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READINGS IN MARKETING



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READINGS IN MARKETING

BY

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PREFACE

THESE readings are designed to provide descriptive and supplementary material for use in the study of commodity marketing. Texts in marketing are quite properly confined to discussions of general principles and methods, and descriptive material is used only in so far as it helps to elucidate those principles and methods. The student and the teacher, on the other hand, feel the need for more detailed supplementary discussions. It is to provide such discussions that these readings have been prepared.

A book of readings is particularly necessary in the marketing field. The published material which concerns the distribution of specific commodities is found here and there in a variety of sources, much of it in books and articles which do not deal primarily with marketing problems. As a result the average teacher does not have time to search for proper collateral material and the average college library does not have a sufficient number of the sources to which students should be referred. And even in the universities where such materials may be available, the marketing classes are now so large that it is impossible to supply these numerous sources in adequate quantities. Furthermore, many of the sources contain material which is not essential for class use. These reasons, in addition to the obvious convenience of a book of readings under any considerations, have prompted the development and publication of these selections.

The editor has used that method of presentation which best suits his own teaching methods, but since no two teachers ordinarily present material in quite the same way, or in the same order, a very complete index has been included to assist both teachers and students in finding readings on particular subjects. The general outline follows the editor's "Principles of Marketing," and the same chapter titles and numbers are used. It is not always possible, however, to follow this plan exactly, since a reading on a particular commodity may discuss all phases of the marketing of that product. To divide such a reading on a functional or institutional basis would make it necessary to cut it into a number of small parts, with each part placed in the appropriate chapter. This is not usually desirable. Consequently, although the readings are developed primarily on a functional and institutional basis, they follow, to some extent, a product basis. A few products have been treated rather fully, and although the readings are separated and

placed in the appropriate chapter, they can be read consecutively by reference to the contents or index.

It has been necessary to "adapt" much of the material in order to eliminate extraneous discussions, and the least essential parts have been omitted so that the size of the book could be kept within bounds. In making these adaptations, every effort has been made not to change the thought or point of view of the authors of the selections. Many of the center headings were not used in the sources from which the readings were taken. They have been inserted for the convenience of the student.

Wherever possible, the date of publication of the reading has been indicated in the footnote. Conditions change so rapidly in the business field that it is often important to know the date of a reading in order to interpret it intelligently. Finally, since most of the selections have been chosen because of their descriptive and illustrative value, many excellent articles dealing with controversial matters and with general principles have been omitted.

The sources are indicated in the footnotes. But I wish to express my gratitude to both authors and publishers for their uniformly courteous permission to use extracts from their publications. My wife, Carrie Patton Clark, has assisted with the work throughout and particularly with the proofreading and preparation of the index.

FRED E. CLARK.

EVANSTON, ILL.

MAY, 1924

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READINGS IN MARKETING

CHAPTER I

INTRODUCTION

1. THE DEVELOPMENT OF MARKETING, TRACED ON A RISK-TAKING BASIS¹

The early marketing system in the United States included such well-known types as the tin peddler, the itinerant shoemaker, the meat peddler, and those who carried packs of various commodities from farmstead to farmstead. Very frequently it was the maker or producer of the goods that carried them to the consumer. There cannot be a simpler or more direct method than this, but it is not practicable when conditions become more complex.

The second stage of the development of our distributive organization came when the producer of goods built his shop and owned his tools and his customers came to him. This is generally known as the "bespoke" or custom order market. The raw material out of which the products were made usually belonged to the customer, who brought it to the maker of goods and said to him: "Work up this cloth into garments of such and such a kind," or "make this leather into boots and shoes of such and such a size." When industry was in this stage of development, the maker of goods was also the merchant of goods, but he had no stock and he ran no risk. The significant thing, however, is that he was stationary, that he was permanently located, that the customers came to him, that there was a shop out of which might develop both the factory and the store.

Then came the third stage in the development of the modern business organization, which may be called the retail-shop stage. This means that the maker of goods found a larger market than formerly existed among his friends and neighbors who brought their raw materials to be made up. This maker of goods began to anticipate the market and to manufacture before he sold. Out of this condition would develop very naturally a distinction between the maker function and the merchant function. Out of this condition also would come the beginnings of a stock plan. For this maker must know beforehand what sizes and what styles would likely be asked for. But prob-

¹Adapted from C. S. Duncan, *The Place of Premiums in a Distributive Organization* (1917), pp. 1-5. (A pamphlet published by the National Premium Advertising Association.)

ably more significant still is the fact that when he had stock on hand and a customer came into his shop to buy, there arose a price bargaining, and this manufacturer-merchant became a price bargainer.

The next stage in the development of modern business organization may be called the wholesale order stage. In this stage there was a large stock of goods on hand. The maker of these goods had manufactured large lots, very probably upon orders previously received. There was an earlier anticipation of the market demand. These goods were turned over in large or wholesale lots to an individual whose sole function was that of a merchant. This was the retailer. In this stage of development, there were two price bargains; one between the wholesaler and retailer; and the other between the retailer and the consumer. There was also a greater risk for the retailer who bought his goods in anticipation of the consumer's demand. But in this situation the retailer stands squarely between the wholesaler and the consumer. It is he who knows the consumer market, and it is he who can most definitely forecast what the market will need. It is through him that the orders come to the wholesaler.

The fifth stage in the development of modern business organization is the wholesale speculative stage. The wholesaler, also, now buys goods in anticipation of the market demand; he speculates. Here there are three price bargains. The first is between the manufacturers and the wholesalers; the second is between the wholesaler and the retailer; the third is between the retailer and the consumer. In this stage the risk of business is upon the wholesaler and the retailer. The manufacturer is free from risk because he waits for orders to come.

But even this condition has been greatly modified in late years, because the manufacturer also has speculated as to what the market will demand. Today the up-to-date manufacturer pre-plans his work. He sets his tasks for six or twelve months ahead and makes goods which he anticipates the market will demand. One great manufacturer set his tasks for five years ahead, and he has been working according to the details of that plan ever since. But upon what basis can the manufacturer pre-plan his work? It is only upon his knowledge of the market, and this knowledge of the market he can receive only through his sales organization. And so long as the wholesaler and retailer stand between him and his market, he must rely upon their anticipation of the market demand. As the condition now stands, therefore, the risk in modern business is shared by retailer, wholesaler, and manufacturer, who are all attempting to forecast what the consumer will ask for.

2. PERSONS 10 YEARS OF AGE AND OVER ENGAGED IN GAINFUL OCCUPATIONS IN 1920¹

TABLE 1

General Division of Occupations	Number	Per Cent Dis- tribution
<i>Both Sexes</i>		
Agriculture, forestry, and animal hus- bandry.....	10,953,158	26.3
Extraction of minerals.....	1,090,223	2.6
Manufacturing and mechanical indus- tries.....	12,818,524	30.8
<i>Transportation</i>	3,063,582	7.4
<i>Trade</i>	4,242,979	10.2
Public service (not elsewhere classified).	770,460	1.8
Professional service.....	2,143,889	5.2
Domestic and personal service.....	3,404,892	8.2
Clerical occupations.....	3,126,541	7.5
All occupations.....	41,614,248	100.0

3. CONCENTRATION AND DISPERSION ILLUSTRATED BY THE MARKETING OF STRAWBERRIES²

A good idea of the distribution process may be obtained by considering strawberries from Louisiana. The producer of a few crates will quite likely sell to a local buyer, who will in turn sell to traveling jobbers' agents or consign to a commission merchant in a distant city. If his quantity is not sufficient for a carload, it would probably be cheaper to send by a forwarding agent, whose charge would be less than the expense of shipping a less than carload (L.C.L.) lot. The forwarder quickly makes up his cars from a comparatively small territory and ships in refrigerator cars by fast freight. These berries, if for Boston, with best connections, could arrive in two days, and easily in two and one-half days. The shipment would come via the New York, New Haven & Hartford Railroad, and jobbers and commission men, notified by wire in advance, would be on hand to receive and dispose of the shipment.

Suppose your box of berries is in a car lot. Probably a jobber has already purchased this lot through his agents in Louisiana or at

¹ *Abstract of the Fourteenth Census of the United States, (1920)*, p. 535.

² Adapted from *A Summary of the Market Situation in Boston*, The City Planning Board, Boston, Mass. (June, 1915), pp. 65-66.

auction at the Boston terminal. He resells to local wholesalers and to buyers from nearly all small cities. These wholesalers sell the same day to various corner grocers, fruit stores, chain stores and other retailers. These retailers may take their berries direct from the car or have them delivered by the wholesaler, paying accordingly. The retailer advertises and arranges berries to attract you and you purchase your quart, picking the best box in the crate. You order your berries on going to business in the morning and they are served to you at supper that evening, having been delivered the mile or so to your house by the grocer's delivery boy, necessitating the use of horse and wagon. Thus the journey from the Louisiana farm to your table ends.

CHAPTER II

THE MARKETING FUNCTIONS¹

1. THE CONSUMER²

Who are the consumers? What do they want?

The consumers of the country are its hundred million of men, women, and children. What they want depends upon their respective ages, sex, habits—social and personal—and their occupations, and how much they want depends largely upon their incomes or wealth.

Under most circumstances, demands for goods come only from adults or persons above the ages of childhood. Parents select goods not only for themselves but also for their children. This is the rule the world over. But in this country there are several notable exceptions. Children of foreigners learn the English language much more quickly than their parents, hence frequently serve as interpreters for the family. They begin to read the English advertising, study the goods at the stores, and are influenced by fashion changes more quickly than their elders. To some extent, children thus buy or influence the buying, not only of goods for themselves, but also for their homes.

Among the American people of the richer classes, the birth rate of children has fallen off markedly during the last fifty years, and this tendency to reduce the number of children per family has probably not yet reached its limit. One of the effects of this tendency of interest to distributors of goods, particularly retailers, is that, as there become fewer children per family, the attention given to each child increases. This attention takes two forms: one to supply all its needs and demands much more completely than could otherwise be possible, and, second, to give more freedom to the child to satisfy its own demands. The fewer the children, the more the money for each child to spend. In consequence, children of native-born parents especially, begin to

¹The methods of selling and buying various products (the exchange functions) are discussed from point to point in the chapters which follow. Special discussions relating to the other functions will be found in chapters XV, XVI, XVII, and XIX. Advertising, as a type of selling, has been emphasized at *this* point because, in many cases, the student starts his study with definite ideas and questions concerning it. Even though this subject may not be discussed until later in the course these readings will help to clarify the student's thought at the outset.

²Adapted from Paul H. Nystrom, *The Economics of Retailing* (1915), pp. 42-45, 59-60. (The Ronald Press Company.)

demand and to buy goods of a great variety at an early age. Children's movements such as "Boy Scouts," "Camp-fire Girls," marble playing, baseball, roller-skating, and so on, sweep over a town with remarkable rapidity, simply because the wherewithal to supply the necessary material equipment is provided to the child by its parents when wanted. The present has been called the "age of the child," and this should be a matter of significance to the retailer in making his plans. The store must be arranged to show its goods in a way to appeal to the age of people who constitute its customers. What suits one age may not suit another. The growth of the influence of children in the markets and merchandise of this country during the last generation is much greater than is generally realized.

Sex makes a great deal of difference in demand, not only in the obvious differences in the goods used, but also in the manner in which the goods are bought from stores. It is commonly asserted that it takes more time, and that it is harder to please and to sell to women than to men. It is probable that many of the differences that have been pointed out between the sexes in their buying habits are exaggerated, but there are certainly differences that need to be noted.

A generation ago women's time was so completely taken up with the household industries in the home, many of which are now performed in factories, that they had very little time to spend in shopping. Then men did practically all of the buying for their families. Now this practice is quite reversed. Women have been set free from a great deal of the arduous hand labor characteristic of the past, and have become purchasers rather than producers of the products needed in the home. It has been estimated by a number of people that, at the present time, at least 75 per cent, possibly more, of the goods used in the home are purchased by women. This applies not only to goods used by the women themselves and by children, but also to food-stuffs and house furnishings. Even men's clothing, particularly furnishings, are now purchased very largely for them by women. The woman is the purchasing agent for the home in an increasingly large number of cases. Retailing in all lines must take this into account.

Women are harder to sell to than men because as a rule they have, or think they have, more time to shop than men do. Practice in looking over stocks of goods affords them much real enjoyment. Most women like to shop. Only a few men, relatively speaking, enjoy shopping. Women, as a rule, rely more on their own senses and less on brand names than men do in buying. They also read descriptions and note details more carefully. The struggle of American families

for social place and for more complete satisfaction of a very wide variety of wants causes many women to think more of the pennies than men do. For this reason, sales at reduced prices mean much more to women than to men. The problem of making a little money go a long way under pressure of an increasing cost of living is one that women are meeting by giving more and more careful attention to details in their shopping. Still another factor to be considered is the specific instruction now being given to young women in hundreds of schools in domestic science, in studies of textiles and foodstuffs. Such education will tend to make women still more critical purchasers, and the retail store must be adapted to meet this development.

Since women are now the chief customers of retail stores in practically all lines, the stores must seek to meet women's standards and demands rather than men's. What was satisfactory to men in the past is not wholly satisfactory to women now. Retailers who have grasped this idea and have made their stores conform to it in such details as cleanliness, fixtures, lighting, decorations, display of goods, and personal service, have reaped large rewards, while those who have not observed these changing conditions have passed out in failure.

Habits of customers are exceedingly important factors in determining how a retail store shall be carried on. We may distinguish between those that many people possess in common and those which only single individuals have. The first may be called social habits, customs, and conventions, and only the latter are designated simply as habits. Of the two classes, the social habits are most important in laying out the plan of a store's work and its general policies. The latter must be met by the individual salesmanship of the retailer and his clerks.

In conclusion, the consumers are the rulers of the retail market. What consumers want, actually or potentially, constitute the things that the retailer must supply. If he cannot, he must make way for the one who can. It is most difficult to characterize these consumers in general terms. Among the multitude of consumers there are marked individual differences. No general classification would be adequate. They are of all classes and conditions. They are made up of the rich and poor, old and young, ignorant and intelligent, active and indolent, careful and indifferent, honest and dishonest, and the sick and the well. Most of them are struggling for a living, all have their difficulties to contend with, and few can ever have all of their demands for goods

entirely satisfied. Now attending to one want, now another, they seek the maximum of satisfaction possible to them under the circumstances. Subject to a multitude of whims, unsystematic in their buyings, forgetful, ease-loving—such in general is the character of the customer of the retailer.

2. THE WILL OF THE CONSUMER¹

The consumer is the point of attack, either immediately or ultimately, in every advertising campaign for advertising goods finally sold at retail. And while we are discussing methods of attack, is it not well to take stock of the consumer's defence? What are the characteristics of the consumer as a class which meet, and, in a measure, offset advertising and selling betterments? Space will not let us catalogue more than a very few:

(1) The consumer's spending power is limited by his earning ability. He may develop, or have stirred in him, new wants, strong enough to make him work harder in order to earn more, but he cannot honestly spend more money than he earns, no matter how complicated his wants may become. This sets a final limit on consuming capacity, and sets a limit to the exercise of his will.

(2) The strength of the consumer's savings instinct determines the margin between his earning power and his willingness to spend. The strength of this instinct is only relative and here the consumer is vulnerable. His "will to save" is elastic.

(3) The "standard of living," the opinion of the class to which the consumer belongs as to what may be expected of him in the spending of his income, has its constant effect on a civilized man's conduct, and this again is relative and open to attack.

(4) Price habits have tended to become fixed in many lines of retail business. The consumer has come to accept an increasing number of set prices, and set price intervals. There may be a few places in this country where a man expects to find a necktie line regularly carried at some price other than 50 cents or \$1 or upward, but they are few. And so it is with suspenders, shirts, shoes, socks—almost everything a man wears—certain price habits have become well established. This puts competition in these lines on a basis of quality, or service. It makes purchase easy for the consumer, but it modifies the character of the advertising appeal.

¹ Adapted from Paul Terry Cherington, *Advertising as a Business Force* (1913), pp. 92-94. (Doubleday Page & Company. Copyright by The Associated Advertising Clubs of the World.)

(5) Buying habits are undergoing modification also. And these make another change in the advertiser's position. With price "higgling" partly eliminated, and the whole problem of appeal and sale based on quality and guaranteed satisfaction, the consumer has come to expect that goods can be bought without bargaining. The consumer certainly is safer in his purchasing, but equally certainly he is more careless.

(6) And again there is the effect of the multiplicity of appeals being made to the consumer. The individual consumer and the consumer as a class is appealed to from so many sides that the effect of no single appeal can be what it would if it stood alone.

3. AN ADVERTISEMENT WHICH PICTURES ASSEMBLY¹

Nineveh sent her sons in search of beautiful things to grace her civilization, and her stately galleys came rowing back to Palestine with wondrous cargoes of ivory and cedar and sweet-smelling sandalwood.

Across the sandy stretches of the great Arabian desert, Europe dispatched her long, winding caravans to seek and bring back from the East the silks and precious ointments to make splendid her courts.

Few people perhaps are conscious of the way the whole round world is laid under tribute for the commonest needs of the everyday life of civilized man.

Coffee for his breakfast table comes from Java, Brazil, Arabia; tea from China, India, Japan; wool for his clothing from Australia; hides for his shoe leather from South America.

The very ink with which his morning paper is printed is made of pigments, oils, gums, and resins brought together from half the tropical countries of the globe.

Anywhere in America the Stetson hat your hatter shows you represents the offerings of many countries.

The fur which goes to make the fine, firm felt of the Stetson hat comes from the Nutria of the Argentine, the Coney of Scotland, and the Beaver of Canada and the far North.

From Europe comes the leather for the sweatbands—thousands upon thousands of sheep, goat and calf skins of thirty different colors and finishes.

From Brazil comes the rubber for cementing the leather.

¹From an advertisement for Stetson hats appearing in *The Literary Digest*, September 25, 1920, p. 161.

From India comes the fine shellac for stiffening the felt, while Japan and Italy contribute raw silk for weaving.

And if, even before the war, this search into the four quarters of the globe was carried on under difficulties, think how doubly difficult it has become in these days of dislocated markets and disarrangement of transportation.

The demand for fur—the fine pelts of Beaver, Nutria, and Coney—has suddenly leaped beyond all former experience.

Fashion has decreed fur for Madame in unprecedented manner.

New sources of supply must be opened up; new forests must be penetrated; traps must be set in new fields.

Think what the initiative and standards must be that maintain Stetson hats at the same high level today as for fifty years!

4. ADVERTISING AS AN AGENCY IN DISTRIBUTION¹

Advertising in the modern commercial sense is of comparatively recent development. Only in the middle of the nineteenth century did it commence to be of real importance in the commercial world. And as in its early extensive use the sale of proprietary medicines of doubtful value predominated, it was held at first in somewhat bad repute as an agency in demand creation. This notion lingers among many economists, who are satisfied casually to condemn advertising under the name "puffing," and who fail fairly to analyze its position as an agency in our scheme of distribution.

That there are evils and abuses in connection with advertising today may be frankly admitted. It is a new economic agency, and ignorance of its true function causes wasteful use. Moreover it lends itself to conscious misuse. So the factory system carried with it evils which were far greater a century ago than today. And just as the factory system, by gathering together large bodies of workers, drew attention to evils which existed unnoticed under the domestic system of manufacture, so advertising tends to bring into the limelight of publicity certain evils which existed as well in sale through other channels. But these are rather undesirable and non-essential incidents than anything fundamental to the thing itself. The evils must be recognized and combated, but should not cloud the fact that advertising is today an element of tremendous importance in our economic organization. The steady and remarkable increase in advertising evidences its efficiency as a selling force. In the United States we are

¹ Adapted from Arch Wilkinson Shaw, *Some Problems in Market Distribution* (1915), pp. 90-96. (Harvard University Press.)

expending annually upon advertising, in its inclusive sense, not less than a billion dollars.¹ This is a cold economic fact which renders advertising worthy of serious analysis.

THE NATURE AND USE OF ADVERTISING

In advertising, as in selling through salesmen, the producer communicates ideas about the goods to the prospective buyer to create in him a demand for the goods. While the purchaser insisted that he see the actual goods before purchasing, sale by advertising was impracticable. While he still required to be shown a sample of the goods, advertising was not in most cases feasible. But now that the general average of intelligence enables the prospective purchaser to gain an idea of the goods without seeing them and without seeing a sample, and now that the prevailing code of business ethics is such that the prospective buyer feels that he may rely upon the description given him, advertising becomes in many lines the most economical agency for the exercise of the selling function. Even where the actual sale is made by salesmen from sample, advertising is used as a supplementary agency to build up a demand which the salesman crystallizes. And sale by advertising alone may be applied today even where the purchaser demands to see the goods before concluding the purchase, by sending the goods to him on approval.)

Not only is the modern development of advertising dependent upon the possibility of sale by description, but it also depends upon the increasing differentiation of commodities by trade-marks, brands, and trade names. For the producer cannot profitably convey to the consumer ideas about a certain food product which will build up a demand for that product, unless the consumer is able to identify the particular product when he goes into the grocery store to purchase it.

Advertising, then, may properly be regarded either as a substitute

for middlemen and salesmen or as auxiliary to them in the exercise of the selling function. Owing to the rise of sale by description and the increasing differentiation of commodities, it tends to displace in whole or in part these other agencies in many lines of distribution because it is a more economical and efficient means of communicating ideas about the goods to the consumer.

Advertising, in the sense here used, may be defined as the communication to possible purchasers by written or printed symbols of ideas about the goods, designed to create a demand for the goods. In this broad sense it includes not only selling letters and circulars, but newspaper and periodical advertising, billboards and window cards, electric signs, street-car advertising, catalogues and all the varied forms of modern commercial publicity.

It is necessary to include in this hasty and incomplete analysis of advertising as an agency in distribution a reference to the character of the demand aroused by advertising. Advertising may be said to build up three general classes of demand: (1) expressed conscious demand, (2) unexpressed conscious demand, and (3) subconscious demand.

The three classes may be illustrated by supposing a product for sale by grocers to be advertised in a periodical of large circulation by a double page costing for one insertion \$8,000. If as a result of the advertisement 30,000 people go to the grocery and buy the product, 60,000 plan to purchase the product at some future time when such an article is needed, and 100,000 more become open to a further exciting force, such as seeing the product at the grocery and recognizing it as one advertised, then we should call the 30,000 the expressed conscious demand, the 60,000 the unexpressed conscious demand, and the 100,000 the subconscious demand resulting from the advertisement. Expressed conscious demand means present sales; unexpressed conscious demand means future sales; subconscious demand means

the field has been fertilized so that future selling efforts will be
 Unexpressed conscious demand and subconscious demand
 of measure but must be taken into account in
 as a selling agency.

expect a financial return, while the man who buys a truck buys it solely on the basis of efficiency and at the end of a year, or a period of years, tests his purchase by the cold figures of its commercial production. This means that a high type of selling is demanded; for the real problem is not the market for today, but how to build a permanent and growing business. What needs to be done?

1. The product must be right, for in selling trucks, as in all merchandise, quality is the first essential.

2. The purchaser's distribution problem must be carefully analyzed and correct advice given as to what type, size and number of trucks will most efficiently perform the required service; for only as the advice is proven sound by the balance sheets can satisfied customers be secured.

3. Prompt and efficient service must be rendered, in order that the purchaser's business may proceed without interruption. It is also essential that the truck receive constant attention, that it may not too rapidly deteriorate and become valueless before it has earned its cost price.

4. It is often necessary to assist with the training of drivers and it continues desirable to do educational work with the owners.

5. National advertising should be used to inform the consumer, vitalize the sales organization and build a reputation.

National advertising can do much for the truck industry in several ways. It can promote the industry as a whole. The phenomenal growth of the pleasure-car industry has been due in part to the large volume of national advertising used by motor-car companies. A larger volume of truck advertising either by coöperative effort or by individual companies, will, no doubt, enlighten the public as to the efficiency and economy of truck transportation; will educate big corporations to the necessity of a closer study of their terminal facilities and their transportation problems; will show cities the advisability of making any municipal changes in docks or streets that will facilitate the use of trucks, and will demonstrate to bankers that trucks decrease commercial risks by increasing earning-power.

National advertising is a very direct and powerful factor in reaching the individual purchaser of a single truck. He may need the assistance of the local salesman to estimate accurately his exact needs, but on the fundamentals of wanting a truck and appreciating the superiority of a given make he may be convinced by strong national advertising in those media in which he has confidence.

National advertising may also be an important supplementary factor in several ways in selling fleets of trucks.

1. The purchasing agent of the corporation selects the trucks. But above the purchasing agent is a Board of Directors who ratify his purchases. For details they trust their agent, but they take sufficient interest in the truck problem to read advertisements in the important magazines. If the purchasing agent recommends a well-known truck, they nod approval; if he recommends an unknown make they may ask questions: "Of course we trust your judgment, John, but are you sure this truck is as good as the well-known makes?" Later, when repair bills come in, for a well-known truck they are passed as a matter of course; for the unknown truck some skeptical director is apt to scan the bill and say: "If we had bought a well-known truck, John, should we have had such bills as these?" The purchasing agent, knowing that he must shoulder alone responsibility for an unknown truck, is more likely to recommend one in which the directors readily acquiesce in his choice and so share his responsibility.

2. Below the purchasing agent are employees who operate the trucks. If these employees have been educated by advertisements in the popular magazines to have a wholesome respect for a given make of truck, they are more likely to handle these trucks with care.

They will take a greater pride in handling trucks which are favorably known, and they know that their superior officers through these same advertisements have come to believe that the trucks will give a certain degree of service, and that if they do not succeed in securing that degree of service the operators, rather than the trucks, will seem to be at fault.

Advertising may be so employed as to reach all the important factors in the purchase: president, directors, treasurer, purchasing agent, engineer, drivers, and shipping-office employees.

3. The use of a truck favorably known to the public through advertisements is of advertising value to those concerns which are appealing to consumers. A department store, for example, that buys a fleet of well-known trucks will gain some prestige for the store by the use of these traveling advertisements of the good judgment of the management.

4. In the merchandising of trucks the local salesmen are of supreme importance, and national advertising will help to secure the best men. For in the truck business, as in the pleasure-car field, volume at list price is the thing that counts, and national influences that help create consumer demand also create dealer good will.

5. Truck salesmen need the opportunity to study transportation problems of important concerns, but obviously a large concern cannot be bothered with twenty or with ten truck salesmen intimately studying its problems. Which two or three truck salesmen will get the opportunity? Those salesmen who represent companies favorably known through national advertising are likely to get the opportunity. These opportunities are valuable to salesmen not only for the direct opportunity to effect sales with those corporations, but also for the opportunity of education in truck salesmanship through practical study of important transportation problems.

THE INDIVIDUAL TRUCK AND THE FLEET OF TRUCKS

National advertising also, by provoking inquiries for booklets, gives a line on those interested in truck purchases, and enables the truck salesman to classify his possible customers and direct his attentions especially upon those who are the most likely prospects.

The dealer who would gain opportunity for himself does well to seek a company that opens the door of opportunity through national advertising. The company which seeks the strong dealers does well to offer them this assistance of national advertising.

Many truck companies have started.

Few will survive.

National advertising, by bringing together strong companies, strong dealers and consumer good will, is likely to become a determining factor in the selection of the fittest. For those companies will survive and grow that have a superior product and put behind it the most effective sales system—a system manned by trained and efficient salesmen, backed by the power of national advertising.

6. A CRITICISM OF AGGRESSIVE SELLING¹

In the last fifty years there has grown up, notably in the United States, a system of distribution which, in my opinion, is calculated to influence and does influence the ideals and habits of the people very profoundly. This system does not confine its functions to *furnishing* what it is found that the consumer wants, but exerts a subtle but powerful and far-reaching influence in *determining what the consumer shall want* and what he shall buy.

¹Adapted from E. P. Harris, *Coöperation, The Hope of the Consumer* (1918), pp. 3-19. (The Macmillan Company.) This reading is primarily a criticism of the existing marketing system, and, with the three which follow, it might well go in chapter XXVI. It is placed at this point, in part, because it deals with demand creation, but particularly to stimulate thought on market criticism early in the course.

THE RESULTS OF PERSUASIVE SALESMANSHIP

In the days of hand production our grandparents sought the producer to obtain that which would satisfy their simple wants. Now the producer, through advertising and other persuasive salesmanship, pursues the consumer so actively that the consumer has become relatively passive or is even on the defensive. The consumer does not, as of old, of his own initiative go to buy; he merely consents to buy when he is importuned to do so. This pressure is applied by scientific means and with tangible results discussed later.

So it has come to pass that, in spite of society's effort to encourage and educate our power to make independent choices, whether we will spend our money or not and what we will spend it for depends largely upon the will of the producers and distributors of commodities by whom we are assailed. We consumers are about as unconscious of this influence as we are of increased pressure of the atmosphere when we descend from the mountain to the valley, but the facts are fully demonstrated by figures.

I claim that, through this influence of aggressive marketing, consumers are caused to buy when they should not spend their money; are caused to buy wrong things instead of things suited to their needs; are distracted from choosing wisely and are afforded insufficient facilities to aid in wise selection.

How does the producer's distributor cause people to buy? By a study of the laws which govern the human mind methods have been evolved whereby, through the use of advertising and other forms of salesmanship, the consumer's undefined wants may be fanned into specific desires. Seizing upon one of these vague, restless yearnings, the producer's distributor develops it into active commercial demand for his product; and a large enough percentage of the public responds to make the process decidedly profitable.

To illustrate: The maker of a talking machine plans and carries out a campaign of advertising and salesmanship covering some years. The result is that enough people all over the country have developed within them a strong enough desire for a talking machine to cause them to buy, so that large additional works have to be built to supply the demand thus created. The same thing is done by the maker of an automobile, a cigarette, a piano player, or a certain brand of whiskey.

In creating demand some interesting principles of psychology are taken advantage of. For instance, when a certain article is repeatedly

brought before the mind and reasons for buying it are given, the reader tends to act as he is urged to do. Even the command to "Drink so and so" the reader tends to act upon unless he consciously combats the suggestion. "Every normal individual," says Professor Walter Dill Scott,¹ "is subject to the influence of suggestion. Every idea of which we think is all too liable to be held for truth, and every thought of an action which enters our minds is likely to result in such action. . . . The very thought of walking will inevitably lead to the act unless I stop the process by the thought of standing still. . . . Thought is dynamic in its very nature and every idea of an action tends to produce that action."

How many of us are aware that the billboard display advertisement or street car card are acting upon us and that, in a considerable proportion of cases, we are to act in turn, buy the article advertised and become one of the thousands to justify the advertiser and return him a profit?

"The actual effect of modern advertising is not so much to convince as to suggest. . . . The individual swallowed up by a crowd is not aware of the fact that he is not exercising a normal amount of deliberation. His actions appear to him to be the result of reason, although the idea as presented is not criticised at all and no contradictory or inhibiting idea has any possibility of arising in his mind. In the same way we think that we are performing a deliberate act when we purchase an advertised commodity, while in fact we may never have deliberated upon the subject at all. The idea is suggested by the advertisement and the impulsiveness of human nature enforces the suggested idea, hence the desired result follows in a way unknown to the purchaser."²

Now, some of us would be disposed to deny the statement that we do not habitually use our reason in buying, but the statistics of advertising returns are against us. On this point Scott says: "Suggestion is of universal application to all persons, while reason is a process which is exceptional even among the wisest. We reason rarely, but act under suggestion constantly."

The purpose of advertising and salesmanship is set forth in the following program: First, attract the consumer's attention; second, awaken his interest; third, create desire; and, fourth, move to action. Appeal first to the perceptive faculties, second, to the intellect; third, to the emotion; and fourth, to the will.

¹Walter Dill Scott, *Psychology of Advertising*, pp. 82-83.

²*Ibid.*, p. 103.

How much of this work upon the consumer the advertisement shall do depends upon many things. But wherever advertising leaves off, personal salesmanship with all its training, devices and accessories takes up the work.

To treat of the application of these principles to the business of causing people to buy what and where they would not otherwise buy, a number of important periodicals and numerous books are published. Indeed, a very considerable technical literature has grown up and several important and well-paid vocations have been developed. The fact is, we are told to spend our money and we spend it; told what to buy and we buy it. To what extent is this so?

About one billion dollars is spent in this country annually on advertising. The amount has grown steadily for a generation. And we may be sure that distributors would not spend money for advertising to tell people to buy and what to buy unless enough of the public acted upon the advice to make the expenditure profitable.

Nor is this all. To the billion dollars spent on advertising must be added all oral and other kinds of persuasive salesmanship, amounting to perhaps as much as another billion dollars, or a total of two billion dollars—around ten per cent of all that is paid for articles bought at retail,—or more than twice the estimated total cost of education in this country in 1913.

Now this means that a demand for advertised articles is created amounting to billions of dollars per year, a demand which would not exist for these specific articles but for these high pressure, adroitly exercised and far-reaching sales methods. The money to buy this enormous output is either earned by the consumer for the purpose or subtracted from savings or deflected from buying some other article. Is not the social influence of this artificially created demand worthy of study?

ANTI-SOCIAL EFFECTS OF ADVERTISING

If space and the scope of our discussion permitted, I should give proper credit to advertising for rendering valuable service in many ways. But it is not my purpose at this time to discuss all the advantages and disadvantages of the advertising and persuasive salesmanship order of distribution, as it would lead us too far afield for the purposes of this book, which are to set forth what seems to me the anti-social influences of advertising and to suggest a remedy.

First, then, it does not seem to me to be a matter of any doubt that the aggressive advertising method of pushing products must,

from the very nature of the case, stimulate an artificial and false estimate of buyable goods, and unjustifiably magnify the importance of *things* in the economy of life. Each advertiser and seller recommends the purchase of his particular wares, but the voice of thousands of advertisers is united in the chorus which appeals to the public to *want, seek, and buy things*.

Can such enormous influence do otherwise than conduce to materialism, and, therefore, away from the life of the intellect and spirit?

Second, the consumer is led by advertising and salesmanship to buy things which, cost considered, should not be purchased.

What is a wise purchase? Only that thing which (1) is worth more to the purchaser than the money which is paid for it and could otherwise be saved; (2) is worth more than the abstinence from effort to earn the money which buys the thing and, finally, (3) would contribute at least as much to the need for shelter, clothing, food or other satisfaction as would another equally or less costly article either to serve the same purpose or a different purpose. If I am influenced to buy when I might better save my money or the effort to earn it, or if I could get more satisfaction out of some other purchase, or the same satisfaction for less price, the influence, which causes me to make the unwise purchase is clearly anti-social. Is the aggressive advertising selling method likely to cause consumers to buy what they ought to buy? It would seem from the nature of the case that the consumer is more likely to be induced to buy the wrong thing. In the first place, it is the more profitable article which is likely to be advertised since there is more margin out of which to pay for the advertising. The article with the smaller profit can usually be bought for less.

Of course, it is not always true that advertising makes a higher price necessary. In some cases advertising so increases demand as to make possible enough lower cost of production to more than pay for the extra selling expense. On the other hand, it is possible to put goods in a fancy package that appeals to the eye and then so to advertise and push them as to sell at prices materially above what the same goods are sold for in bulk.

The expense of creating first a consciousness of a new want and a demand for the article to fill it is costly and the cost comes out of the consumer. The business of creating new demands is extensive. Mr. W. R. Hotchkin, speaking on this subject says:

"It is all very well to get the sales of things that people want to buy; but that is too small in volume. We must *make people want many other*

things, in order to get a big increase in business. So the advertising manager must have two things constantly in mind:

"First—What do people want?

"And his advertising must let them know that he is able to supply that want. That is one vital side of advertising.

"But the other side is not less important and is too often either neglected or only half done, and that vital question is: What do I want to sell that I must make people *want* to buy?"

Of making more people want cigarettes, the same writer says:

"The concern that realizes the power of suggestion will tell such a story of the delights that come from smoking that particular brand, that every smoker will want to try it and thousands of *non-smokers* will be tempted to learn to smoke in anticipation of enjoying the delights that have been exploited."

In view of the great economic and social importance of wisely directed consumption it is pertinent to inquire how far demand is deflected from right things to wrong things by the present selling system. Many hundreds of expensive automobiles are purchased each year by people who have to mortgage their homes to pay the bills. Hundreds of millions of dollars are spent annually for patent medicines which were among the earliest and most extensively advertised articles. Who knows how much the consumption of intoxicating liquors is due to the demand stimulated by advertising—but surely enough to pay the advertising bill.

The extent to which advertised foods are bought when more nourishing foods could be had for less money, it is, of course, difficult to say. Probably it would not be far wrong to guess that equal nutritive value unadvertised could be bought for two-thirds of the amount spent for trade-marked foods. It is fair to admit, however, that greater purity and cleanliness are claimed for the packaged foods.

In 1913 the *Chicago Tribune* made an investigation to learn why some 30,000 housekeepers had purchased certain food products. It was found that—

6 per cent were influenced by friends,
36 per cent were influenced by advertising,
55 per cent were influenced by retailers.

The dealer is depended upon to take advantage of this momentum caused by advertising and to push the product onto the purchaser.

Is the consumer afforded proper facilities to enable him to choose wisely? In the opinion of the writer there is no department of our

social life which leaves so much to be desired. We Americans are far abler to turn our efforts into dollars than to turn our dollars into real utility values.

The incentive of the dealer and his representatives to overreach and sell an article for better than it is, is too well recognized to need extended mention here. The salesman has interests to serve which constantly run counter to the interests of the consumer. Large profit on an article to the dealer means a large price to the customer. This antagonistic interest between dealer and consumer exerts a constant pressure and leads to all sorts of disadvantageous results to the consumer. The dealer is a specialist, the average consumer knows nothing about the goods. It is an unfair encounter in which the chances are all against the consumer.

We are not here absolving the consumer from the main responsibility for wisely ordering his economic life, but are alleging that in the process of enlightenment and education he is retarded by the inevitable influence and impact of, and conditions brought about by, the distributive system under which we live.

7. THE NEED FOR BETTER SALESMANSHIP¹

The charge that retail stores deliberately induce customers to purchase goods which they cannot use is for the most part unfounded. Cases where customers have purchased goods ill-adapted to their purpose can usually be traced to ignorance on the part of either the salesperson, the customer, or both. In the past, retailers have paid too little attention to the education of their sales force, and, in so far as the customer has been wronged, the retailer can be justly condemned for laxity and shortsightedness. With so many new goods coming on the market, with their complexity of construction and clever substitutions, the customer cannot be expected to be aware of their true character. Years ago, when the range of selection was narrower, and when keen competition had not flooded the market with undetectable substitutes, the customer could be his own expert. It was not then necessary for the salesperson to know all about the goods. At present, however, it clearly devolves upon retailers to educate their salespeople so that they can give the customer the expert advice which he needs. Unless this is done, the retailer will continue to be charged with dishonesty.

¹ Adapted from P. W. Ivey, *Principles of Marketing* (1921), pp. 317-18. (The Ronald Press Company.)

If the customer inquires whether hose are all-silk, the salesperson should be able to say whether they are pure thread silk, manufactured silk, fiber silk, or something else. Only too often the salesperson says, "Yes, they are pure silk," when in reality he does not know the facts because no one in the store has instructed him. The customer makes the purchase believing that it will satisfy his requirements. When, after a time, short ends appear, indicating that the hose are made of manufactured silk, the customer believes that the store has used "salesmanship" on him in order to get rid of some inferior merchandise. The truth is that salesmanship is not to blame, but rather ignorance, lack of salesmanship.

8. SOME SOCIAL AND ECONOMIC ASPECTS OF ADVERTISING¹

A little over a billion dollars was spent last year in the United States for advertising. What return, if any, did the public receive for this expenditure, or was this staggering sum simply levied as an indirect tax, concealed in the higher prices of the advertised goods purchased? In other words, if this advertising should be stopped, would it not be possible for us to buy the same aggregate of goods for a billion dollars less?

This question has raised itself in the mind of every thoughtful person as he pondered over the "wicked, wanton waste" of the electric signs on New York's Great White Way, or thumbed through a copy of a magazine containing practically half a million dollars' worth of advertising.

It must be admitted by any honest-minded person that a part, at least, of this stupendous sum is wasted through inefficient methods. The same is true of any other great class of expenditure, as money paid out for wages, for power in production, for services of professional men. The purpose of this article is to suggest some of the benefits which accrue from advertising—benefits, not to the advertiser himself, but to society as a whole.

These benefits are of two kinds: economic and social. Taking up the economic aspect first we see that:

A. Advertising lowers selling cost.

The cost of selling a product is an important part of the expenses of the average manufacturing establishment. It sometimes happens that the cost of manufacturing the product is less than the cost of

¹Adapted from F. A. Russell, "Some Economic Aspects of Advertising," in *The Enterpriser*, November, 1920, pp. 8 ff.

getting it into the hands of the next purchaser, while it frequently is less than the cost of placing it in the hands of the final purchaser. Advertising is merely one way of selling or creating demand, the other way being by means of personal salesmanship.

Now how does advertising lower the cost of selling?

1. By supplementing the salesman. This may occur at any stage of the marketing process from producer to consumer. The salesman supplanted may be one of the middlemen himself, as in those cases where large advertisers have made themselves independent of the jobber. Or it may be the retailer who is supplanted by the mail order catalogue. When advertising supplants a salesman in this way it is usually because the product can be more cheaply marketed by the new method, so the public gains.

2. By supplementing the work of the salesman.

(a) It saves his time, whether he be a clerk behind the counter or a specialty salesman on the road. He finds that his prospective customers are at least partially sold already, so that he can obtain his order with far less expenditure of time than when the prospect has never heard of his proposition.

(b) It renders unnecessary many calls which the traveling salesman would otherwise be compelled to make. The advertising sent out from headquarters holds his regular customers in line and secures many direct orders between his visits.

(c) Advertising educates the salespeople all along the selling chain so that they can sell more goods in the same time. The salesman, behind the counter or on the road, who has absorbed the material in the advertising literature sent out by the manufacturer, knows enough more about the product to enable him to make many sales which would otherwise be lost if he did not possess that information.

(d) Advertising speeds up the handling of goods. Advertised goods are usually put up in packages, and there is no denying the fact that such goods are more quickly handled in a retail store than are bulk goods. The clerk can easily sell double the volume in package goods than he can sell in bulk goods.

(e) In another way advertising saves the time of the retail clerk. When the customer knows in advance through reading the advertisements just what he wants and where he can find it, it saves consuming the clerk's time while "shopping."

(f) Advertising has proven itself a tremendous aid in equalizing the burden of unequal buying days and buying hours, thereby

enabling the clerks to keep employed all day and every day instead of being crowded past the point of efficiency certain hours of certain days. This has made it possible to release some clerks for other work.

B. Advertising lowers manufacturing costs.

This is our second proposition under the head of economic benefits of advertising. If advertising can lower selling costs and also manufacturing costs, it would appear that perhaps it is almost paying its way without taxing anyone.

1. By increasing the demand or market for an article, advertising makes possible the familiar economies of large-scale production.

2. Advertising equalizes supply and demand, thereby steadying production throughout the year so that the plant may be operated at its most efficient capacity the year around. This steady demand helps the factory to meet it without resorting to overtime, or to shutting a part of the plant during a dull season. A splendid illustration of this point is the experience of the manufacturers of Sapolio, which was formerly sold almost entirely in two months—May and October. The advertising was designed to equalize the use of the product throughout the year, and was eminently successful in accomplishing this.

3. Advertising is one of the chief factors in the spread of the gospel of efficiency throughout American industry. The advertising done by manufacturers of filing systems, power plants, auto trucks, industrial lighting systems, and hundreds of types of improved machinery and methods, has increased the productive capacity of our factories much more rapidly than would have been the case without it. And as every economist knows, this increased efficiency in production means, through the action of competition, lowered prices to the consumer.

The second main proposition regarding the effects of this billion-dollar advertising expenditure was that it rendered certain social benefits in addition to the economic benefits just outlined. These social benefits will be presented under four heads.

A. Advertising confers *positive* comforts. That advertising is one of the fundamental factors in the production of goods some might deny, but that it is a tremendously effective accelerator of the wheels of progress most will grant. Without the stimulus of advertising few of the modern inventions that have so generously added to the richness of life would have been generally received.

Picture conditions in isolated communities unreached by the advertiser's message. Is it a pleasant picture? Are the homes

comfortable and clean? Are the people healthy and intelligent? Is their product large or small?

To be more specific, have they adequate beds, easy chairs, pianos, good heating systems, refrigerators, washing machines, vacuum cleaners, sanitary plumbing, and talking machines? Have they sound teeth, good digestion, and a low death rate? Or do the women do men's work and the children lose their birthright of childhood because they, too, must help earn the scanty living?

Advertising, as truly as our public school system, has raised the general level of intelligence and the plane of living. When a man has presented to him an ideal of better living, he begins to seek means to attain that ideal. In other words, if a man sees things advertised and forms a desire for those things, he will not rest until he has gratified his newly-awakened desire. And the social significance of this is, that man will begin to use his brain to devise ways of earning or producing more so that he can buy what he wants.

Advertising performs the double service of awakening new ambitions and of showing the man in whose breast these fires have been kindled how he may attain his desire. If it stimulates his demand for an expensive automobile, it also tells him how he may increase his income by the use of some advertised appliance, machine, or method in his work.

B. Advertising creates *negative* comforts. It creates what may be termed information utility. It tells us what we ought to buy, when we should purchase it, where we can find it at the best price. It saves us many exhausting hours of blind shopping, or in other words, provides us the means of escape from that positive discomfort.

C. Advertising improves the quality of advertised goods. The constant and keen rivalry for public favor unavoidably results in successful efforts being made to improve the article or the container or both. In lines where competition is very vigorous this tendency is very marked, as in the manufacture of automobile tires, shaving soaps, and washing machines. Gradually, through the pressure of competition carried on under the eyes of the entire country, the research laboratories of the various manufacturers have perfected products that have been hailed with glad acclaim by the men and women of our land. The more quickly people learn the merits of a product, the more quickly must competition act to offset that advantage. And through advertising the spread of this knowledge is facilitated.

D. Advertising elevates the ethics of salesmanship. When the good points of an article have been emphasized to the public many

times through advertising, it is not so easy for the salesman to allow his enthusiasm to stampede his regard for the truth. He feels a conscious check upon him; a check imposed by the fear that the prospect or customer has already learned a good deal about his proposition. Truly, advertising has done its full share in consigning *caveat emptor* to a place among the phrases of a former code of business ethics.

These achievements of advertising, considered from the viewpoint of society as a whole, rather than from that of a particular advertiser or advertisers as a class, are surely sufficient to relieve to some degree the burden of criticism heaped upon it by critics who see only the expenditure, which is tangible and capable of being reckoned, while overlooking the benefits, which are intangible and not susceptible of accurate computation.

9. WHO PAYS FOR ALL THE ADVERTISING?¹

Thirty years ago a camera cost you \$30. Today you pay \$10 for it, although it is much improved. A can of Campbell's soup, twenty-five years ago, cost eighteen cents. Today you can buy it for ten cents a can and in some cases three for a quarter. Perhaps you would be interested in knowing just how much of your purchase price is devoted to advertising it. Well, in the case of Campbell's soup, 17/100 of one cent is spent to advertise each can.

The advertising by a firm like Hart, Schaffner & Marx is both educational and a protection to many men. The ordinary man in the old days when he went to buy his clothes, was a victim, if the dealer was determined to palm something spurious, shopworn or otherwise unsuitable, upon him. Now he sees the pictures and follows the wide publicity of these reputable garments, and his taste and judgment are formed, and he can buy in confidence.

The manufacturers of food products have exposed, through advertising, many popular fallacies about eating coarse and unwholesome food, and they have spread abroad much information on the subject of pure food and sanitary cooking. What books to read, the places to visit for rest and enjoyment are all advertised. In almost every phase of human activity and duty, advertising is a guide. It tells how to care for the baby who has just entered the world, and even churches use it to bring people to hear messages about the world beyond.

¹Adapted from Bernard Lichtenberg, "Who Pays for All the Advertising," in *Business Progress Bulletin*, Oct. 25, 1923, pp. 1-2. (Alexander Hamilton Institute.)

One of America's best known manufacturers of women's garments said to me recently that as he increases demand, and therefore production, through advertising, he can improve the quality and reduce the selling price. Ten thousand garments, for example, might represent a selling expense of half a dollar each; but by spending twenty-five hundred dollars for advertising he doubles the number of garments he can sell, and cuts down the selling cost to $37\frac{1}{2}$ cents. Through buying his raw material in greater bulk he gets it on more favorable terms, his multiplied production makes for economy, and the public shares in the benefit.

Who is paying for advertising there? It looks as if advertising were paying its own way. In other words, advertising is an asset, both to the producer and to the consumer.

Advertising has become a guarantee that the goods will be what the merchant or manufacturer claims for them.

Suppose that there was no advertising to guide you. What a hopeless task you'd have, if you wanted to select a new phonograph. There are in the United States about 160 manufacturers of phonographs. If you were to take a pencil and paper and write down on it the names of all the phonographs you have ever heard of, how close do you think you would come to the total number of makes. Another thing, just notice the brand that you've written first. I venture to say it would be Victor, wouldn't it? Let's take something else—automobile tires. There are 150 tire companies in the United States, yet ten companies are responsible for more than 75 per cent of the total production of tires. How do you account for that?

As I said before, advertising enables us to select, it insures us uniformity of quality and uniformity of price. We know that the phonograph or automobile tire, or any other nationally advertised brand, will be the same quality and the same price whether we buy it in New York or Chicago, and the same guarantee holds good.

I remember an investigation in 1917 on selling prices of 142 manufacturers known the country over. This investigation showed that selling prices had either not advanced at all, or only to a very small extent, in spite of the fact that in many cases the increase in costs of material was from 25 to 300 per cent higher. But this was not true of unadvertised goods. On the contrary, there was a general increase in the price of unbranded non-advertised articles.

CHAPTER III

MARKETING FARM PRODUCTS

1. METHODS OF SALE BY THE FARMER¹

In marketing his grain any one or more of at least four different methods are usually available to the farmer. He may dispose of it (1) by outright sale either to the country house or other local buyer, (2) by sale after storage in the local elevator or warehouse either to the house or others, (3) by sale on contract before actual delivery, or (4) by sale on his own account in the terminal market.

The relative importance of these methods varies as between different sections and different states. The first method, for example, is the most important in the Northwest and probably all grain-producing states in the Central West, and the second in the Pacific Coast area.

2. THE PURCHASE OF GRAIN BY COUNTRY ELEVATORS²

Regardless of the manner in which a sale is made, the price usually is established in one of four ways: (1) By a flat rate, (2) by grade, (3) by grade subject to dockage, or (4) by grade after cleaning.

PURCHASE AT A FLAT RATE

If purchased at a flat rate, the buyer takes all of the grain at a fixed price. To do this some knowledge must be had of the quality of a farmer's grain or a sufficiently large margin of profit must be demanded as protection against loss in event of poor quality. Under this system of equal price it is evident that the producer of high-quality grain usually receives less than it is worth.

PURCHASE BY GRADE³

In determining the grade of a load of grain the elevator agent usually scans the load and examines several handfuls therefrom for

¹Adapted from Federal Trade Commission, *The Grain Trade*, Vol. I, *Country Grain Marketing* (1920), p. 94.

²Adapted from G. K. Livingston and K. B. Seeds, *Marketing Grain at Country Points* (1917), pp. 6-7. (U. S. Department of Agriculture, Bureau of Agricultural Economics, Bul. No. 558.)

³Adapted from Federal Trade Commission, *The Grain Trade*, Vol. I, *Country Grain Marketing* (1920), pp. 99-100.

shrunken kernels, admixture with other grains, dirt, smut balls, etc.¹ If a careful agent, he will also plunge his hands far into the load for the purpose of discovering any signs of heating. If the grain has been bin-burnt² or contains smut or garlic, etc., this can usually be detected by smelling samples of the grain, any such contamination giving rise to strong, disagreeable odors.

Following this examination the test weight is taken, the weight of the grain being an important element in determining the grade. For this purpose a device known as a "hand tester" or "test kettle" is employed. It consists of a cup or kettle (usually of a pint or 1 or 2 quarts capacity) attached to a hand beam scale. The beam balances at zero when the kettle is empty and is so graduated that when in balance with the kettle filled it will record the number of pounds the grain content of the kettle will weigh to the bushel. This result is the test weight per bushel.

Taking these into consideration, and giving due weight to each, the agent decides the grade that he is willing to give the grain.

During the season of heavy deliveries at country points many agents do not even attempt to grade each load. At that time this often becomes a practical impossibility on account of the time which this process necessarily consumes. Instead, several handfuls of grain are taken from the stream as the grain is dumped from the farmer's wagon into the unloading pit and these are placed in a box or other container. The samples from each farmer's grain thus taken are kept separate, and when a farmer has finished hauling for the day the combined samples of his grain are thoroughly mixed and then graded, the result being the grade for all loads delivered.

The process of obtaining samples from the stream is also often followed in grading individual loads. Samples obtained in this manner are more representative of the load than are those obtained from the wagon box on account of the fact that certain light foreign material, such as seeds, etc., for which dockage is taken, is forced to the top of the load by the motion of the wagon, while other and heavier foreign matter settles to the bottom on account of its weight. A few agents in the Northwest grade the first few loads of a farmer's grain and thereafter give the same grade to the rest of his grain, loads that are of such quality as to be obviously different from the general run being graded separately as they occur.

¹ This discussion is based upon the practice in the Northwest prior to the introduction of Federal grades.

² Bin-burnt grain is that which has heated in the bin because of wet condition.

Competition prevents accurate grading. In some instances farmers believe their grain to be of the highest quality, and as a result will often sell to an elevator that offers them a better grade than the quality of the grain actually justifies, even though in such cases the elevator may make up for the overgrading by taking excess dockage.

All of the above and other factors tend to prevent the accurate grading of grain, and this remains true even though many country agents from long experience in the constant handling of grain are very proficient in sight grading. Evidence of overgrading by country agents, at least in the Northwest, is frequently found.

*Variation in Grade*¹

Deductions are nearly always made when the grain delivered is not equal to the grade contracted, but out of 163 elevators from which data on the subject were obtained only 50 paid a premium to the farmer when the grain delivered was of a higher grade than that commonly purchased. At the remaining 113 elevators the farmer with grain of exceptional quality realized nothing additional for it, any premium which the grain should command being either added to the profits of the buyer or used in equalizing excessive prices paid for inferior grain.

While some attempt at least is made to buy wheat, oats, and other small grains by grade at nearly all points, until recently almost no effort has been made to purchase corn in this manner, the same price being paid for all corn received, regardless of variation in any of the factors contributing to the grade, including color, moisture content, and the percentage of dirt and damaged grains. This method of paying for grain does not offer many inducements to the farmer to handle his grain properly.

Yield and other factors being equal the farmer should grow corn of the color commanding the best price in his market; of a variety showing a low moisture content when properly cared for; should harvest and store his crop in a manner insuring a low percentage of moisture and damaged grain; and should insist, in return, that the dealer pay him for the superior quality of his grain.

PURCHASE BY GRADE SUBJECT TO DOCKAGE²

Dockage is the number of pounds deducted from the gross weight of the grain as allowance for the foreign material contained therein,

¹Adapted from G. K. Livingston and K. B. Seeds, *op. cit.*, p. 9.

²Adapted from Federal Trade Commission, *op. cit.*, p. 101.

in order to determine the net weight of the grain. An average sample of the farmer's grain is obtained from the load and subjected to siftings through a series of sieves shaken by hand. The meshes of the sieves employed in this process are of graduated sizes similar to those prescribed by law for use by the terminal market inspection departments. The sample of grain is subjected to successive siftings, each through a sieve of a smaller mesh than the one preceding, until all the refuse has been sifted out, leaving only the grain.

In determining dockage there is employed, in addition to the sieves mentioned, in those cases where the grain contains a mixture of oats, a machine known as a "kicker." This contrivance consists of a series of slanting screens, one below the other, within a wooden frame, so arranged that they can be violently agitated by the turning of a crank. The sample is fed into the top of the machine, the crank is turned, and the grain in sliding over the screens is separated, the oats being spouted off into one pan and the other grain flowing from another spout into another pan.

In computing the dockage on a load of grain, the simplest method is probably to fill the test-weight kettle with a representative sample of the load and subject this sample to the sifting processes described. The refuse is then returned to the test-weight kettle, the scale beam of which, as already indicated, is so graduated as to record the number of pounds that the contents of the kettle will weigh to the bushel. The result will be the number of pounds dockage to the bushel, and this result multiplied by the gross bushels in the load gives the total pounds dockage on the load.

Correct dockage is not always taken by the country house any more than accurate grades are always given. The dockage taken is frequently estimated by the agent, and on account of competition or other factors its amount is often far from correct. According to the information obtained by the Commission, however, it seems probable, though not certain, that the farmer is less often favored by underdocking on the part of the agent than he is by overgrading. In fact, the charge has been made by farmers that the country elevators have taken a heavy toll from them by way of excessive dockage.

PURCHASE BY GRADE AFTER CLEANING¹

In some sections elevators are equipped with machinery which cleans the grain before it is weighed; the screenings are returned to

¹ Adapted from G. K. Livingston and K. B. Seeds, *op. cit.*, p. 10. Cleaning is discussed in more detail on *infra*, pp. 34-5.

the farmer, and settlement is made for the weight and grade of the cleaned grain. It is a rather surprising fact that this method is not used more widely than it is at the present time, for while one of the first machines for this purpose was installed over twenty years ago, the practice is still confined to a relatively small territory.

WEIGHING IN AND THE ELEVATING OPERATION¹

After the wagon has been driven on the scale it is weighed and the weight noted by the agent. The weight taken is usually to the nearest 10 pounds. This is done as a means of saving time, and since the error on a single load can not by this method be more than 5 pounds, greater accuracy is regarded as unnecessary. The cover of the unloading pit is then lifted, and if the elevator is equipped with a dump scale the grain is unloaded by elevating the front end of the wagon and allowing the grain to run out of the rear end into the pit. If the scales are of the usual platform style, the end gate of the wagon is removed and the grain is shoveled and swept out of the wagon box into the pit. When the wagon is empty it is again weighed, and the difference between this result and the weight of the loaded wagon gives the gross weight of the grain.

In determining the number of bushels for which the farmer is to be paid, arbitrary weights approximating the weight of the grain per bushel are used for computation purposes—for example, in the Northwest territory 60 pounds in the case of wheat, 32 pounds in the case of oats, etc. The gross weight of the grain divided by the fixed arbitrary gives the number of gross bushels of grain contained in the farmer's load. This result is then multiplied by the pounds of dockage, as determined by the agent, to obtain the total dockage on the load. This total dockage is then deducted from the gross weight and the result is the total net pounds of grain in the load. To convert pounds to bushels the net weight is again divided by the fixed arbitraries previously used and the result is the number of bushels for which the farmer is paid.²

After the grain has been dumped from the farmer's wagon into the unloading pit it must be removed to make room for other incoming

¹ Adapted from the Federal Trade Commission, *The Grain Trade*, Vol. I, *Country Grain Marketing* (1920), pp. 102-4.

² Thus, if the gross weight of the farmer's load were 5,400 pounds and the dockage per bushel $4\frac{1}{2}$ pounds and the grain in question was wheat, 5,400 would be divided by 60 to obtain the total bushels in the load, which would be 90; 90 multiplied by the $4\frac{1}{2}$ pounds of dockage per bushel gives a total dockage of the load of 405 pounds. Deducting this dockage from the gross weight of the load, 5,400 pounds, gives a total net weight for the farmer's grain of 4,995 pounds. Converting this again into bushels by dividing by 60 gives 83 bushels and 15 pounds for which the farmer is paid.

loads. The bottom of the unloading pit slopes down into what is known as a "boot." This is a metal container at the lower end of that part of the grain elevating machinery known as the "elevating leg." This leg consists of a series of buckets or scoops attached to an endless chain or belt operating on rollers, one of which is at the top and one at the bottom of the house, the belt or chain running up through the house in an inclosed chamber. This cup or scoop belt turns at its lower end in the boot and the cups scoop up the grain. At the top of the leg the belt is deflected as it passes over the top roller so as to permit the filled cups to empty into a spout. This spout can be directed to any of the various bins. The agent sets this spout for the proper bin, the leg is set in motion, and the grain is elevated and spouted into the bin.

PAYMENT FOR GRAIN

The price per bushel having been arrived at, the agent draws a check or draft to the farmer for his grain, provided the transaction is an outright purchase. Local elevator companies usually have accounts with banks in the locality and issue checks. In the case of the line companies the agent usually draws on the line company, most of which have arrangements with the local banks at their various stations for cashing such drafts. When there is no bank at the station, arrangements are made with one or more local merchants.

In some states the laws require that elevators issue for every load delivered by the farmer a memorandum of the quantity of grain delivered. Such a ticket is merely a memorandum showing the weights and dockage of each load and is not negotiable. Some companies comply with the law by the issuance of storage tickets instead of scale tickets.

Regardless of the requirements of the state laws a number of line companies as a matter of practice issue a storage ticket for every load or lot of grain delivered to the elevator, whether the grain thus delivered has been purchased or is merely put in storage by the farmer. If the transaction is an outright sale, the storage ticket is not retained by the farmer, but is indorsed by him and returned to the elevator agent, who thereupon draws a check or draft to the farmer, closing the transaction. This method, however, is not common, and is used apparently only by line companies. Should the farmer lose the check or draft, a duplicate can be had upon application to the elevator company and the filing of a bond.

3. CLEANING AND CONDITIONING GRAIN AT THE COUNTRY ELEVATOR¹

Some country elevators are provided with equipment for cleaning and conditioning grain. While such equipment is expensive, its use frequently improves the quality of the grain and increases its market value. Sometimes grain comes to the elevator in poor condition, often being dirty, dusty, or with high moisture content, and unless the quality is improved by cleaning or drying, the grain can not be disposed of advantageously. Moreover, grain containing impurities, foreign matter, or a high moisture content is quite likely to become hot in transit, which greatly reduces its value and frequently results in serious financial loss. If the elevator is not provided with suitable equipment for this process such grain must be shipped in the condition in which it is received. The farmer should not place all responsibility for cleaning grain on the elevator. It should be remembered that elevator managers do not pay grain prices for the dirt and water found in a farmer's grain. Rather they establish the price by taking into consideration the necessary expense of placing the grain in marketable condition. The farmer who delivers clean, dry, sound grain should receive a premium over the price paid to his more careless competitor. Farmers who deliver grain of inferior quality should be willing to submit to a discount.

The country elevator in some sections cleans the grain received and returns the screenings to the producers. The screenings are sometimes of considerable value for feeding purposes, selling for as much as \$10 to \$25 per ton. In sections of the country where wild oats are commonly found mixed with the small grains, from 2 to 40 per cent of the grain delivered at the elevator may consist of screenings. At several stations in North Dakota the "dockage" for the 1914 season crop of wheat averaged 6 pounds per bushel. In other words, the equivalent of every tenth load of grain delivered at the elevator was screenings, for which the farmer received no return unless the elevator was provided with cleaning equipment. Sometimes a charge is made for cleaning, usually from 1 to 2 cents per bushel, bulk weight.

Cleaning equipment is much more important in some sections of the country than in others. Houses provided with cleaning machinery usually have the advantage over competitors not so equipped

¹Adapted from G. K. Livingston and K. B. Seeds, *Marketing Grain at Country Points* (1917), pp. 4-5. (U. S. Department of Agriculture, Bureau of Agricultural Economics, Bul. No. 558.)

for obviously they are the only ones that can handle a low-grade crop and market it in proper condition. Ordinarily the farmer will fare better if he cleans his grain on the farm before marketing and retains the screenings for feed.

4. SEASONAL VARIATIONS IN COUNTRY ELEVATOR PURCHASES¹

During the first six months of the crop year about three-fourths of the wheat crop in the 14 principal grain-producing states² is marketed and a somewhat higher proportion of both the rye and barley crops.³ Due perhaps in a considerable degree to the wide distribution of the oats crop, the proportion of this grain marketed during the first six months of the crop year is appreciably below that of wheat, barley, or rye, only 62.77 per cent of this grain in 1913-14 and 69.27 per cent in 1916-17 being marketed in the six months from July to December.

TABLE 2. — TOTAL PURCHASES OF EACH OF THE FIVE PRINCIPAL GRAINS MADE IN EACH MONTH OF THE CROP YEARS 1913-14 AND 1916-17 BY ALL REPORTING COUNTRY ELEVATORS IN THE 14 PRINCIPAL GRAIN-PRODUCING STATES⁴

YEAR AND MONTH	Elevators Reporting	ALL GRAINS	WHEAT	CORN	OATS	RYE	BARLEY
		Percentage of Total	Percentage of Total	Percentage of Total	Percentage of Total	Percentage of Total	Percentage of Total
1913-14							
July, 1913.....	2,676	8.32	13.31	4.50	6.52	5.58	2.60
August, 1913.....	2,974	11.95	12.03	6.83	18.13	15.36	8.83
September, 1913.....	3,078	13.07	14.51	8.09	13.31	20.19	21.78
October, 1913.....	3,065	11.26	14.25	5.57	10.32	15.34	19.09
November, 1913.....	3,053	9.26	10.99	8.70	6.43	9.41	11.67
December, 1913.....	3,040	10.71	8.12	17.32	8.06	9.31	9.08
January, 1914.....	3,016	8.02	6.97	11.47	6.32	5.94	7.02
February, 1914.....	2,978	7.39	5.52	10.95	6.96	5.55	5.93
March, 1914.....	2,951	6.13	4.49	8.04	6.99	4.68	5.07
April, 1914.....	2,787	3.14	2.77	3.65	3.56	2.28	1.90
May, 1914.....	2,767	5.45	3.60	8.14	6.31	2.62	2.94
June, 1914.....	2,705	5.30	3.44	6.75	7.08	3.75	4.08
Total.....	35,090	100.00	100.00	100.00	100.00	100.00	100.00

¹ Adapted from Federal Trade Commission, *The Grain Trade*, Vol. I, *Country Grain Marketing* (1920), pp. 119, 339.

² Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Montana, Nebraska, North Dakota, Ohio, Oklahoma, South Dakota, and Wisconsin.

³ These conclusions are drawn from data covering the crop years 1913-14 and 1916-17.—EDITOR.

⁴ For names of the 14 states in question, see Note 2. The number of bushels marketed in each month, which is given in the original table, is omitted here.—EDITOR.

YEAR AND MONTH	Elevators Reporting	ALL GRAINS	WHEAT	CORN	OATS	RYE	BARLEY
		Percent-age of Total	Percent-age of Total	Percent-age of Total	Percent-age of Total	Percent-age of Total	Percent-age of Total
1916-17							
July, 1916.....	3,891	8.59	13.56	5.73	7.25	3.13	4.04
August, 1916.....	4,303	15.62	16.63	6.80	22.89	14.88	13.06
September, 1916.....	4,489	12.33	14.49	6.52	13.11	24.32	21.92
October, 1916.....	4,525	11.16	14.48	4.26	12.33	19.92	18.14
November, 1916.....	4,428	10.94	10.39	13.23	8.46	14.82	15.75
December, 1916.....	4,338	7.56	5.39	12.85	5.23	7.00	6.52
January, 1917.....	4,390	9.87	7.31	16.42	7.42	4.56	6.67
February, 1917.....	4,201	5.75	3.31	9.47	5.32	3.35	3.85
March, 1917.....	4,246	5.60	4.56	7.32	5.65	3.12	3.19
April, 1917.....	4,038	3.96	3.74	4.70	3.96	1.75	2.03
May, 1917.....	3,906	4.64	3.85	6.50	4.25	1.65	2.69
June, 1917.....	3,613	3.98	2.30	6.20	4.14	1.49	2.14
Total.....	50,368	100.00	100.00	100.00	100.00	100.00	100.00

Corn is marketed the latest of any of the five principal grain crops. Less than one-fourth of the corn crop in the 14 states tabulated is marketed during the first four months of the crop year as compared with about one-half or more of the crop of each of the other grains. Moreover, while the heavy movement of corn begins usually in November, only about 50 per cent of the crop is marketed during the first six months of the crop year as compared with about 65 per cent of the oats and much higher proportions of wheat, rye, and barley.

5. SOME FURTHER DETAILS OF THE COUNTRY ELEVATOR BUSINESS¹

The average country elevator is of wood construction, most frequently the cribbed type, with a capacity of between 25,000 and 26,000 bushels. About one-half of the country elevators are equipped with cleaning machinery, and slightly less than 80 per cent handle other commodities than grain. The five principal side lines so handled, as indicated by the proportion of elevators reporting their handling, are, in order of importance, coal, feed, flour, building material, and seed.

On the average the country elevator buys slightly less than 100,000 bushels of grain annually, of which about 36 per cent is wheat, 31 per cent oats, 24 per cent corn, 7 per cent barley, and 2 per cent rye. The average individual coöperative elevator, however, buys annually about 153,000 bushels, the individual mill elevator 113,000 bushels,

¹ Adapted from Federal Trade Commission, *Report on The Grain Trade*, Vol. I, *Country Grain Marketing* (1920), p. 17.

and the independent elevator 103,000 bushels. The commercial line and mill line elevators, on the other hand, buy on the average only about 77,000 and 79,000 bushels, respectively.

About 70 per cent of the grain shipped by country elevators goes to terminal markets (those markets receiving annually more than 1,000 cars of country grain) and about 7 per cent to smaller markets (those receiving less than 1,000 cars annually). The local mills absorb $13\frac{1}{2}$ per cent of the country elevator shipments and interior brokers 6 per cent; about 2 per cent goes to feeders, and approximately the same proportion to miscellaneous purchasers. Of the grain shipped to specified markets, about 71 per cent is sold on consignment, the balance being sold "to-arrive" or "on-track" to representatives of these market organizations.

6. TYPE DIFFERENCES IN COUNTRY HOUSES¹

A concern engaged in the country elevator or warehouse business may, theoretically, operate any number of houses. Actually, something under 200 houses seems to be about the maximum. The largest number of houses operated by a single organization which was reported in the returns to the Commission's country elevator schedule was 178. There are instances, however, where the ownership and control of two or more organizations, each operating several houses, are in the hands of a third organization, and in such cases it is evident that the latter concern might be operating, at least indirectly, more than the above-stated maximum.

Between the companies thus operating from 30 or 40 to 150 or more houses located at different points and between companies operating a smaller number of houses there is no essential distinction except in size.

Between the line type of elevator or warehouse and the individual type there is a fairly clear line of demarcation. A single line house is only a part of a larger organization buying grain in two or more localities, and all its operations are directed and controlled, with reference, more or less, to the operations of all the other houses composing the line. The individual elevator or warehouse, on the other hand, operates locally only and is managed without reference to the operations of other houses, except in so far as it may be competitively affected by them.

¹ Adapted from Federal Trade Commission, *Report on the Grain Trade*, Vol. I, *Country Grain Marketing* (1920), pp. 30-32, 41.

In each of these two principal classes of houses there may be distinguished four subclasses based on the character of control or ownership. On this basis the line type may be divided into "commercial," coöperative, mill, and maltster subtypes, and individual type into independent, coöperative, mill, and maltster houses.

According to information obtained from the Department of Agriculture and the Food Administration, there are probably not far from 30,000 country elevators and warehouses in the United States. The following table presents the numbers and percentages of elevators and warehouses according to the five types enumerated above.

TABLE 3.—COUNTRY ELEVATOR TYPES

TYPE	COUNTRY ELEVATORS		COUNTRY WAREHOUSES		TOTAL COUNTRY ELEVATORS AND WAREHOUSES	
	Number Reporting	Per cent of Total	Number Reporting	Per cent of Total	Number Reporting	Per cent of Total
Commercial line.....	3,383	36.01	126	24.66	3,509	35.42
Coöperative...	1,831	19.49	37	7.24	1,868	18.86
Independent..	2,971	31.62	234	45.79	3,205	32.35
Mill.....	1,175	12.51	114	22.31	1,289	13.01
Maltster.....	35	.37	.....	.....	35	.36
Total.....	9,395	100.00	511	100.00	9,906	100.00

7. LOCAL PURCHASING FACTORS OTHER THAN ELEVATORS AND WAREHOUSES¹

Besides the elevators and warehouses there are operating in the country, interior brokers, track buyers, scoop shovelers, solicitors for terminal dealers, feeders, retailers, country mills and other converters, or their agents. The number and importance of these buyers vary according to a variety of conditions. At various points and at different times one or more of these buyers may be found in more or less direct competition with the local elevators or warehouses in purchasing from the farmer. For this reason they must be considered in any discussion of the country marketing, even though their operations are in many sections either negligible or of minor importance as compared with those of elevators and warehouses. Sometimes these purchasers buy from the farmer and sometimes from the elevator. But

¹ Adapted from Federal Trade Commission, *Report on the Grain Trade*, Vol. I, *Country Grain Marketing* (1920), pp. 95-99.

since such buyers usually lack local warehouse facilities the grain which they purchase is most often bought outright, regardless of whether the seller is the producer or the local house, or whether the farmer is selling grain which he has just hauled in or grain which he has stored in the local house. In so far as these local purchasers buy from elevators or other buyers, these transactions are, of course, between middlemen.

Interior brokers operating in the country grain territory most often make their headquarters in one of the larger local towns affording transportation facilities in various directions. They purchase grain on a brokerage basis from practically all factors in the country market for anyone who may desire it, including terminal market dealers. The bulk of the purchases made by such brokers is from country houses in carload lots. Comparatively little grain is bought by such dealers directly from farmers, and of the grain so purchased practically all is in carload quantities.

Country track buyers are usually located at points in the country from which it is convenient to keep in touch with a considerable number of country stations. These buyers purchase grain in cars "on-track" at the elevator and also buy in car lots from farmers, reselling to whatever purchaser offers the best price, a terminal market factor, miller, jobber, feeder, or converter, etc. In this type of transaction the seller guarantees that the weight and grade of the grain are in accordance with his agreement with the purchaser, but as it is often difficult for country track buyers to obtain official weights and inspection, disputes not infrequently occur. Track buyers, like interior brokers, are perhaps most often found at points so located as to afford transportation facilities in a number of directions, thus enabling shipment to numerous consumption points.

The "scoop shoveler," or "scooper," buys grain entirely from farmers and loads it directly into cars from the wagons. The usual method of loading is to shovel the grain into the cars by means of scoop shovels; hence the name of this class of grain buyers. At times the "scoopers" employ contrivances known as track loaders, or portable elevators. This equipment consists of a frame carrying a series of buckets on a belt which is often operated by a small gas engine. It is placed alongside the railroad track beside the car to be loaded, one end of the machine extending through the car door. The grain is fed into a hopper at the other end of the machine from the farmer's wagon, the buckets fill themselves, and are carried into the car and dumped as the belt turns.

Scoop shovelers are usually transient, although there are some men who engage in the business regularly at the same place. Whether transient or not, the scoop shoveler is not common in the northwestern grain states. No scoopers were reported at any of the stations in four northwestern grain states which were visited, although one elevator stated that it had experienced competition from such a buyer, though not since 1915. In the Southwest, particularly Texas and parts of Oklahoma, such grain buyers apparently operate more frequently.

Scoop shovelers are a thorn in the side of the regular grain dealers. Each load of grain bought by the scoopers is lost to the elevators. In addition, the scoopers often, if not generally, offer higher prices than the elevators¹ are paying, and to secure grain it is necessary to meet these prices.

The purchase of grain from farmers by representatives of terminal market grain dealers is usually spasmodic. Frequently their purchases are made from farmers who, dissatisfied with the prices offered at the station, have loaded their grain with the intention of consigning it or selling it "on-track." Purchases by this type of buyer are usually in carload lots, although at times grain has been bought from farmers in wagonload quantities. This last is particularly true of new territory where elevators have not been extensively established. At times portable elevators have also been used by these solicitors for loading grain directly from wagons into cars.

The bulk of the grain purchased by solicitors of terminal market concerns, however, is from elevators, warehouses, and scoopers rather than farmers.

As solicitors of terminal concerns are also frequently attempting to secure the consignment business of local elevators, purchases of grain from farmers are avoided at stations where a local elevator is a customer of the house by which the solicitor is employed. Were a solicitor to buy grain from a farmer under such circumstances, the elevator's volume of business would be decreased and its account almost certainly lost to the solicitor's house.

Agents of the mills and other converters at times go from place to place, depending upon local prices and other conditions, purchase grain in carload or wagon lots from farmers, and then ship it to the miller or other consumer.

Feeders are stock raisers or liverymen, and the grains they pur-

¹They can, of course, afford to do this, since they have no fixed operating expenses comparable with those of the elevator.

chase—usually corn and oats—are used for feeding their stock. They also buy grain from farmers in both wagonload and carload quantities, in the former event loading it from the wagon into cars for shipment.

The operation of the retailer is local in character. He buys grain from the farmer, usually in wagonload lots, and then sells it to his customers as feed. Very often the grain is paid for by merchandise.

In spite of the considerable number of purchasers besides elevators and warehouses which are operating in the country market, the great bulk of the initial buying from farmers is done by the country houses. The operations of all other classes of purchasers discussed in the preceding paragraphs are more limited in character, and it is doubtful if their total amounts to more than a small fraction of the total sales made by the producer.

8. COUNTRY STORAGE OF GRAIN¹

Not all the grain grown in a community finds its way to the terminal market or other destination as soon as harvested. Some of it may be held back temporarily awaiting an increase in price, or permanently for use as seed grain at the next planting season. As a general rule, the farmer withholds sufficient grain from each crop to supply his requirements for seed the following year.

The quantity of grain stored by a farmer for other than seeding purposes depends in a large degree upon his financial situation. If he is compelled to borrow money to grow or harvest his crops, thus in effect mortgaging them in advance, he is generally compelled to sell his grain as soon as it is harvested. One instance of such a condition is where a general crop failure has occurred the previous year in any section which has left the farmer in such a financial position that he is compelled to sell immediately whatever grain he may harvest in order to pay his debts.

STORAGE BY FARMERS

In many cases, however, the financial condition of the farmer is such that it is necessary for him to sell only a small part of his crop, or none at all, to pay his debts or necessary expenses. In either event, if the price of grain is relatively low the farmer will frequently hold all or the balance remaining, after the payment of debts and expenses, for a higher price. In some cases farmers pursuing this practice sell their poor quality grain when harvested and hold their better grades.

¹Adapted from Federal Trade Commission, *Report on the Grain Trade*, Vol. I, *Country Grain Marketing* (1920), pp. 104-7, 110-12.

One of the inquiries made by agents of the Commission in the Northwest and of the Department of Agriculture in Illinois and Iowa in their interviews with country elevator agents was whether the tendency for the farmers to hold grain, either on the farm or at the elevator, for an increase in price, was increasing or decreasing as compared with former years.¹

Although the number of elevators involved is too small to permit very definite conclusions, the results indicate that there is at present little, if any, tendency for this practice to increase in the Northwest and that there is probably a considerable increase in holding grain in Iowa and Illinois. The reason for the difference between the two areas in this respect is probably to be found in the fact that the Northwest is relatively new territory as compared with Iowa and especially Illinois, and that the economic status of the farmers in these two states is somewhat better than in the Northwest.

Where grain is held back by the farmer for higher prices the volume of it is likely to be considerable, as compared with those cases where it is held for seed. Owing to the frequent inadequacy of farm storage space, therefore, or other considerations of expediency, the elevator or warehouse rather than the farm is likely to be employed for storage purposes instead of the reverse, as where grain is held for seed.

The attitude of country elevator operators regarding warehousing or storing grain for farmers varies greatly. A majority of the numerous elevators in the Northwest visited by the Commission's agents reported that they received grain for storage from farmers. A few concerns reported that they refused to accept grain for storage and a number of others that while they formerly stored for farmers they were now either refusing to do so or else discouraging the practice.

In the two states of Iowa and Illinois 21 of some 90 elevators replying to inquiries of the Department of Agriculture on this subject stored grain for farmers. In most cases these houses reported oats as the principal grain stored.

Elevators frequently, if not generally, prefer to store little or no grain, and many of them refuse to store at all upon one ground or another. A frequent reason given by agents for refusing to store is that the elevators do not have sufficient space.² A further objection

¹The interviews referred to in this section occurred in 1918.

²Though this is frequently merely an excuse, it should be borne in mind that the average country elevator has only about 10 or 11 bins and about 25,500 bushels capacity. Nearly all of them, except some mills and maltster houses, usually handle at least two or three kinds of grain and sometimes four or five, including flax, each of various grades, some if not all of which grades as well as the different kinds of grain must be kept separate.

to storage by the elevator reported by one agent was that misunderstandings with farmers not infrequently arose when grain was stored. One elevator in the Northwest reported storing grain for farmers only when such farmers were tenants and it was not known what the landlords wanted to do with the grain. In this case the storage would be temporary. Likewise, elevators are often compelled to store because competing elevators do so.

The practice with reference to charges for storage among the elevators visited by the agents of the Commission and the Department of Agriculture shows considerable variation. Many concerns, for competitive reasons, etc., store gratis, and it appears to be customary for most elevators to allow free storage of from 15 to 30 days. Occasionally longer periods are allowed. One case was reported where two months were permitted and one coöperative house gave six months free, as only stockholders stored in the house. After the period of free storage the charges reported ranged from a half a cent to 1 cent per month for each bushel. In some cases one rate was made for a certain period after free storage and a lower rate thereafter. The rates were made on a 15-day basis in some cases and in others on a 30-day basis.

When the farmer in the northwestern grain states elects to store his grain in the elevator or warehouse instead of selling it immediately, he usually does so with the intention of ultimately disposing of it to the house in which it is stored. In such a case the method of handling the grain at the local house is practically the same as when the grain is sold outright, except that no price is fixed, and consequently no check or draft issued by the agent to the farmer. The grain, however, is graded, weighed, and docked, unloaded, and elevated to the proper bin in the same fashion as though it had been sold outright. Instead of a check or draft the farmer receives from the agent a storage ticket for each load delivered at the elevator, showing the kind and grade of grain, the gross weight, dockage, and net weight of the load. The ticket also shows the rate of storage charged and the conditions under which the grain is stored. This ticket, when signed by the elevator agent, is negotiable and can be used as collateral for loans.

The farmer retains this storage ticket until such time as he decides to sell. He then presents his ticket to the elevator agent, who computes the total storage charges, deducts them from the price he is paying for that grade of grain on that day, and draws a check or draft to the farmer for the net proceeds.

Storage tickets are often lost. Duplicates can be had upon application to the issuing company and the filing of a bond.

Very rarely does a farmer present his storage tickets and demand delivery of the grain called for by such tickets. In the event that he were to do so he would be required to pay such storage charges as might have accrued upon the grain in question. Moreover, in such cases the farmer would not and could not receive back the actual grain which he delivered to the elevator, since this grain would not ordinarily have been kept separate but would have been binned with other grain of similar kind and grade owned either by the elevator company, other farmers, or by both the elevator and farmers. In fact, the actual grain delivered by the farmer may have been sold and shipped a long time previously, the elevator company having purchased a future, which is sold when the farmer cashes in his storage tickets.

If the farmer, instead of storing his grain in the elevator or warehouse with the intention of ultimately selling it to the house, stores with the expectation or intention of later demanding delivery of the identical lot he has unloaded, the grain in question is treated as special bin storage grain.

Special bin storage transactions are comparatively rare in the Central grain states. Such transactions usually occur either when a farmer intends to ship his own grain or when the farmer and elevator agent are unable to agree upon the grade. In the first case the grain is put in an empty bin, and a special bin-storage ticket is issued for each load. In the event of a disagreement between the farmer and the agent as to grade, the grain is elevated to an empty bin and its identity preserved until a sample has been sent to the terminal market and there graded. The grade thus established, the elevator agent issues a regular storage ticket to the farmer if he does not wish to sell immediately, or a check in case he does.

STORAGE BY ELEVATORS

Elevators as well as farmers may hold back grain from the terminal market awaiting higher prices. The extent of this practice varies. In the Northwest only 13 out of about 150 elevators visited by the Commission's agents reported storing for higher prices. Several of these reported that they held only about 10 per cent, or "very little," or "occasionally." Line elevators in the Northwest frequently fill the house with good grades of grain (usually wheat) for the purpose of carrying it through the winter.

In Iowa and Illinois grain apparently is much more often held by elevators for higher prices than in the Northwest. In Illinois about one-half of the elevators visited by the Department of Agriculture agents reported affirmatively on this matter and in Iowa about one-third.

There are indications in the data gathered by the Commission that the attitude of the country elevator on holding back its own grain is frequently influenced by the hedging policy of the elevator, and the differences in this respect between the Northwest on the one hand and Illinois and Iowa on the other confirms this view. In the Northwest hedging is much more prevalent than in either Iowa or Illinois. If an elevator has hedged its grain, there is little reason to hold it except for the purpose of realizing either a carrying charge or a possible premium of the cash grain over the future. By hedging, the elevator has presumably protected itself against loss, but it has also presumably limited its profit, except so far as the cash grain goes to a premium later in the crop year. Unless the cash grain should go to a premium, any advance will presumably be offset by a corresponding advance in the future. For this reason, therefore, there is probably less inducement for the hedging house to hold grain than for the nonhedging house. The nonhedging house, however, having no future outstanding, will obtain the full benefit of any price advance, although it must also bear the loss resulting from any decline. In the case of the nonhedging house, therefore, there is a speculative inducement for holding grain, which is largely absent in the case of hedging houses.

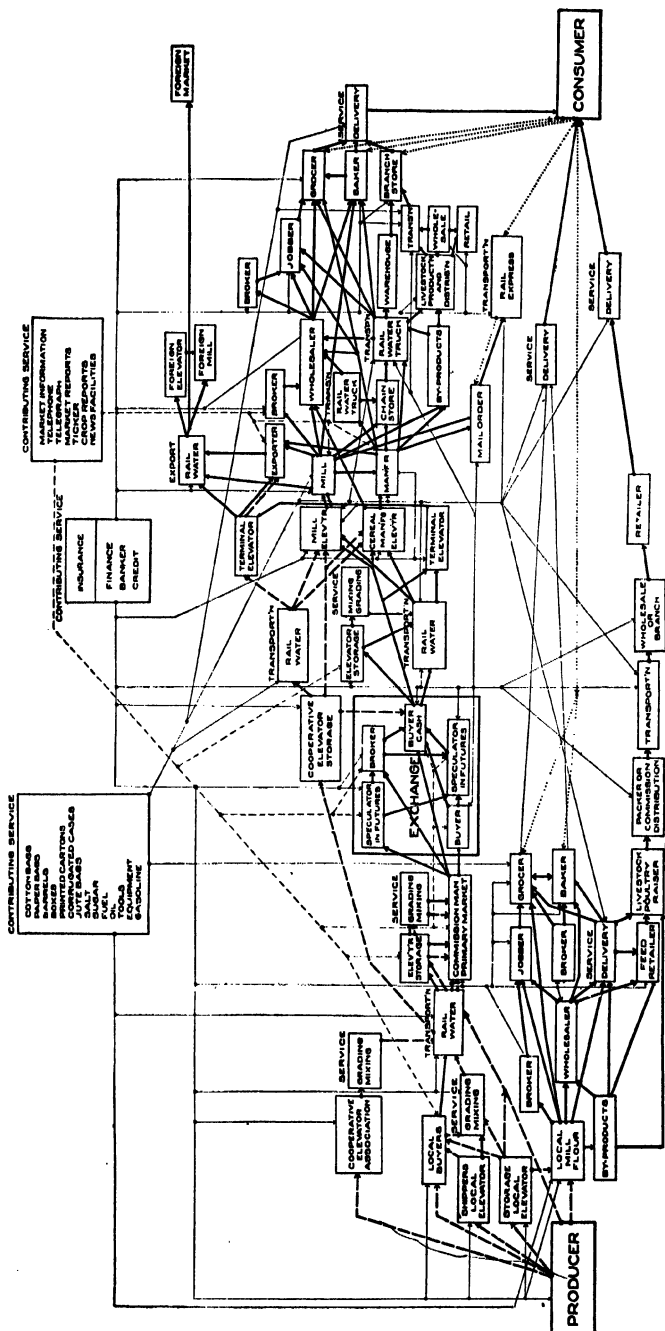
9. SALE OF GRAIN ON CONTRACT¹

Many of the contracts of elevators with farmers for the delivery of grain are reported as made while the grain is being harvested. This is to be interpreted broadly, however. It may mean while the grain is being cut, while it is in the stacks, or again while being threshed, or even after threshing. In other cases contracts are made prior to the harvest, before the grain has been cut. Generally the elevators in the Northwest that contract for grain confine their contracts to grain being threshed or already threshed and stored in the farmers' granaries.

Such contracts for grain are both oral and written. Because of the reluctance of some farmers to sign written contracts, some com-

¹ Adapted from Federal Trade Commission, *Report on the Grain Trade*, Vol. I, *Country Grain Marketing* (1920), pp. 112-14.

DIAGRAM 1.—DISTRIBUTION OF WHEAT AND WHEAT PRODUCTS¹



From Joint Commission of Agricultural Inquiry, Report, Pt. IV, Marketing and Distribution (1921), facing p. 17.

Diagram 1 shows the detail of distribution of wheat and wheat products, and the agencies to which the producer may offer his wheat in his local market and the operations of distribution through primary and terminal markets and the functions to be performed in each instance. The diagram also shows the contributing services that relate to the movement and handling of wheat and wheat products. Other grains travel toward market in a manner somewhat similar to wheat.

panies make oral contracts only. Other companies will make only written contracts. The oral contracts are frequently loosely made and indefinite. The written contracts are more explicit, more formal in character, and more easily enforced. In making a contract the country agent may agree to purchase the farmer's grain either at a price agreed upon at time of contracting or based upon the price prevailing at time of delivery.

In the Northwest, with some differences in different sections, practically all classes of elevators are disposed to discourage the making of contracts with farmers. The Minneapolis line companies interviewed stated that they preferred not to make these contracts, while of the approximately 150 representatives of mill, coöperative, and independent elevators interviewed in the country 69 per cent stated that they did not make contracts, and 18 per cent that they contracted but very little and only with farmers whom they were certain would deliver. About 4 per cent of these representatives informed the Commission's agents that they had contracted in the past, but had abandoned the practice because of failure of farmers to deliver, and another 4 per cent reported that, while they contracted, they did so only in special cases, as, for example, when the farmers were in need of money owing to inability to deliver grain on account of bad roads.

In the grain states tributary to Chicago contracting appears to be much more prevalent than in the Northwest. Thus in Iowa and Illinois 73 out of 95 elevators reported that they made contracts for grain with farmers; 21 out of 39 in Iowa; and 52 out of 56 in Illinois. In south central Illinois a few elevators reported contracting acreage.

The few line companies operating out of Chicago, Indianapolis, and Peoria, in contrast to those in the Northwest, do considerable contracting. Although one milling line reported only a few acreage contracts for grain, and only with farmers whom they thought would make deliveries, an official of one of the other line concerns stated that his company made contracts just prior to the harvest for about 5 per cent of the grain received at its elevators and for from 25 to 50 per cent between the time of cutting and the time of threshing the grain. These contracts were made by the agents of the company and the farmer at a stipulated price and called for delivery on or before a specified future time.

A 19-house line operating out of Peoria is also in the habit of making contracts with farmers for the delivery of grain, these contracts usually running for 10, 30, 60, or 90 days. An Indianapolis

mill line likewise reported a good many contracts with farmers for the sale of grain.

OBJECTIONS OF ELEVATORS TO CONTRACTING

Contracting for grain at a fixed price has proven an unsatisfactory practice with many elevators. The principal objection thereto is that if prices are in advance of those stipulated in the contract when the time of delivery arrives the farmer becomes dissatisfied and often refuses to fulfill the contract.¹ If the elevator then attempts to enforce it the usual result is that the farmer transfers his business to another elevator. His dissatisfaction easily spreads to other farmers, especially if the elevator in question is an independent or one of a line company and may result in a serious loss of business.

Contracting with farmers for their grain by both warehouses and terminal market interests is a common practice on the Pacific Coast. In this territory the farmers are financed to a considerable extent by terminal market buyers, mills, and other grain dealers. When such advances are made it is quite customary to enter into contracts either for the farmer's whole crop or else to an amount sufficient to cover the advances. The contracts are generally made during the harvest season and usually to enable the farmer to pay the expenses of harvesting. They usually specify the price to be paid the farmer for his grain.

In this territory, apparently, contracts are customarily complied with, and no complaint from this section that the farmers refuse to fulfill such agreements was reported.

10. MODERN METHODS OF MARKETING BEEF CATTLE²

Many methods are used by the producer in marketing beef cattle, but most of them may be grouped under six or seven general heads. The principal systems, listed in the probable order of their relative importance, are as follows:

- (a) Selling to country drover for shipment to central markets.
- (b) Shipping to central markets through coöperative associations.
- (c) Shipping to central markets direct.
- (d) Direct marketing to local butchers.

¹ It is interesting to note that out of 79 Iowa and Illinois elevators visited by the agents of the Department of Agriculture 25 reported that deliveries on contracts were not to be relied upon.

² Adapted from E. W. Sheets, O. E. Baker, C. E. Gibbons, O. C. Stine and R. H. Wilcox, *Our Beef Supply* (1921), pp. 278-80; 286-89. (U. S. Department of Agriculture, *Yearbook 1921*, printed as Separate No. 874.)

(e) Selling direct: (1) Selling direct to packer-buyer, or speculator in the country. (2) Shipping direct to the packing house.

(f) Slaughtering on farms and selling as carcass meat.

(g) Special forms of marketing, such as (1) auction sales, (2) sales on the range to coöperative purchasers, etc., (3) mail order sales.

From one-half to three-fourths of the beef cattle marketed in the United States pass through central markets. In 1916 central markets received more than 71 per cent of the beef cattle marketed, and in 1917, 76 per cent. Since then there has been a slow but steady decrease in the percentage of cattle disposed of through public stockyards. In 1918 about 75 per cent, in 1919, 74 per cent, and in 1920, 70 per cent passed through public stockyards, whereas in 1921 the apparent proportion so marketed dropped to 67 per cent.

One of the earliest methods of disposing of cattle was through sales to the country drover, and although during the past few years the business of the drover has been seriously curtailed because of the development of newer methods of marketing, it seems probable that a greater per cent of cattle and calves still pass through the hands of the country drover than are marketed in any other way. Formerly the drover had a tremendous advantage in his dealings with most farmers due to his superior knowledge of general market conditions. Recently, however, the extension of such facilities as the telephone, rural free delivery of mail, wireless telegraph and telephone has placed the farmer on a more nearly equal footing with the drover.

Next to the country drover, coöperative shipping is probably the most important present-day method of marketing beef cattle. In 1920 approximately one-fourth of Iowa's live stock was marketed coöperatively. During the same year Wisconsin had about 500 coöperative livestock shipping associations, which handled approximately 65 per cent of the livestock marketed by that state.

Shipping to central markets by producers has always been the favorite method of large-scale producers. The range cattleman or the Corn Belt feeder who has anywhere from a few carloads to several trainloads of cattle to market at one time usually prefers to take his own stock to market rather than patronize either the country drover or the coöperative shipping association.

The local butcher has always provided an important outlet for cattle. His nearness to the producer gives him certain advantages, but during recent years this advantage has been somewhat neutralized by the economy of large-scale slaughtering and the extension by the big packers of the peddler car system.

Selling direct to a speculator or packer buyer in the country and shipping direct to the packing house appeals to some producers on account of the elimination of stockyard charges. The chief objection to these methods is that it relieves the producer of a certain amount of responsibility, and thereby contributes to his position of comparative isolation and discourages careful study of market and trade conditions.

In 1919, 1,904,581 cattle and calves were slaughtered on farms, while 224,780,189 pounds of beef and veal were sold from farms during the same year. Auction sales, selling on mail order, and selling on the range to coöperative purchasers, are comparatively new ways of disposing of cattle and have not, as yet, become important.

Statistics of railway loadings of cattle and calves are available only for the year 1918. Nebraska was the leading State in that year, with over 90,000 carloads. Illinois, Texas, Missouri, and Iowa each shipped nearly as many, Iowa shipping practically as many from country points as Nebraska. These five states furnished more than half of all cattle and calves shipped in the United States during that year. Market as well as country loadings are included. The cattle were shipped mostly to the big markets and packing centers located in the same group of states.

Not all cattle marketed are converted immediately into beef. About 20 per cent of all cattle and calves received at the 67 markets during the five years 1916 to 1920, inclusive, were returned to the country for further feeding.

SEASONAL MOVEMENTS OF CATTLE

An important characteristic of the movement of cattle through public stockyards is the seasonal variations. Both range and pasture cattle are marketed when the pasture season ends, while the bulk of the cattle from the Corn Belt go to market from three to four months after they are put on feed. Since probably 75 per cent of the cattle marketed are grass cattle it is obvious that their movement represents the peak for the year.

A tabulation of cattle and calf receipts at all public markets for five years shows that October is, on the average, the month of heaviest marketing, November second, and September usually third. As a rule February is the lightest month, partly due to the fact that it is the shortest month but more particularly because it comes between seasons. By that time the grass-fed cattle have all

been marketed and only a few of the grain-fed cattle are ready for market. For the five years studied the October average was 2,709,148 head, while that of February was 1,357,549, a variation of nearly 50 per cent. Normally over 40 per cent of the total number marketed during the year go to market during the last four months.

These seasonal surpluses usually react to the decided disadvantage of the producer in the form of dull trade and lower prices. For many years individuals and organizations have made serious efforts to devise ways of equalizing receipts at public markets. For one reason or another most of these have failed, the chief difficulty arising from the fact, pointed out above, that such movements are controlled largely by weather and climatic conditions.

11. DIRECT SALE OF FRUITS AND VEGETABLES TO CONSUMERS¹

The principal methods of selling direct to consumer by the farmer may be summarized as follows: Direct delivery by wagon or motor truck; sales on public markets; express and parcel-post shipments; peddling from the car doors; and, finally, sales to factories, such as canning or pickling plants, cider mills, and grape-juice factories.

SALE DIRECT TO CONSUMER

Direct delivery by wagon or motor truck is practicable only where the farmer lives within a 25-mile radius of the consuming center. Hence this method affords an outlet only for the commodities produced in the area immediately surrounding the market. Such deliveries are limited, in the main, to country towns and smaller cities. The automobile truck undoubtedly is enlarging this radius, but this service probably will be limited to a very small portion of the total producing area of the country and cannot be expected to form an outlet for the great bulk of farm crops. Again, the development of cities with their constant encroachments upon outlying country districts forces production areas farther from the market centers, and in the larger cities makes it practically impossible for growers to deliver their produce direct to consumers. The best examples of successful direct deliveries by growers to consumers are found in the sales of fresh fruits and vegetables in small country towns and in the deliveries of milk from neighboring farms through the residential sections of most of the larger cities.

¹ Adapted from J. W. Fisher, Jr., J. H. Collins, and W. A. Sherman, *Outlets and Methods of Sale for Shippers of Fruits and Vegetables* (Aug. 16, 1915), pp. 9-12. (U. S. Department of Agriculture, Bureau of Agricultural Economics, Bul. No. 266.)

Public markets afford a profitable outlet for the farm products of growers located within hauling distance of many large cities. These markets may be either municipally or privately owned. Selling may be either at wholesale or retail, although in many cases both selling methods are allowed. Customarily the sites consist merely of an uncovered tract set aside for this purpose, where space sufficient for the grower's wagon is rented at an average charge ranging from 10 to 25 cents per day. The site may be improved by the erection of sheds or even a specially constructed market house. In the latter instance the interior is portioned into stalls which usually are rented to regular wholesale or retail dealers who buy from the producers.

Public markets are important factors in the distribution of farm products in many eastern cities, and although they are not quite so usual in the West, they constantly are receiving more attention.¹

The extensive use of express and parcel post by farmers in order to reach consumers is of recent development, and the ultimate possibilities of this means of distribution are as yet unknown. The post-office authorities, as well as the express companies, are making efforts to bring the consumer and producer together by publishing lists of producers who have goods to sell, at stated prices, and also by means of lists of consumers who are in the market for different commodities.

The parcel-post shipments up to the present time usually have been limited to shipments of poultry, butter, and eggs, and have been quite successful in these lines. The cost of such service, except for extra fancy stock, in many cases is prohibitive, and it is doubtful to what extent the average farmer can make use of these outlets for miscellaneous products. Without the development of special methods they are not to be considered by those having car-lot quantities.

Another method by which the grower can sell direct to the consumer, at least direct to the retail trade, is by accompanying a car of produce to the market and selling direct from the car door to the dealers and consumers. This is termed "car peddling." In order to do this it is necessary in most cities that the producer take out a license from the city authorities which gives him temporary selling privileges. The charge for such a license varies from \$10 to \$25.

While this method of selling may be practicable where the growers have no coöperative association, yet it would be unwise for an individual producer to go on the road in active competition with a competent selling organization. The grower also must bear in mind the fact that although the returns from this method of selling at first

¹See G. V. Branch, "Public Retail Markets," in U. S. Department of Agriculture, *Yearbook 1914*

may appear large, they will be cut down to a great extent by his expenses, the time consumed, and the consequent neglect of his regular business.

This practice may result also in lowering wholesale prices, inasmuch as the grower may be anxious to get away and may sell at figures which the regular dealers would not accept. Car peddling is more common in the South and Southwest than in other sections of the country.

SALE TO FACTORIES

Sales to factories may not seem to be rightfully classed with direct sales to consumers. However, when it is remembered that fruit which is taken to a canning factory as a perishable product comes from the factory as a semistaple product, this classification seems reasonable. These factories may be classed under the following general heads: Canning plants, pickling plants, cider mills, evaporating plants, wineries, distilleries, and others of like nature.

Canning plants probably constitute the largest outlet for fruits and vegetables, but there is a common misunderstanding concerning these factories. It is usually understood that these plants utilize the cull grades of fruits and vegetables. This is true in only a limited way, and the practice is becoming less common. Competition has become so keen among canning factories that quality is now a determining factor of success, consequently they are making an effort to secure the higher grades of fruits and vegetables. It usually is necessary to make contracts in advance if markets are to be secured at these factories. The farmer who approaches the factory only when he has unsalable surplus and the markets are glutted must expect very low offers.

Pickling plants use more vegetables than fruits, and a large part of the cucumber crop is used in this way. Kraut factories, which in many sections afford important markets for cabbage, may be included under this head.

Cider mills and evaporating plants may be said to be the real outlet for cull grades of fruits, although even with these quality is becoming more important. It is a truth too little understood that low grades, while sometimes bringing fair returns, are in reality a detriment to the market, because they tend to pull down the price of the better grades. Farmers will do better on the whole to accept a low price for these cull grades from the factory and keep them off the general market, thus causing the general tone of the market to strengthen materially.

Wineries are most numerous in the western grape sections, especially in certain districts in California. Certain varieties of the European grapes are especially desired for wine manufacture, and the wine industry at Fresno, California, is a very important factor in the grape-growing business. The grape-juice factories of New York and Michigan are important factors in the utilization of native grapes in the northern section. These factories are insisting more and more upon a better quality, and cull grapes find a limited outlet. Apples and peaches are the fruits most largely used in the manufacture of brandies and cordials by the distilleries, and these are now insisting upon at least a fair quality.

These industries have become vital necessities in the fruit sections on the Pacific Coast and probably will be the determining factors between profit and loss. While the need of such outlets has not been forced upon the attention of eastern fruit growers to the same extent as in the West, nevertheless there is room for much study and development in this field.

12. SALES OF FRUITS AND VEGETABLES THROUGH MIDDLEMEN¹

Although direct sales from producers to consumers have their advantages, nevertheless it is true that most car-lot quantities of farm produce must be sold through wholesale distributing agencies, and the average producer will have to utilize some of the present machinery. There is much misunderstanding and confusion in the use of the terms which designate the different middlemen. In this bulletin an attempt is made to employ these terms according to their most common usage in order to have definite expressions with which to work.

The middlemen to or through whom growers can sell direct may be enumerated as follows: Country merchants, country collecting agents, country buyers of special products, traveling buyers, private exchanges, operators, brokers, commission men, auctions, and retailers.

BUYERS AT COUNTRY POINTS

The primary advantage of dealing with a country merchant is that the farmer can trade with him in person and is more apt to know the financial and moral responsibility of the man to whom he is selling. The country merchant usually will purchase poultry and

¹Adapted from J. W. Fisher, Jr., J. H. Collins, and W. A. Sherman, *op. cit.*, pp. 12-16.

poultry products, farm butter, wool, hides, or commodities produced on the farm in quantities not sufficiently large to constitute commercial shipments. The farmer is paid for the produce either in cash or with credit at the local store. Provided his purchases are large enough, the country merchant combines them into car lots and sells direct to the city trade, or disposes of them to a car-lot assembler at some neighboring shipping point, who concentrates these small shipments into car-lot quantities, selling to the city trade on his own account; also the country merchant may ship small lots of produce directly to commission houses.

Country collecting agents, on the other hand, are the country dealers or buyers who go directly to the farm with their wagons, buying or trading for small quantities of eggs, butter, poultry, hogs, calves, and other farm products which they concentrate into carloads and ship to receivers in the city. They pay cash for the goods at the farm. These country collecting agents include the so-called "car-lot assemblers."

Country buyers operate, as a rule, in districts producing large quantities of such specialized commodities as apples, peaches, and citrus fruits. They buy from the producers in car lots and ship to the best available markets, selling on orders or through the usual market channels for whatever margin they can secure. They pay in cash at the shipping point at the time of sale or delivery. This method of sale is common for tomatoes and cantaloupes in Florida, potatoes in Maine, watermelons in Texas, peaches in Georgia and Michigan, and apples in the eastern states.

The term "country buyers" as used in this bulletin refers to buyers who are permanently located and do not move from one district to another as do buying brokers and traveling buyers. In many instances the trade defines this person as a "shipper." Another very erroneous designation is "car-lot assembler."

These local country buyers, where they are well known in particular communities, may prove to be profitable connections for shippers, due to the fact that they have reputations to uphold in order to obtain business, and consequently cannot operate on a "fly-by-night" basis. Furthermore, these buyers usually pay cash at time of delivery, and inasmuch as the grower thus has the money in possession, the honesty of the buyer is not so important.

Traveling buyers and brokers operating at shipping points work along practically the same lines, moving from one specialized district to another with the advance of the season.

The difference in activities lies in the fact that brokers buy whatever produce is wanted in whatever amounts are desired, and ship to wholesale houses which have placed orders with them, charging a definite brokerage for each car shipped. They are usually "free lances" buying for all who retain them, upon payment of the stipulated brokerage. In reality so-called brokers at the shipping end in addition to buying on orders from wholesale houses also sell for growers and shippers, thus finding outlets for carloads of produce.

Traveling buyers, on the other hand, are employed by single houses on a definite salary basis and perform the services of brokers for these individual houses alone.

In order to attract buyers to a certain section, the first requirement is a crop or crops of sufficient tonnage to make the "deal" of commercial importance. A second requirement is to bring the facts to the attention of the trade before shipments begin. This can be accomplished by advertisements in trade journals or by letters to the largest distributors of these products in neighboring markets, stating the probable number of carloads of each product to be shipped from the district, together with the probable opening date of commercial shipments. Provided a large number of buyers and trade representatives can be assembled, the possibility of higher prices is greatly increased through competitive bidding.

Sales should not be made to representatives of unknown firms without a careful inquiry into the business responsibility of the firms and into the accredited standing of the representatives.

Traveling buyers and brokers will be found in nearly all of the specialized districts as well as in many other sections.

MIDDLEMEN FROM OUTSIDE THE LOCAL MARKET

Private exchanges are stock companies, organized for profit, which distribute shipments, usually in car lots, for either individual growers or producers' organizations. They take charge of the goods before they are packed, and sell through salaried representatives or individual brokers in the large markets, subject to the growers' orders. Except that they are operated for profit rather than on a coöperative basis, they resemble very closely the coöperative associations in their distribution and sales methods.

These exchanges charge either a straight brokerage or a percentage based upon contract. The charges vary with each transaction, consequently no general average can be given. In general, their charges

will be found to be about the same as private brokerage charges, with an addition sufficient to cover the cost of any extra services which may be rendered. Large quantities of northwestern apples, Michigan grapes, and California citrus fruits are handled by these exchanges.

Operators are large wholesale firms which send private buyers or solicitors into producing sections, and which, through representatives or branch houses in several large markets, afford a wide distribution for commodities purchased on their own account. Some of the firms which have handled a large part of the Colorado cantaloupe production in recent years may be termed operators. These firms performed the following functions: (1) They have advanced rent, irrigation expenses, crate materials, and other supplies; (2) superintended the picking, grading, packing, and loading of the crop; (3) made further cash advances at the time of shipment; (4) distributed the crop.

Operators buy in car lots, and in many cases they will handle the whole "deal" in a particular section, as was done with Colorado and California cantaloupes in the 1914 season. They attend to all of the details of advertising and marketing, and sell the fruit under their own wrappers and labels. The advances made vary with each transaction and depend upon how favorable a contract the grower is able to demand from the representatives of the operators. Cantaloupes in California and Colorado, tomatoes in Florida, and potatoes in Texas are handled, to a large extent, by these organizations.

The producer who sells to operators is reasonably sure of a market, although he may have to accept low prices. The low prices sometimes offered by the firms acting in this capacity are perhaps justified by the fact that they assume large risks and heavy financial burdens, while the growers are relieved of all speculative worries.

A rather uncommon practice is that of the billing of cars direct to brokers in the markets by individual growers. When goods are standardized and the broker can effect a sale, subject to inspection, merely upon notification of shipment, this method may be practicable, but in the majority of cases the average grower will be unable to utilize this method.

The most common outlet for the producer who is shipping in less than carload quantities is through the commission merchants in large markets.¹

¹ This method is discussed *infra*, pp. 144-46, 154-58.

13. GENERAL SALES PRACTICES AND TERMS: FRUITS AND VEGETABLES¹

The usual types of sales of produce may be enumerated as follows: sales at point of origin, sales in transit, and sales at destination. The terms upon which sales may be made may be classified as follows: cash at farm or orchard, f.o.b. either point of origin or destination, and finally an "on-track" sale for cash at destination.

SALES AT POINT OF ORIGIN

Sales at point of origin may be either outright sales of commodities before or at harvest, sales on f.o.b. terms, or sales "on joint account."

Outright Sale

The outright sale of products before or at harvest does not need much elaboration, as these sales are for cash and the producer can treat in person with the buyer. The only differences that may occur between sales of this class are in the terms. For instance, fruit may be sold to the buyer on the trees, in which case the buyer estimates the probable yield and offers a lump price for the whole crop. In this case the buyer attends to picking, packing, and delivering the fruit, and the grower is relieved of all further responsibility. Many orchardists object to this method of sale, claiming that the pickers and packers hired by the buyer do great damage to the trees while gathering the fruit.

Growers who object to this method of sale pick and pack the fruit themselves, preparing it in marketable shape, and sell the fruit at the orchard. In this case the buyer attends only to loading the fruit on the cars and to its disposition on the market, the grower receiving his money at the time of sale. A variation of this method occurs when the grower sells the crop while on the trees, but payment is deferred until after the fruit is picked, packed, and delivered.

Another common type of outright sales occurs when the buyer contracts to use only fruit of a certain grade, in which case the orchardist must find other outlets for the remaining grades.

F.O.B. Sales

Sales on f.o.b. terms, due to improved standardization of farm products, are forming a continually increasing portion of the total sales of produce, although the increase is very gradual.

¹ Adapted from J. W. Fisher, Jr., J. H. Collins, and Wells A. Sherman, *Outlets and Methods of Sale for Shippers of Fruits and Vegetables* (1915), pp. 17-23. (U. S. Department of Agriculture, Bureau of Agricultural Economics, Bul. No. 266.)

"F.o.b." means "free on board." As sales may be made "f.o.b. point of origin" or "f.o.b. destination," the grower should always be careful to specify whether he means free on board at point of origin or delivered at destination. If the terms of the sale are "f.o.b. place of shipment," then the purchaser will have the goods he intends to buy delivered and loaded into the car without any expense to himself. On the other hand if the terms of the shipment read "f.o.b. destination" it means that the freight must be delivered at destination freight paid, or if the freight is not prepaid the purchaser may deduct these charges from the invoice before making remittance.

In fruit and produce circles generally, the term f.o.b. is commonly understood to mean a sale at point of origin, with inspection privileges at destination. These sales are called "f.o.b. destination," "f.o.b. usual terms," or "delivered sales."

Sales on f.o.b. terms may be made either to traveling representatives of distributors or by correspondence with city connections.

Certain disadvantages and limitations attend sales on "f.o.b. destination" terms which do not apply to cash f.o.b. sales at point of origin. One of the most common difficulties is experienced when a buyer orders a car subject to inspection, and, in case of a decline on the market before delivery is made, refuses acceptance because of some alleged deficiency. If a buyer wishes to refuse a car, it is not hard to find some defect which he can use as a plausible pretext for refusal.

This matter of rejection depends entirely upon the nature of the implied contract. If the grower ships a car which is under grade, the receiver has a right to refuse it whether the market is declining or advancing. When a buyer makes a purchase "f.o.b. point of origin" he assumes all risk of loss in transit and must see to all claims for damage. On the other hand, if he buys "f.o.b. destination" or buys "on-track" at destination the shipper assumes the risk.

In the absence of special agreement to the contrary, when commodities are delivered to a common carrier for shipment, the title to the goods ordinarily passes to the purchaser when the goods are delivered to the carrier properly tagged and addressed. Usually, discrepancies may be found through which a purchaser can manage to withdraw from his agreement, but where a shipment has been accepted at point of origin it belongs to the purchaser and not to the producer.

The question of the relative advantages of sales on f.o.b. terms and sales "on-track" at destination is one over which the managers of the large coöperative associations in the country differ greatly. It

has been claimed that sales on f.o.b. terms subject to inspection are of no more advantage than sales "on-track" at destination, inasmuch as in the majority of cases they must depend upon acceptance at destination. To a certain extent this is true.

On the other hand, advocates of f.o.b. sales claim that when a buyer orders a car on these terms through the city representative of a shipping association, the buyer is really in the market for the supplies ordered. Consequently, when the goods are shipped, there is at least a prospective buyer in sight and the final sale is more likely to be consummated. Even though the market may decline in the interim, the allowance made on account of decline in price is usually not as great as the total drop in the market price. The reason for this is plain. The buyer is in the market for the commodities and he is depending upon this one source to secure them. Although the market has dropped and he naturally hopes for certain concessions from the seller, yet he will not expect an allowance to cover the total drop, but will be content, in most cases, to compromise and accept a reasonable concession. As a consequence, the selling association will secure larger returns than if it had shipped a car without a previous order, commonly termed a "tramp car," in which case it would have been compelled to accept the prevailing market price.

Sales on Joint Account

Sales on joint account are agreements made between the grower or shipper and the market representatives on a certain deal, the latter to contribute his knowledge of marketing conditions and the former to make use of his knowledge of conditions at the producing end. Deals of this kind are possible only where both parties know and understand each other thoroughly, for each is absolutely dependent upon the integrity of the other. The division of expenses and profits varies greatly with each contract, though it may be said that the usual custom is for the net profits, after deduction of expenses, to be divided equally between the shipper and the market representative.

SALES IN TRANSIT

Customarily sales in transit do not concern the individual grower directly, inasmuch as this type of sale is usually made only by shipping associations. Again, sales in transit are necessary only in the case of large crops of produce which must be kept moving in order to prevent a congestion at the shipping end. In many cases it is impossible for a large association to secure f.o.b. sales for all the produce

which it has ready for shipment. Consequently, the manager ships out cars known as tramp cars, which are billed to some diversion point in the general direction of the markets where prices seem to be strongest. While the cars are in transit orders are received and the cars diverted accordingly. In case no buyer is found by the time the diversion point is reached, the car is either diverted to the market which seems to offer the best possibilities or is sent to some auction point.

In these sales either absolute selling power is granted to the representative of the shipping association or sales are made subject to confirmation by the shipper. In the former case, where absolute selling power is granted to the representative, no control is possible by the shipper, inasmuch as the representative becomes the virtual owner of the commodity. Thus a shipper who is unable to keep in close touch with the market may rely on the ability of his representative and telegraph him instructions merely to sell to best advantage. Under instructions of this kind the representative is justified in making almost any disposition of the shipment which he believes to be best.

The usual and safest method is to make all sales subject to confirmation by the shipper and not give absolute selling power to the representative. In this case the broker will offer to the trade or receive orders from the wholesale trade, and if any seem to approximate the market, he will telegraph these offers to the association or shipper. In case the association accepts the offer, the sale is made, usually, with the proviso that the goods are to be subject to inspection by the purchaser.

SALES AT DESTINATION

Sales at destination may be either for cash "on-track," through the auction, or sales out of storage.

Where a car is billed as a tramp car in the general direction in which markets seem strongest and no sale has been made or order secured for the goods en route, the car is diverted to the strongest available market with orders to the local representative or broker to make the most advantageous sale possible. The broker then gets prospective buyers to make inspections and offers, which he submits to the shipper. In case no attractive offers are made the car may be sold through the auction.

Another common procedure for the producer when marketing conditions are not favorable at the time of shipment is to place the goods in cold or common storage until the market strengthens. In this case the shipper becomes a speculator, and usually it is best to allow regular marketing agencies to handle speculative deals, unless the

grower has the advantage of a coöperative association and the expert services of a trained manager. In the first place, the average individual shipper has not a sufficient quantity of produce to influence the trend of the market materially, nor is he able to keep in touch with country-wide conditions and probable future developments. In the second place usually he is not able to inspect the goods in storage at regular intervals. The keeping qualities of the same varieties of fruit vary greatly from year to year, and regular inspection is almost a necessity in order that the sales may return a profit. Where growers are coöperatively associated the sales representatives on the different markets can perform this service. As a general principle, it may be stated that only sound and fairly matured stock should go into storage. In other words, this method of sale is practicable only when the grower can keep in touch with the market, or when he has an absolutely reliable representative on the market who can make inspections for him and give him expert advice as to the best time to sell. Storage charges in the case of fruits are based upon monthly and seasonal rates. Thus with barreled apples the usual charge is from 10 to 25 cents for the first month, with a monthly charge thereafter of from 10 to 15 cents, or a seasonal charge of 40 to 50 cents, which allows the shipper to store his commodities from one to six months.

In many instances the provision of storage facilities on the farm may be a profitable investment. A storage house or cellar of the simplest type which will hold produce in good condition for even a few days may prove to be a determining factor between profit and loss. For instance, the psychological influence upon a buyer of the realization that the grower is not dependent upon him often will result in the offer of higher prices.

Most growers are unable to store because of the fact that they need immediate cash returns in order to pay existing obligations.

In many cases it also will be necessary to insure the goods while in storage to cover all possible risks, and this is an additional charge which the grower must pay, although comparatively the cost is not great.

14. COUNTRY POTATO MARKETS IN WESTERN NEW YORK¹

The day's program in the shipping section in western New York near Rochester is representative in a general way of the operations in the eastern potato country.

¹ Adapted from W. A. Sherman, George B. Fiske, and O. D. Miller, *Marketing Main-Crop Potatoes* (1923), pp. 26-29. (U. S. Department of Agriculture, Farmers' Bul. No. 1317.)

While Rochester itself is not a shipping point, it is considered a center of the potato trade for western New York and is centrally located with reference to the principal producing areas. Monroe County, which includes Rochester, is the largest potato-producing county in the section. Some of the largest dealers are located in that city. In the office of a dealer who handles at least three to five carloads a day, telegrams and price inquiries are being received early in the day. So far, perhaps, inquiry is active and business looks promising. Long-distance calls are coming in from points to which he ships, and it is reported that supplies are light, the demand increasing, and market firm with prices advancing slightly. Apparently a general price advance may occur.

However, not the least important consideration at the time is the number of cars being shipped to markets that draw supplies from this section and the total movement from each competitive area. If these other regions are shipping heavily, the market will bear close scrutiny. The local representative of the Bureau of Agricultural Economics is called and information is obtained as to movement and destination on the previous day. The dealer concludes that supplies in the city markets are light, shipments are light, and there is an increasing demand and inquiry. His asking price is advanced and wire "feelers" are sent out to prospective customers.

If he is able to secure the advanced price and the market seems likely to hold strong for a few days, he telephones his buyers who are located in one or another of the principal producing areas, informing them as to the price per bushel to offer the growers. The cost of sacks, labor, material for loading the car, plus a certain profit, is included in the buying price. In this section there seems to be much competition between the different buyers in the same town. Immediate necessity for stock required to complete orders, or for speculative purposes, often makes it possible for the grower to secure a premium for his potatoes.

Orders by telegraph comprise the bulk of sales by the dealers. Inquiries usually ask for a quotation on sacks or bulk f.o.b. destination. However, a few sales are made on the basis of 100-pound or 150-pound sacks f.o.b. shipping point. It has been found more satisfactory to quote prices per sack delivered or "f.o.b. usual terms." The dealer wires his price in response to the inquiry, and if the offer is accepted the deal is considered closed. Collection is usually made by means of bank draft. Some few shippers who deal with houses of long-established reputation or who trust to the honesty of receivers,

ship "open" and receive returns through ordinary methods. Many of the dealers who handle potatoes also deal in other commodities, and in this way the expense for telephone and telegraph service is not chargeable in full to the one crop, and the expense incurred in securing information is considered well spent. The smaller dealers usually depend on price information and use as their gauge the official "Daily Market Reports" and the volume of letters or wires received. They strengthen their attitude whenever the inquiry becomes heavy and hold their stocks for all the market will bear.

The buyer has a warehouse and office usually on a railroad siding with facilities and machinery for grading and sorting. He does business by telephone with certain growers with whose stock he is familiar. News of any advance or decline in price travels swiftly; and if the growers are disposed to sell, haulings begin immediately. Prices to growers in a normal season remain fairly steady; for on an average changes are made not oftener than once a week.

If the stock has been already inspected by the buyer and terms arranged, the bulk potatoes are hauled to the warehouse, weighed, graded and sacked, and loaded aboard a car. Refrigerator or protected cars only are used during the cool months, and papering of the ordinary car is necessary.

Very few dealers in this section seem willing to let the growers do the grading and sorting. They claim that experience has taught them it is better to do this work carefully and by improved methods and machinery than to trust to the grower. Few growers have either the machinery or the lighting facilities to insure a good pack. Much trouble is experienced because many growers do the packing under such conditions that they are not able to inspect the potatoes closely and do not put up a reliable pack. While undoubtedly some cars are rejected at destinations for other causes, it is probable that most rejections are the direct result of poor grading.

In a season of heavy production dealers generally make no effort to store potatoes for even a short period; it is merely a case of hauling as the needs of the day's business demand. In such a season no buyer is willing to buy any reserve stock because the market, although fluctuating from week to week, is often on the downward grade.

A great distributing market like Chicago handles more or less stock from opposite ends of the country. It is one of the most active potato markets, and responds quickly to changes in general conditions of supply and demand, often showing earliest signs of coming

developments in the trend of the general market. Shipping-point markets tributary to Chicago usually respond to Chicago market changes within twenty-four to forty-eight hours. Many sales in the Chicago market are in car lots. About one-fourth of the business is on a commission basis.

It is well to have car lots arrive about the middle of the week, as the accumulated supplies are heavy on Monday, while trading slows down the last part of the week. Sales are made on team tracks of the railroads. The buyer looks over the car, usually looking into a few sacks, if it is sacked stock, or digging down a foot or so if it is bulk. If the car suits, he makes terms with the receiver, gets his sale ticket, brings in his trucks, and unloads the car. Each load is weighed on the railroad scales, and a copy of the scale ticket is given to the seller. Bulk stock is sacked in the car, the culls being sorted out. The buyer pays only for what goes into the sacks. Thus, a car of bulk stock may bring more per 100 pounds, as compared with sacked stock, but less for the car lot, because of the culls thrown out in sacking. The buyers at the car-lot market are mostly jobbers, who resell to such customers as provision dealers, hotels, and peddlers.

New York is the largest consuming market. It does not reship many car lots, but repacks small lots to supply dealers in near-by towns and cities.

15. PRODUCERS' METHODS OF MARKETING MILK¹

DIRECT MARKETING

In our smaller cities and towns practically all milk is retailed by the producers themselves. The same practice is followed to some extent even in the larger cities. In Columbus,² Ohio, for example, perhaps 5 or 10 per cent of the milk is still brought in by producers. No hard and fast line can be drawn, however, between direct and indirect marketing, since almost every producer who distributes his own product finds at certain seasons that he cannot supply the demand without buying additional milk from a creamery, a milk plant, or from neighboring producers. In the main, however, the division is fairly clear.

The methods of delivery in direct marketing vary from delivery on foot or with a small express wagon, as frequently seen in villages,

¹ Adapted from H. E. Erdman, *The Marketing of Whole Milk* (1921), pp. 73-84. (The Macmillan Company.)

² A city of about 25,000 population.

to delivery by covered wagon or motor truck. Where the producer lives some little distance out from the city, use is ordinarily made of a delivery wagon of some sort drawn by one or two horses. Occasionally one finds an auto truck or a touring car in use for this purpose. The auto truck has been found particularly useful by men living farther out or men supplying a special grade of milk, which must be disposed of to customers scattered all over the city. There is as a rule but one delivery outfit, and that is most frequently operated by the owner himself.

Equipment for direct marketing varies from a few milk cans, a strainer, and a dipper in the producer's kitchen to an elaborately equipped milk house such as one often finds in the case of men producing special grades of milk. Most commonly, however, there is some sort of milk house near the well, containing a bottler, perhaps a bottle washer, a supply of bottles and bottle cases, and often a cream separator for skimming surplus milk. An ice house is usually felt to be a necessity, inasmuch as a regular supply of ice is not likely to be available from other sources.

The methods of handling milk in preparation for marketing are also simple. Where the practice is to sell milk unbottled by dipping from the can, the milk is merely strained into cans, which are placed in cold water to cool, or it may be strained, passed over a cooler, and then put into cans for delivery. In most communities at the present time the greater proportion of the milk is sold in bottles. In this case it is strained, cooled—either by being put into cans set in cold water or by being passed over a cooler,—and then bottled. The bottles are then iced for delivery.

The surplus and shortage problem is seldom a serious one to the man marketing directly. A small amount of extra milk is obtainable from a neighbor, if city regulations are not too stringent to allow of this practice, or milk can be obtained from some other milkman or from a creamery. A surplus can usually be disposed of at the same creamery, or it can be skimmed and fed to young stock, in which case the cream is sold bottled to customers or in bulk to a creamery or ice-cream factory, or is made into butter on the farm.

Under direct marketing the milk peddler is faced with certain difficult problems. In the first place, the producer peddling his own milk spends much of his time in town, thus neglecting during that period his farm work or intrusting it to hired help. On the other hand, if he attends to the farm work himself and intrusts the milk route to hired help, he has the difficulty of preventing fraud or dis-

honesty, and of keeping customers satisfied and having the work efficiently performed.

Around our large cities direct marketing is being forced out because the length of the drive to the city becomes too great to be made regularly with a small load. The dairyman cannot afford to erect the kind of buildings required by health regulations on high-priced land which is likely to be needed for factories or homes in the immediate future. If he goes out to cheaper land, however, he is likely to be five or six miles or more from the city, in which case he can hardly afford to take the daily trip to peddle his own milk, unless he is a producer of "special" milk. Around a city like Milwaukee there are very few dairymen within five or six miles of the city proper.

The producer of special milk would seem at first glance to have some advantage in selling by the direct method, since he can get a somewhat higher price. After he has worked hard to build up a trade, however, he usually finds that he has difficulty in holding it, first, because it is not an easy matter to get help which will care for milk equipment and do the milking in such a way as to keep a uniformly high standard of quality regularly, and, second, once the demand for a high-grade milk has been established, it is always relatively easy for a competitor with milk claimed to be "just as good" and offered at a few cents less to attract some of the customers, thus dividing up the business and perhaps making the route unprofitable. This is particularly true because the demand for a high-grade milk is limited.

It is sometimes suggested by writers in our daily papers and elsewhere that we go back to the direct method of distribution. Even though it were possible to produce sufficient milk within a reasonable driving distance, such a change in a city like Columbus, for example, would mean more expensive rather than cheaper milk, since it would bring about the extreme of duplication. At present we have several dealers each with the city nicely parceled off so that his deliverymen have certain small areas to cover. Under direct distribution we should have each of many producers seeking customers wherever he could find them, driving over long routes and frequently crossing the routes of other producers. Since producers distributing their own milk usually sell at the same price at which other dealers sell, one would think that if they were making a large profit, more farmers would take up the marketing by that method. As a matter of fact, however, the number has been gradually decreasing.

That it is possible, however, for an individual to enter the business and maintain a trade even under adverse conditions is shown by

the fact that a few men are always found successfully distributing their own milk. A producer wishing to do this usually starts business by cutting prices during the summer months when prices are low. At first he may have to sell to scattered customers. By having a high grade of fresh milk at a somewhat lower price than his competitors, he can usually retail all he has. If there is a surplus, this can ordinarily be sold to stores. As soon as his trade is firmly established, he increases his price nearly or quite to that of his competitors. The next step is to try to consolidate the route by dropping here and there an outlying customer and picking up more in a solid district, thus eliminating the long drives, particularly during seasons of shortage. Building up a route by this method is certain to cause large competitors considerable annoyance, to say the least, and the fact that it can be done and is being done is a practical guarantee against monopoly prices in our smaller towns and even in cities of considerable size, although of course not in our larger cities, since there are not enough farmers producing milk within driving distance of the latter to afford a serious hindrance to monopoly.

INDIRECT MARKETING

In most of our cities of any size, the indirect method of marketing prevails. In Milwaukee perhaps 97 per cent of the fluid milk supply was thus marketed in 1916. In the larger cities of Ohio 85 to 95 per cent falls into this class. In the smaller cities, those of from fifteen to thirty thousand, the percentage usually varies from 25 to 75 per cent. In our very large cities the direct method of marketing is practically unknown.

RELATIONS BETWEEN FARMERS AND DEALERS

With the rise of the indirect method of marketing, the relations between producer and dealer become complicated and require frequent adjustment. The most usual contractual relation between producer and dealer is one which provides that the dealer is to take all of the milk produced during a given period of time. Prior to the present unsettled conditions arising out of the war the most usual contract period was for six months. Commonly one six months' period included the winter months and the other six months' period the summer months. During the past two or three years, however, neither producers nor dealers have as a rule been willing to contract for longer periods than one or two months at a time. Though there are often no definite contracts, the large dealers usually ask their

patrons to sign agreements going somewhat into detail as to number of cows supplying the milk purchased, method of handling milk, method and condition of delivery, and prices. Recently in many cases contractual relations have been established between producers and a selling agency of their own, which in turn contracts with the city dealer.¹

The financial relations between farmers and dealers have been the cause of frequent contention. Payments are usually made once or twice each month, more frequently the latter, although in the case of many of the large plants, payments are made but once each month. With many of the larger plants there is a tendency to postpone payment long enough after the half month or month has elapsed to allow for the making up of all the statements of the numerous patrons. Consequently many of these concerns do not pay until two or three weeks after the last delivery has been made under a given pay period. One such company, for example, pays on the twentieth of the following month. The claim is made that were payments to be expedited to the extent of settling within a few days after the close of the pay period, it would mean a tremendous expense for extra clerical help, which would ultimately have to come out of the price paid to the producer.

The financial standing of the dealer is a question of considerable concern to the farmer. Attempts have been made to protect the producer through laws requiring that dealers be bonded. New York at present has such a law, as have also several of the New England states. In many sections producers' associations have taken up this function and are placing on the blacklist dealers who are slow pay, so that in some instances such dealers have had to pay a few cents extra in order to get milk at all. Dealers who are financially weak have frequently been known to fall farther and farther behind in their payments, ultimately going into bankruptcy owing the producers for two or three months' milk. Small dealers in many of our cities have been especially troublesome in this way. A good part of this difficulty would be obviated if farmers were more generally to make use of the various commercial credit rating agencies when they do not have an agency of their own.

With the development of the indirect method of marketing, we have the entrance of an intermediary—the middleman. He may be a very small dealer, one man buying the milk from two or three farmers, doing all his own bottle washing, filling, etc., delivering in

¹This development is further discussed in Mr. Erdman's book, pp. 134-187.

the morning and doing the bottling and other work later. Most of the small dealers of our cities operate but one route each. They frequently have an extra boy or man to help about the bottling plant. Varying from this small dealer are other dealers with larger and larger businesses, until we reach the very large concerns, operating hundreds of wagons. In Milwaukee in 1916 there were 77 dealers operating routes as shown in the following table:

TABLE 4.—SHOWING NUMBER OF ROUTES OPERATED BY 77
MILWAUKEE MILK DEALERS, APRIL, 1916

Number of Routes	Number of Dealers	Total Number of Routes in Group
1 to 10.....	71	152
11 to 20.....	3	50
Over 20.....	3	238
All dealers.....	<u>77</u>	<u>440</u>

In the spring of 1920 the number of dealers had been reduced to about thirty-five. The largest of these was operating 242 routes and was supplying milk to about 55 per cent of the families of the city, and the two dealers next in size were operating about forty routes each.

OPERATING PROBLEMS OF THE LARGE DEALER

Once the milk business has reached the stage where such large quantities are distributed by a few dealers, a high degree of systematization is necessary to conduct the distribution efficiently. Milk arrives at the plant in large volume at a certain hour of the day and must be processed and entirely out of the way before the next day's supply is due. It must also be ready for delivery each day at a certain time, for there is no reserve of bottled milk to fall back upon in case the new supply is held up at any stage. The whole distributive organization must work in unison if the distribution is to be made with efficiency and dispatch. That this is true becomes apparent when one considers the distribution from the point of view of what each of the various operations implies.

The receiving of the milk at the plant door, simple as that may seem, requires system in order that the hundreds or in many cases thousands of cans can be received, examined or sampled, and weighed in the course of a few hours each morning. Then there is the matter of keeping straight the records of a great number of individual pro-

ducers, which records must show each individual's tests and weights. Every mistake means complaints and the possibility of accusations of dishonesty and other misunderstandings.

Putting the milk through the various stages is alone an elaborate process. In a small plant the system of handling may consist of a few simple steps. They may be: (1) weighing the milk, if it is purchased by weight; (2) straining into the filler supply can; (3) bottling; (4) capping by hand; (5) transferring bottles to wagon ready for delivery, or, if delivery is made the following morning, transferring to a refrigerator; and (6) delivery; or the milk may pass from the weigh can to a pasteurizer supply can, thence to a pasteurizer and to a cooler before being bottled.

Keeping check on several hundred delivery-men is another problem in a large company, since the method must be such as to protect the company's interests as well as to insure proper treatment of the consumer and to keep the good will of the driver. Still another problem which any large concern must meet is that of getting its bottles returned, for a lost bottle, costing four or five cents, means the profit on ten to twenty quarts of milk at least. Then there is also the question of keeping up collections on hundreds of small accounts with consumers and on the larger accounts with wholesale customers.

In the milk business there has been a pronounced tendency towards centralization. From every part of the country reports indicate that in the past decade there has been a very great decrease in the number of men distributing milk, in spite of the fact that the cities have been growing and that the milk business as a whole has been increasing fully as rapidly as has the population. Thus in New Haven, Connecticut, which in 1903 had a population of 108,027, there were about two hundred milk routes. In 1916, with an estimated population of 170,000 there were only 160 routes—that is, an increase of 57 per cent in the population was being served by 20 per cent fewer wagons.

16. THE PURCHASE OF MILK

BASIS ON WHICH MILK IS PURCHASED¹

The basis on which dealers and producers do business naturally varies; there may or may not be a contract between the two. Where the dealer holds the whip hand he merely agrees to take the milk the

¹Adapted from Horatio N. Parker, *City Milk Supply* (1917), pp. 231–33. (McGraw-Hill Book Company.)

dairyman brings him, paying therefor what and when he chooses, or a few weeks in advance, he may set the price of milk for the ensuing month. In better-developed dairy districts sounder business relations exist; written contracts are made for 6- or 12-month periods. These contracts vary a great deal; they commonly state the price to be paid each month for milk and often contain a clause to the effect that the daily deliveries of milk by the dairyman shall not vary more than a stated percentage above or below the amount called for in the contract. Other clauses are often inserted whereby the dairyman agrees to do certain things such as to exclude certain breeds of cows from his herd, to have his herd tuberculin-tested every six months, not to use diverse kinds of feed, to build a milk house or silos, or to cool his milk right after milking and to deliver it at the receiving station between certain hours and below a fixed temperature. In these long-term contracts the price paid for milk varies from month to month, usually being lower in June and the early summer months than in midwinter.

Methods of purchase which do not take into account the percentage of butter fat in the milk encourage farmers to keep high-producing cows that give milk of low butter fat content. In general, it is poor policy not to pay on the quality basis. Clean milk and rich milk costs more to produce than thin milk or dirty milk; therefore, a method of payment should be adopted that will adequately reward the producer of superior milk. No single system can be recommended for universal use, because the character of the trade varies and should decide the method of purchasing. Premium for barn scores, for bacterial counts, etc., and the grading of milk are most likely to prevail in dairy districts supplying a well-regulated city milk trade. Probably it would be good for the dairy business if all milk were purchased by the 100 pounds, for the dealers would then weigh the milk they buy, and so would pay only for that they actually receive; which would cut down their losses from short measure resulting from battered cans, etc.

PLACES AT WHICH PRICES APPLY¹

In addition to payment for various units, prices are quoted at various stages on the way to the market. Thus in many cases prices are quoted for milk delivered at the plant door; in other instances the quotation is for milk f.o.b. the city railway station; or again, a price

¹ Adapted from H. E. Erdman, *The Marketing of Whole Milk* (1921), pp. 43-44. (The Macmillan Company.)

may be quoted at the farm gate. Even here, however, one cannot be sure as to the prices received by the farmer, for the latter may have to pay all or a part of the cost of hauling. In many sections prices quoted are for milk delivered at the country bottling plant. Many companies make quotations at several different stages to accommodate farmers variously located. For example, it is not at all uncommon to find a company buying from farmers who deliver their own milk at the city plant door and at the same time gathering milk from the farms of others, and paying them different prices, while in another part of its milk territory the same company may be operating a country bottling plant and basing its payments on milk delivered at that place.

The Babcock test, since its introduction, has been widely adopted as one of the factors in the basic price. Perhaps the most usual method is to pay for milk of a given richness in fat, say four per cent, at so much per hundredweight. Then for each one-tenth of one per cent of butter fat above the basic test, a certain number of cents are added and the same number of cents deducted for milk testing less than this basic test. In many instances this differential has been so low as to be prejudicial to men with cows producing milk rich in fat. It would seem that this differential should be quite close to the market price of butter fat.

17. SHEARING AND MARKETING FLEECE WOOL¹

Wool is obtained from the sheep in two ways: it is either shorn from the live animal, or pulled from the skin of the slaughtered carcass.

Shearing was formerly done by hand. An expert was able to clip as many as one hundred head per day, but the average was less than half of that amount. The introduction of machine shearing has made it possible for one man to shear from 175 to 200 sheep in a day, and the fleece is very much more evenly clipped than formerly. Some merino breeds, known as type A, have so many folds of loose skin that machine shearing is not feasible, but except for these animals, and some of type B, or Rambouillet Merinos, almost all sheep are now shorn by machine, that is, where they are raised in numbers. Sheep raising in this country is not pursued with nearly so much care as, for instance, in Australia. There they have huge shearing sheds where the animals are first sweated and then carefully shorn. The belly is shorn separately, whereas here the entire fleece is left in one piece. In Australia each fleece is carefully skirted, that is, the inferior parts

¹Adapted from James Paul Warburg, *Wool and Wool Manufacturing* (1920), pp. 7-8. (First National Bank of Boston.)

such as the britch are torn off. Then each fleece is folded and tied up and the fleeces are put up in bales. Moreover, a bale usually contains fleeces of the same grade, so that practically nothing but sorting remains to be done by the purchaser. Here, on the other hand, fleeces are shorn in one piece and are folded up carelessly, without skirting. The tying up is frequently done in a slovenly manner, and a bag will very often contain all grades of wool from the finest to the coarsest. Of late years some attempt has been made to install the Australian system, but without much success.

The shearing season in the northern hemisphere is in the spring; in countries below the equator, except Australia, it is, of course, in our fall. In Texas and California, as well as in some other localities, shearing is frequently done twice a year.

Roughly speaking, there are seven ways in which the wool grower may dispose of his fleece wool:

1. He may sell it to buyers representing merchants. The merchant, while he is a middleman and therefore incurs the usual anathema, performs a variety of very essential services. At the time of the clip he sends his buyers to the wool producing centers and buys the clip for cash, then he ships it to his warehouse, grades it, and sells to the mills on credit. Obviously he finances a very important part of the production, and is furthermore essential, because he knows the demand, which the wool grower does not, and the supply—of which the mill is usually ignorant.

2. The wool grower may also sell to buyers representing mills. He likes to do this because he eliminates the merchant's profit, but, as a matter of fact, there are very few mills large enough to stand the buying expense, and even fewer that can afford to buy their whole season's supply of raw material at one time and for cash. Also, mills can usually employ only certain grades.

3. If the grower thinks that he is not receiving fair offers from the visiting buyers, he will frequently consign his wool to a merchant to be sold on commission for his account. In this case he may or may not get a better price, but it costs him his carrying charges plus commission. There are some wool houses that make it a specialty to execute commission sales of this nature.

4. Some wool is sold direct to near-by mills. This is done particularly in Ohio, where many of the smaller mills obtain their entire requirements in this manner.

5. Wool growers sometimes sell to local dealers. This is particularly prevalent in regions where the individual grower's production is

small. In most eastern states there are a great number of small farmers who grow a certain amount of wool. The local dealers are in many cases also the general storekeepers, and, since they are the farmer's creditors on other merchandise, and since the average farmer knows very little about the grades of wool, these individuals very frequently turn a handsome profit when they in turn sell to the visiting buyers.

6. Some wool is sold through farmers' coöperative sales agencies. But these organizations have in the past been so poorly administered, that, as a general rule they have not been successful.

7. Finally, there remains the method whereby almost all the British and colonial wools are sold, namely, by auction. Auction sales have been established for almost a century in London, Liverpool, Antwerp, Bremen, Hamburg, Marseilles, and recently in Australia. This method of disposing of their raw product does not, however, appeal to the American growers, because of the inherent American trading instinct. It is also not very feasible in this country, because the wool is not graded in the shearing sheds and because sheep raising is not standardized.

The chief markets for wool in this country are Boston, Philadelphia, Chicago, New York and St. Louis.

18. COTTON HANDLING AND MARKETING AT LOCAL POINTS¹

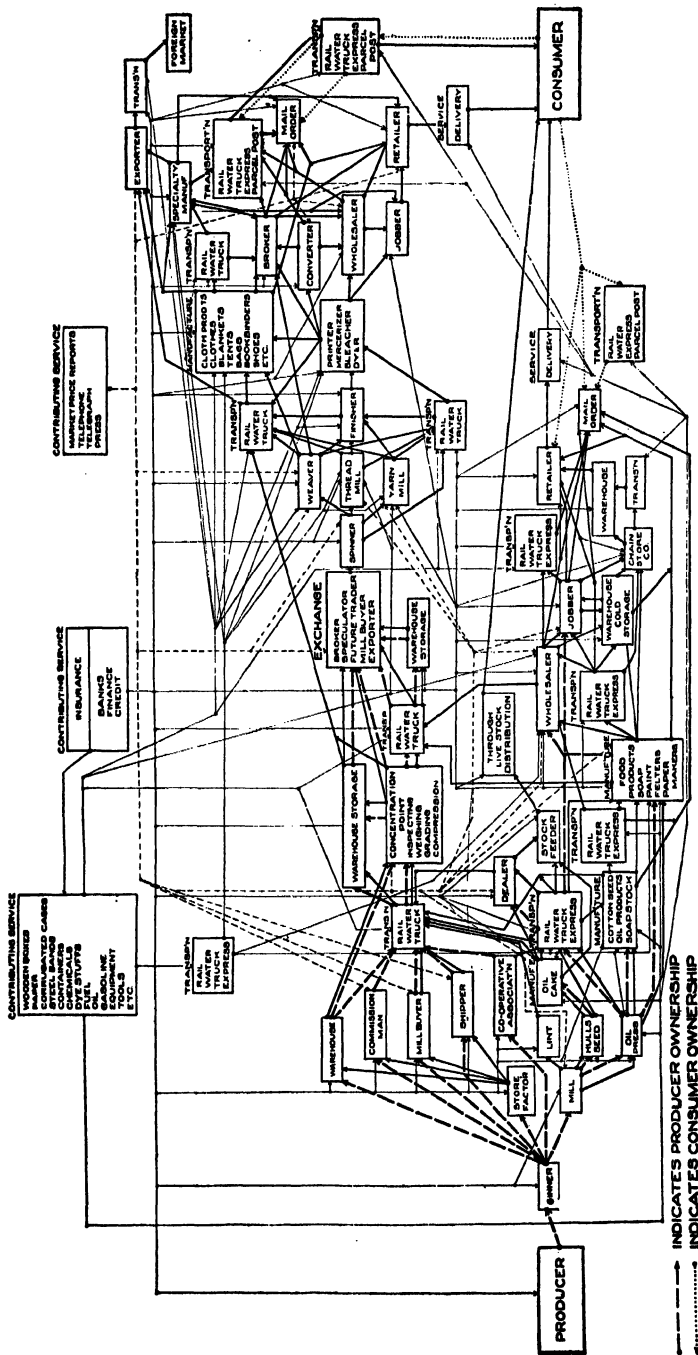
The days of the American homespun are past, and now the entire American cotton crop is produced for the market. The course of the cotton from the producer to the mills depends on the point of origin, the location of the mills for which it is destined, the means of transportation, and the methods of trading.

The process of separating the lint from the seed is known as ginning. This the producer usually has done before he sells, which enables him to dispose of both the seed and the fiber to the best advantage. The producer may sell his cotton at once or hold it until some future date. He may sell directly to a mill buyer or to some one of the numerous grades of dealers in cotton.

Southern cotton mills consume about one-fourth of the American crop, the bulk of which is produced locally in the South Atlantic states. The rest of the crop must be transported by rail or water either to northern mills or abroad. The movement of the great

¹Adapted from A. M. Agelasto, C. B. Doyle, G. S. Meloy, and O. C. Stine, *The Cotton Situation* (1921), pp. 370-90. (U. S. Department of Agriculture, *Yearbook 1921*, reprinted as *Separate No. 877*.)

DIAGRAM 2.—DISTRIBUTION OF COTTON AND COTTON PRODUCTS¹



¹ From Joint Commission of Agricultural Inquiry, *Report*, Pt. IV, *Marketing and Distribution* (1921), facing p. 74.

American cotton crop therefore necessitates an extensive system of transportation as well as of markets.

The length and the character of the fiber or staple are the most important of the factors that determine the value of cotton. Cottons differing in length and character of fiber require special methods in handling and marketing. Commercially all cotton is divided into two classes—short staple, that of $1\frac{1}{8}$ inches and under in length, and long staple, cotton $1\frac{1}{8}$ inches and over in length of fibers. Cottons, however, having a staple length of $1\frac{1}{8}$ inches usually command a premium over short-staple cottons of $\frac{7}{8}$ to 1 inch in length of staple. The length and strength of fiber produced in any locality depend on the variety planted, the soil, climatic conditions, and cultural methods.

GINNING AND COMPRESSING

While the ginning of cotton is done primarily in order to bale the farmer's product so that it may be sold, it is the first step in the preparation of the fiber for spinning, and therefore the condition in which the lint comes from the gin has a most important bearing on its future value and is the primary basis for grades on which purchases are made. Some of the factors influencing the grade of cotton as it comes from the gin are the care with which it has been harvested and prepared for ginning, i.e., whether ripe, clean, and dry; second, the condition of the ginning mechanism and the skill of operation, i.e., clean machinery in prime condition, operated both as to the feeding and speed with care, taking into consideration the type of the cotton being ginned and its physical condition.

BALING

As the lint or fiber (or raw cotton) comes from the gin it is put up in packages of different sizes and shapes. The bulk of the American crop, however, is packed into a press box 54 inches long and 27 inches wide and to a depth of about 45 inches. This makes the standard "flat" or "square" bale, which weighs about 500 pounds. It is covered on two sides and on the ends with bagging and is tied with six iron bands.

With the exception of the round bale and the recently devised gin-compressed bale, which is a small square bale and, like the round bale, built up under pressure automatically as the ginning is done, the American cotton bale is of comparatively low density and is not only unwieldy but does not fit into either freight cars or ship holds econom-

ically. In order that the maximum number of pounds of cotton may be packed for shipment, square bales are subjected to a recompression by which the cotton is compacted to a high density and the bale reduced to approximately one-half its original size. At the same time patches are added to cover all sample holes and to make up the usual tare allowance. Plants for recompressing the bales are usually located at interior markets and railroad concentration points and are known as "compresses."

The standard 500-pound square bale as it comes from the gin has a density of only 12 to 15 pounds per cubic foot, and from 30 to 35 of them fill a 36-foot box car. When they are compressed at the ordinary or standard compresses to a density of 22 to 24 pounds per cubic foot, from 65 to 75 bales may be loaded into a car. The "round" gin-compressed bale, weighing about 250 pounds, has a density of 32 to 37 pounds per cubic foot, and approximately 200 of them may be packed in a car, equivalent to 100 standard bales. The square gin-compressed bale has a density of about 35 pounds to the cubic foot.

At some of the concentration points and ports, such as Houston, Galveston, New Orleans, Mobile, Augusta, and Savannah, there are "high-density" compresses, which give the bale a density of 35 pounds or more per cubic foot, which results in a still greater saving of car and cargo space.

SELLING COTTON IN THE SEED

In a few sections of the Cotton Belt some farmers sell their cotton before it is ginned, or "in the seed," as it is known. The practice of selling cotton in the seed is most prevalent in those sections where the cotton-growing industry has only recently developed or where cotton is not very extensively grown. The ginner buys the cotton seed as it is brought in and gin it whenever enough has accumulated for a run. In settling with the producer the average outturn or lint percentage of the community is usually taken as a basis. The ratio of seed to lint is approximately 2 to 1, though some of the improved varieties turn out from 35 to 40 per cent of lint. The application of averages therefore often results in not giving the individual farmer the price he deserves. From every angle the practice of selling cotton in the seed is most unfortunate, since the producer has no incentive for growing better varieties or for making any effort to improve his grade and is prevented from maintaining the purity of his seed supply.

WAREHOUSING

The warehousing of cotton after ginning is very important economically. Leaving the baled cotton exposed to the weather results in large losses annually from the rotting of the fiber. Such damage is commonly known as "country damage." The cotton warehouse is a place of shelter and protection from fire and theft; a place for classing and assorting to meet mill requirements; and finally it is a place where cotton may be deposited under conditions which enable the owner to obtain money advances upon it until such time as he may desire to sell. Receipts of responsible warehouses are considered among the best kinds of security. The Federal Warehouse Act of August, 1916, facilitates the use of warehouse receipts by holders of cotton in financing themselves while holding for favorable market conditions.

Warehouses for storing cotton have been built at many local markets, as well as at the larger concentration points throughout the South. In Arkansas, Oklahoma, and Texas, where much of the cotton is customarily marketed as soon as it is ginned, and is shipped directly to the mills or exported, there are comparatively few warehouses, except at concentration points where the cotton is held by merchants. The same statement applies generally to Tennessee, Mississippi, and Louisiana. In the eastern states warehouses are usually accessible to the farmers.

GRADING COTTON

The value of cotton to the consuming mills is measured not only by the length, strength, and uniformity of the staple but also by its color and by the amount of foreign material that it contains. While in the wild state species of cotton are found with fibers of a variety of colors, the principal varieties of commerce, with the exception of a few, such as the brown Egyptians, are of a creamy or pure white color. Seasonal conditions, such as frosts or excessively damp or rainy weather, stain and discolor cotton. In some sections cotton unduly exposed to the weather after maturing receives a bluish cast or becomes mildewed. This condition so frequently occurs in some sections as to lead to the belief that the damage is connected with certain types of soil. The fibers of "blue cotton" are usually weakened. Dirt, sand, broken leaves, and stems become lodged in cotton fibers during storms and long exposure in the field, and when picked and ginned with the cotton reduce its value in proportion to the quantity of such foreign matter present.

There has always been considerable confusion in the marketing of cotton, due to the fact that nearly every market had its own grades, and these were frequently changed to meet special crop conditions. In order to simplify cotton marketing by making a single set of standard grades, on which quotations and purchases and sales could be based, the United States Department of Agriculture was authorized in the appropriation bill for the fiscal year 1909 to prepare grade standards. Subsequent legislation enlarged these powers and authorized the sale of copies of the Official Cotton Standards to all who desired them. The United States Official Cotton Standards for grade have now been adopted by the exchanges of practically all the leading cotton markets of this country. Approximately 2,500 full and fractional copies of the standards have been sold to the American cotton trade. Copies have also been sold into practically all the foreign markets.

COTTON MARKETS

The term "spot cotton" is used to designate actual cotton on the market, and a "spot market" is one dealing in spot or actual cotton. In the future markets the trading is done in contracts to deliver at some future date. A future contract usually calls for 100 bales or approximately 50,000 pounds of cotton to be delivered during a specified future month.

The spot markets are classified, according to their location and their functions in cotton trading, as primary and interior markets.

Primary markets are villages and towns where baled cotton is first put on the market and sold by the producer. Cotton buyers go into almost every village and town where a ginnery is to be found.

Interior markets are large towns and cities where cotton from primary markets is received and sold by primary buyers to merchants or mill agents. Such markets are usually the points of concentration for grading, compressing, assembling in commercial lots, and consigning to destination for consumption.

The cities along the Atlantic and Gulf coasts where cotton is sold and from which it is exported are called export markets. About one-half of the American cotton crop is exported for consumption in foreign mills.

Cities or towns in which cotton is purchased for manufacturing are called consuming markets. Boston, New York, and Philadelphia are both export and important consuming markets.

There are future cotton markets or exchanges in New Orleans and New York. The importance of these markets is not indicated

by their receipts or exports of cotton, as much of the cotton dealt in never reaches these points. New Orleans is both a spot market and a future market, while New York is primarily a future market. Liverpool is the most important foreign future market dealing in American cotton. There are future exchanges also at Bremen and Havre which deal in American cotton. The classification of all cotton delivered on the New York and New Orleans future exchanges is now done by the United States Department of Agriculture.

MARKETING COTTON

Buyers become active in the primary markets as soon as ginning begins. Some cotton is grown under mortgage and is sold promptly in order to meet pressing financial obligations. Where only small quantities of cotton are grown, it is usually sold to the ginner or local merchant in the nearest town or village. Through the center of the Cotton Belt the tenants on plantations, usually having pledged their crops in advance, sell at once to the owners of the plantations, or, subject to the lien, to merchants or buyers. With many producers, however, the time of selling is largely a matter of choice.

When cotton is bought in greater quantities than can be moved or consumed at once, the purchaser must bear the expense of storage and risk of loss, and he, therefore, pays the producer a lower price for it. On the other hand, the producer who can hold his crop must consider the expenses of storage, insurance, and interest on money

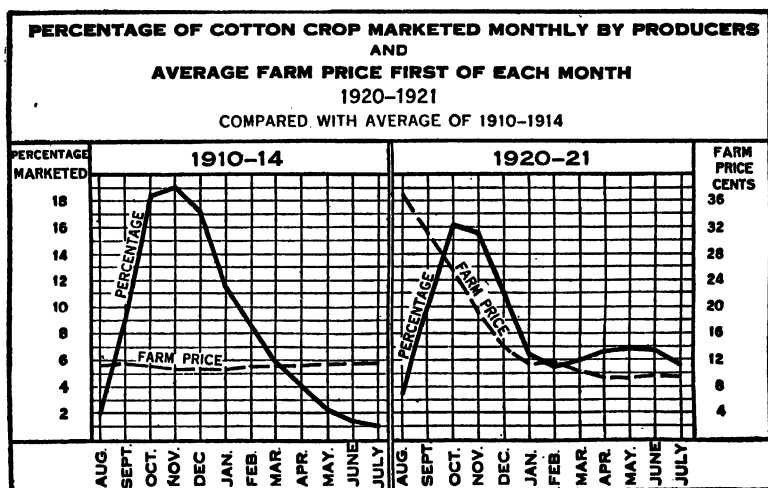


Figure 1

involved in estimating the advantages of holding. It may be that in some cases the buyer can hold at less expense than the farmer and can afford to pay such a price that the farmer would lose by holding. Many successful farmers have adopted the fixed policy of selling a portion of their crop promptly and holding the remainder for sale as conditions and circumstances seem to warrant. The cotton sold under stress and of free choice soon after ginning forms a large percentage of the total crop.

It requires some time to assemble the cotton at the large primary and interior markets and to ship it to points of export and of consumption. Dealers move some of it as rapidly as possible, but hold some in storage at interior markets and concentration points so that they may deliver to spinners throughout the year. Spinners, as a rule, do not carry a very large supply of cotton on hand. The operations of the future exchanges enable dealers through hedging to buy and hold the cotton many months or to ship it a long distance without undue hazard from changes in prices.

The basis for price quotations upon all the markets is the quotation for Middling on the nearest active future month upon the future exchanges. At each primary market a deduction from the price quotations must be made to cover expenses of handling and transportation. If there are many buyers on the market, grading may be fairly close and the prices paid close to the limit that will allow a reasonable profit to the buyer.

Prices in the large primary and interior markets are determined as in the smaller primary markets. However, grading has become standardized in these markets, and at each market the grades above and below Middling are settled for according to the differences prevailing in that market. The differences in price between Middling and the other grades and the premiums for the longer staples vary from time to time because of special demands or the effects of the season upon the supply of the different grades and lengths of staple.

TRANSPORTATION

On the primary markets the miscellaneous assortments of grades and lengths of staple produced by the growers of cotton are purchased and forwarded to the interior markets, where they are assorted and assembled into lots, even running as to grade and other character, and offered to the purchasing agencies of the mills. Before forwarding to the mills, however, the cotton is compressed so as to conserve freight and mill storage space and to economize on freight charges.

Where there are no facilities for compressing the cotton at point of origin railroads accept it and have it compressed in transit. The charge for compressing averages about 12 cents per hundred-weight. Additional charges are made for patching. These charges are added to the freight charges and collected by the railroad company. To secure through shipping rates all cotton is shipped to concentration points with reshipment privileges. When the cotton is to be reshipped the owner surrenders his receipts and it is forwarded to destination on the rate quoted from point of origin.

19. COUNTRY MARKETING OF TOBACCO¹

The marketing of tobacco varies considerably in different tobacco-producing sections of the country. In general there are three methods—the auction system, farm selling, and coöperative marketing.

THE AUCTION SYSTEM

The auction system is practiced principally in Maryland, Virginia, North Carolina, South Carolina, Georgia, Tennessee, Kentucky, West Virginia, southern Ohio, Indiana, and Missouri. Most tobacco produced in the cigar-leaf sections of Wisconsin, Ohio, Pennsylvania, Florida, Georgia, and the Connecticut Valley is marketed on the farm. Coöperative marketing is practiced more or less in every tobacco-producing section of the country. There is only a small amount of tobacco that is not marketed by one of these methods.

In preparing tobacco to be sold at auction, as soon as the tobacco is cured it is brought into a soft, pliable condition and assorted according to quality, color, length, and other factors. Where the tobacco is cured on the stalk the leaves must first be stripped from the stalks for assorting. The number of lots made by each producer varies considerably, depending upon the accuracy with which the tobacco is assorted and also upon the size and character of the crop. From 5 to 12 lots are usually made from each curing or barn of tobacco. Except for a general knowledge of the qualities of tobacco farmers have no guide in this assorting process. In most cases they separate their tobacco into lots of similar character without knowing to what grades the tobacco belongs or for what use the tobacco is suited. This being true, the farmer is at a loss to know the market value of his tobacco even after carefully assorting it. The principal reason for this con-

¹W. W. Garner, E. G. Moss, H. S. Yohe, F. B. Wilkinson, and O. C. Stine, *History and Status of Tobacco Culture* (1922), pp. 433-42. (U. S. Department of Agriculture, Bul. No. 885.)

dition is due to the fact that there are no generally recognized standard grades for tobacco.

After the tobacco is assorted into various lots by the farmer it is tied into hands, or bundles, as they are sometimes called, each hand containing 5 to 25 leaves. The hands are then hung on laths or sticks so that they can be handled easily without breaking or tangling the tobacco. The tobacco is then conditioned for market. Tobacco is usually conditioned on the farm in one of three ways—(1) by hanging it loosely in an open shed during a warm moist day, (2) by hanging it in a damp cellar or steam room, (3) by sprinkling it lightly with water and packing it into a bulk. In conditioning for market the general tendency is to put too much moisture in the tobacco, especially when it is sprinkled, and sometimes it is delivered wet and badly bruised. To be in the best marketable condition the tobacco should contain from 15 to 20 per cent of moisture.

Tobacco is sold at auction in three ways—by publicly selling loose or unpacked tobacco to the highest bidder, by publicly selling in packed form to the highest bidder, and by closed-bid auction of packed tobacco.

Loose-leaf Auctions

The first method, often referred to as the loose-leaf auction system, is the method by which the majority of tobacco produced in the United States in the past two decades has been sold. Practically all of the auction markets of the country operate on the loose-leaf auction plan, with the exception of Baltimore, Maryland, which is a packed-tobacco market operating under the closed-bid auction plan, and Louisville, Kentucky, which is a packed-tobacco market operating on the public-auction plan. The market at Cincinnati, Ohio, is operated principally on the loose-leaf auction plan, but it has also a public auction market for packed tobacco.

As a rule the tobacco is taken to the loose-leaf auction market on the laths, where each lot is stripped from the laths and placed into a large flat-bottomed basket. The baskets containing the tobacco are then weighed and arranged according to quality in rows on the floor of a loose-leaf auction sales warehouse. In some markets, instead of using baskets, the lots are merely weighed and placed in piles on the floor of the warehouse. On each basket or pile is placed a ticket showing the name of the farmer who owns the tobacco, the number of pounds contained in the lot, and the consecutive number given to the lot. The tobacco is then sold in piles or lots ranging from 10 to 1,500

pounds to the highest bidder at public auction. As the sale proceeds from basket to basket a clerk of the warehouse enters on each ticket the price per pound at which the tobacco is sold, the name of the buyer, and the grade assigned to the lot by the buyer. As a rule, the buyers for the large companies are governed in their bids entirely by their private grades, so it becomes largely a matter on the auction floors for the buyer first to determine to which of his grades, if any, a certain lot of tobacco belongs. Having determined the grade, he knows the limit that his company allows him to bid on the lot. Each buyer or manufacturer has for his own use a private system of grades. After the tobacco once leaves the farmer's hands it is handled almost entirely by grade.

In some of the larger markets the sales proceed very rapidly. In many markets the local board of trade requires the auctioneer to sell as high as 240 lots of tobacco in an hour's time. After the sale is over the farmer has a right to refuse the price offered, in which case he can either have the tobacco put up at auction the second time or have it removed from the warehouse for sale elsewhere. If the price offered is accepted, the auction-sales warehouseman renders the farmer an account, showing the number of pounds and the price of each lot sold, and gives him a check for the total amount of the sale, less the warehouse charges, which usually include an auction fee, a weighing charge, and a commission for selling.

Each buyer removes the tobacco purchased by him from the auction-sales warehouse to a redrying plant or packing house, where the tobacco is placed in a safe-keeping condition and packed into hogsheads, ready for storage or shipment. A large percentage of the tobacco is bought direct by the manufacturer, in which case the tobacco, after being conditioned and packed, is usually shipped to the private-storage warehouse of the manufacturer, where it remains in storage until it is ready to be manufactured. The large amount of tobacco bought for export trade is shipped abroad for storage. Most of the independent buyers have their tobacco stored in public storage warehouses, where the tobacco is held for resale. In such cases tobacco is usually resold on samples which are taken from the hogsheads of tobacco while in storage.

Auction of Packed Tobacco

Tobacco to be sold at public auction in packed form is prepared by the farmers in the same way as tobacco to be sold under the loose-leaf auction system, except that it is packed into hogsheads or tierces

containing from 500 to 2,000 pounds and then shipped to sales warehouses. When tobacco is offered for selling, the packages are arranged in rows on the floor of the warehouse in very much the same manner that the baskets are arranged on the floor of a loose-leaf auction warehouse. The packages are then opened up in a manner that will not disturb the form of packing. The tobacco is then sold at public auction as the buyers pass from lot to lot examining and bidding on the tobacco. When the sale is over the lots are placed back into the same containers and returned to storage, where the tobacco is held for resale or manufacture by the new owner.

Closed-bid Auctions

Under the closed-bid auction plan the packages are prepared in the same form as when the tobacco is sold in packed form, but the containers are opened up and sampled when they are received at the warehouse. Samples are made up of from four to nine hands drawn from different parts of the package and are labeled to preserve the identity of the sample and sealed to prevent substitution. At some warehouses these samples are drawn and sealed by persons who are licensed under the United States warehouse act for the purpose. The samples are then displayed by the broker or commission merchant to whom the tobacco was consigned for sale. Each buyer enters on a slip of paper, opposite the number of each sample, the price per pound which he is willing to give for the lot represented by the sample and drops it into a box. At the end of the day the box is opened and the tobacco is sold to the buyer who offers the highest price.

FARM SELLING

Possibly next to the auction-sales method of selling tobacco the most general practice is to sell the tobacco on the farm to buyers who visit producing districts. In most sections in which tobacco is thus sold the farmer makes little attempt to assort his tobacco with respect to quality. As soon as the tobacco is cured, the farmer watches an opportunity when he can find the tobacco in a natural condition, soft enough to be handled without breaking. He then takes the tobacco down from the barns or sheds, strips the leaves from the stalks, and ties them roughly into large hands, which are packed into bundles of approximately 100 pounds each. Usually before the tobacco is taken down from the barns or after it has been placed into bundles it is examined by country buyers and bought, but very often it is bought

at a general average price without being examined. The tobacco is then delivered to a place designated by the buyer, where the bundles are opened up, the hands untied, and the tobacco assorted according to the buyer's grades. The tobacco is then retied into hands and conditioned for storage. After conditioning the tobacco is ordinarily packed into cases averaging about 300 pounds and placed in storage warehouses.

After the tobacco has passed through the spring sweat the cases are opened up and sampled, at which time the tobacco is offered for sale to the manufacturer. The tobacco is usually sold by the dealers according to the quality of each lot, whereas the farmer sells the tobacco unassorted for a general average price. In some instances the tobacco is bought by representatives of the manufacturer direct from the farmer. When this is done the manufacturer has the tobacco assorted and packed for storage in the same manner as is ordinarily practiced by the independent country buyer. The contract method of buying is practiced to a large extent in many of the cigar-leaf producing sections of the country. Very often the country buyers purchase a large percentage of the year's crop before it is harvested, the farmer agreeing to deliver the tobacco after it is produced, cured, and packed into bundles.

In all sections in which farm selling is practiced the farmers have practically no conception of tobacco grades, and very few realize the wide variation in the prices of tobacco of different qualities. Their main source of information as to the value of tobacco is the price received by neighbors, which is usually a flat price of so many cents per pound for all qualities of tobacco. The farmer who sells his tobacco at an average of 30 cents has very little idea what proportion of it has a market value of from 3 to 5 cents per pound and what from 80 to 90 cents per pound. This is due to the fact that there are no standard grades by which the farmer can be governed. With tobacco varying in price from 1 cent to \$2 per pound, it is not practical for a farmer to estimate with any degree of accuracy the market value of his tobacco without the use of some uniform system of grades. Neither is it possible for market quotations to be of much value without standard grades.

COÖPERATIVE MARKETING

Coöperative marketing has followed principally three general lines: Coöperative packing, coöperative sales agencies, and coöperative pooling.

Coöperative Packing

In many sections farmers have found that it was impracticable for them to pack their individual crops for storage, due to the fact that they were unable to employ expert sorters and also on account of the small size of the lots of tobacco of a particular quality that would be produced on a single farm. To own and operate coöperative packing houses where the tobacco could be assorted into lots of like qualities by trained men has proved of advantage. In this way the farmers were able to pack complete cases or hogsheads of tobacco of similar quality, whereas in individual packing it would be necessary in most instances to mix the different qualities in order to fill cases of commercial size. The packing houses as a rule have not been altogether successful, due, perhaps, to the fact that they were not able to operate continually from year to year. In years in which there was little demand for tobacco the packing houses had more tobacco than they could conveniently care for, while in other years when the demand and prices were good the farmers would sell their tobacco direct to the dealers and manufacturers without packing, leaving the packing houses idle. Ordinarily no special provisions were made for the sale of the tobacco which was jointly packed in this manner. Each farmer or group of farmers interested in a particular packing was required to be his own sales agent.

Coöperative Sales Agencies

In some sections farmers organize coöperative sales agencies in connection with their packing houses. These agencies sell the tobacco that is coöperatively packed by the farmers. In practically all cases the individual farmer reserves the right to accept or reject the price offered to these agencies, and in most cases the individual farmer is allowed to sell his packing independent of agencies. However, this is limited to some extent in some agencies by requiring the individual producer when selling his tobacco independent of the agency to pay a fee to the agency. In other sections the agencies were formed independent of the coöperative packing plants. In these sections the individual farmer usually does his own assorting and packing and ships his tobacco to a storage warehouse under consignment to the coöperative selling agency. The coöperative agency in this particular instance performs the function of a commission merchant.

The most common form of coöperative marketing that is practiced is coöperative pooling. Pools have been formed in practically every

section of the country in which tobacco is produced. Until recent years the pooling idea has been worked out on a small scale in most sections, but during the last two years several very large pools have been formed. These large coöperative pools have absorbed a number of the smaller pools, and one of the principles on which they are formed is to control a large percentage of the production in certain areas. In organizing a pool of this kind, from 50 to 75 per cent of the tobacco produced in a particular section is determined upon as a goal, and the organization is not put into operation until this percentage of the tobacco has been pledged to the pool by individual farmers who sign contracts. In these contracts the farmers agree to sell and deliver their entire crops of tobacco for a certain number of years to the pool, or coöperative association, which will sell the tobacco and make returns to the farmers after deducting all operating expenses. These coöperative associations are organized without capital stock.

To secure the necessary funds to pay for the operating expenses of the association and to make advances to its members the association borrows money on its notes, which are usually secured by warehouse receipts showing the type, form, grade, weight, and condition of the tobacco, and the obligations assumed by the warehouseman. The grade or other class of the tobacco shown on the warehouse receipts, if issued under the United States warehouse act, are usually taken from an official inspection, grade, and weight certificate issued at the conditioning plant. This is done in order to save opening up the tobacco after being received into storage, which is not only expensive but causes considerable damage to the tobacco.

The associations found that in many cases the number of public storage houses available was not sufficient to take care of their storage requirements, and it became necessary to organize subsidiary warehousing corporations to perform this function. These corporations are organized as a rule with sufficient capital stock to purchase, own, and operate storage warehouses. In some cases these subsidiary corporations own and operate redrying and conditioning plants in connection with the operation of storage warehouses, and in other cases they own and operate assorting and packing houses in which the tobacco is prepared for storage.

Under the pooling plan the tobacco is assorted and tied into hands by the individual farmer and delivered to the receiving warehouses of the association at such times and places as it directs. As the tobacco is received into the warehouses of the association it is weighed, placed into baskets, and tagged in the same manner as in the case of the auc-

tion system, but instead of selling it at auction the baskets are graded by expert graders who are employed by the association. Each farmer is given a statement showing the grades of the tobacco delivered to the association with the weight of each grade. At the same time an advance payment is made on the tobacco delivered. The amount of this advance is governed by the association and proportioned according to the particular quantity of each grade delivered to the association.

The association has full jurisdiction over the tobacco after it has been received and may condition, warehouse, or sell it at will. A certain percentage of the tobacco as a rule is sold direct to dealers and manufacturers from the loose-leaf receiving floors of the association. The remainder of the tobacco is shipped by the association to conditioning plants, where it is conditioned and packed into hogsheads or cases for storage. As the tobacco is packed it is inspected, regraded, sampled, and weighed by competent and reliable persons, many of whom are licensed for the purpose under the United States warehouse act. It is then delivered to public storage houses, many of which are also licensed under the same law.

20. THE CHICAGO FLOWER MARKET¹

There are 500 growers in the Chicago territory, 21 wholesalers, more than 500 retailers, and a number of important houses that deal exclusively in florists' supplies. The wholesale output of cut flowers and plants approximates \$10,000,000 annually.

Contrary to current opinion, the flower business is an extremely hazardous one, whether considered from the standpoint of the grower, the wholesaler, or the retailer. In the case of the grower his greenhouse is constantly exposed to the ravages of the elements, and a heavy hailstorm, in a few minutes' time, may destroy a plant worth hundreds of thousands of dollars.

On the other hand, the success of the wholesaler and retailer is dependent, to a very great extent on weather conditions. Flowers and plants which have taken months of painstaking labor to grow, under the direction of trained horticulturists, and which have been correctly timed to bloom for some special holiday occasion, may involve a heavy loss through an unfavorable turn of the weather.

¹Adapted from Ada A. Gridley, "Chicago Leads as a Flower Market," in *America To-day—Fort Dearborn Magazine*, (July, 1923), pp. 20-23.

A serious disadvantage that the flower business has to contend with, and one that necessarily has an adverse influence on popular prices, is the fact that no appreciable amount of stock can be accumulated for the days of special demand, as is possible with producers and manufacturers in other industries.

During the cold winter months, the growth of flowers is very slow, and the supply of stock correspondingly meager. In the spring and summer months, however, Nature lends a helping hand, pushing the flowers along so rapidly that a large supply of stock is thrown on the Chicago market, at the same time that large quantities of southern and local grown outdoor flowers compete with these staple greenhouse crops.

Chicago is the greatest shipping center for flowers in the world, and ships as far west as Denver, as far north as Winnipeg, as far east as the Atlantic Coast, and south to the Gulf Coast. The South consumes a large proportion of Chicago's commercial flowers, 50 per cent of those sold in New Orleans alone coming from the Chicago market.

Great care is taken in packing the flowers for shipment. First, the roses are wrapped in waxed paper, then rolled in newspapers. They are laid in the large boxes in layers, heads toward each end. In order to prevent bruising, the heads are not permitted to touch the ends of the boxes. Newspapers are laid between the layers, and on top. An ice chamber is built in the center of the box, and as it presses down on the stems it keeps the flowers from slipping around.

The Chicago wholesalers and growers are organized on lines similar to the orange growers of California. Each member is assessed a certain amount on every dollar's worth of flowers produced, which goes into a common fund, which is used for advertising and publicity features to create a demand for flowers.

CHAPTER IV

THE WHOLESALING OF FARM PRODUCTS

1. GRAIN PRODUCTION AND THE MARKETING MOVEMENT¹

WHEAT.—The most important surplus wheat-producing areas in the United States are the spring wheat area in the Northwest, centering in the Dakotas and including Minnesota and Montana, the hard winter wheat area, centering in Kansas and including Nebraska, parts of Oklahoma, Nevada, and Texas, and the smaller, but prolific wheat area of the Pacific Northwest. Minneapolis and Duluth are the principal markets for the car-lot movement in the spring wheat area, while Kansas City, Chicago, St. Louis, and Omaha are the chief markets for the hard winter wheat movement. The distribution of the hard winter wheat crop is much more widespread than that of the hard spring crop. The available information would indicate that exports of hard winter wheat are both absolutely and relatively greater than those of hard spring, the demand of domestic mills, particularly the larger mills in the vicinity of Minneapolis, leaving only a negligible quantity of hard spring wheat for export.

CORN.—The heaviest production of corn centers in Iowa and Illinois, although corn is one of the most widely distributed crops. Chicago is the greatest distributing center for corn in the United States, and the inspections indicate that for 1920–21 the other primary markets in the order of importance next to Chicago, were St. Louis, Kansas City, Milwaukee, Omaha, and Indianapolis. It is estimated that about 80 per cent of the corn crop is consumed on farms where grown, and the proportion of the corn crop marketed represents in consequence but a small proportion of the entire crop. The size of the crop, however, is so great that the car-lot movement of corn is heavy. Approximately 3 per cent of the corn crop has been normally absorbed by the manufacturers of corn meal; about 1 per cent in the production of grits, and about 2 per cent in the manufacture of corn starch and glucose. The export demand for corn has never been large.

¹ Adapted from Federal Trade Commission, *The Grain Trade*, Vol. III, *Terminal Grain Marketing* (Dec. 21, 1921), pp. 1–2.

OATS.—The area of surplus oats production in the United States has conformed closely to that of corn, except that oats are raised in large quantities considerably farther north. Thus, while Iowa and Illinois are the leading states for both oats and corn production, the area of heaviest oats production extends into Minnesota, Wisconsin, and other states to the north of the Corn Belt. As with corn, the bulk of the oats crop (about 70 per cent) is consumed on the farms. Probably 80 per cent of the remainder comes from the North Central states. Chicago is the chief outlet for oats as well as corn. Minneapolis, Milwaukee, and St. Louis are normally the next largest oats markets.

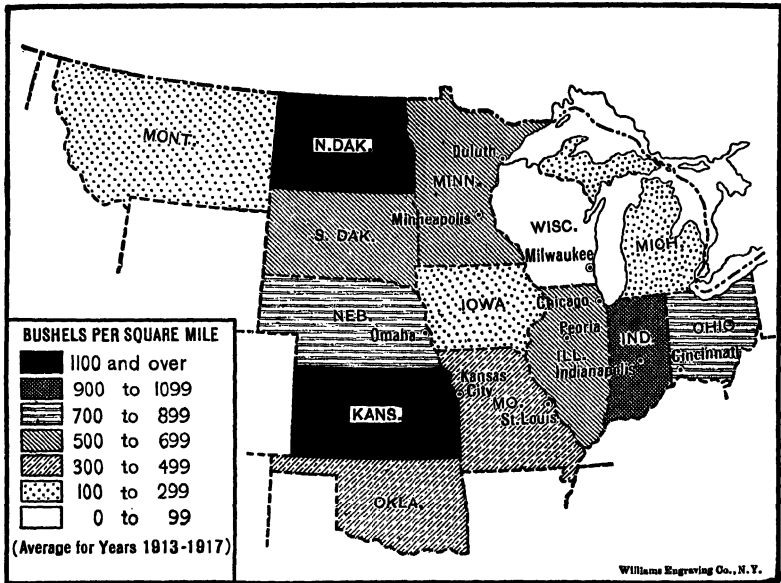
RYE AND BARLEY.—As compared with wheat, corn, or oats, the barley and particularly the rye crops are very small. The chief barley-producing sections of the United States are the extreme West, particularly California, and the upper Mississippi Valley states—Minnesota, the Dakotas, and Wisconsin. The leading states in the rye production have been Wisconsin, Minnesota, Michigan, Pennsylvania, and North Dakota. Feeding on the farms accounts for more than half of the barley crop. Minneapolis has been the chief market for barley and also rye, and Chicago, Milwaukee, and Duluth are next in importance in each of these grains. During the war a considerable proportion of the barley crop was exported. Since the adoption of prohibition there has been a small increase in the consumption of rye by flour mills and relative to the size of the crop an extremely heavy exportation of this cereal to Europe. A considerable proportion of the Minneapolis receipts has been consumed by the local mills.

2. CONTROLLING FACTORS IN THE DEVELOPMENT OF TERMINAL GRAIN MARKETS¹

In the development of grain markets there have been three chief factors: (1) proximity to the productive areas, (2) transportation facilities and rates (including terminal facilities), and (3) consumptive demand, especially that of millers and converters. There are other minor factors, more or less related to these. The existing public storage capacity, for example, whether it be considered a part of the transportation scheme or not, is influential in directing grain toward a market. Also the banking and credit facilities of a market exercise an attractive influence in themselves when highly organized, although they may have been built up primarily because of the traffic.

¹Adapted from Federal Trade Commission, *The Grain Trade*, Vol. II, *Terminal Grain Markets and Exchanges* (Sept. 15, 1920), pp. 29–31, 37.

Obviously mere geographical nearness to producing areas is not the only determining factor. Why, for instance, has the market at Kansas City so far surpassed that at St. Joseph, Missouri? It is apparent from the outset that transportation facilities and favorable freight rates are a leading influence in the development of grain



Map 1

markets. Accessibility to the productive areas is, however, a prime advantage and will be first discussed with the aid of Map 1.¹

The areas of wheat production and the location of ten primary markets in relation thereto are shown in Map 1. This shows the density of wheat production per square mile by states for the period 1913-17. It is quite apparent that the six largest primary wheat markets are located within or immediately adjacent to the areas of largest wheat production. These markets are also important terminals of grain-carrying trunk line railroads. Chicago, Duluth, and Milwaukee occupy water shipping positions on the Great Lakes; while Kansas City and St. Louis have potential facilities for shipping by river. Each of the ten markets forms a concentration point for the initial movement of wheat and other grains, hence the designation primary terminal.

¹Six maps were used in the original.—EDITOR.

The production of winter wheat extends through a broad belt including Nebraska on the north and extending into Texas in the southwest. The most productive area centers in Kansas, reaching north into Nebraska, south into Oklahoma, and eastward through Missouri, Illinois, Indiana, and Ohio. Wheat is not grown successfully in the Southeast where the warm, humid spring weather permits fungus diseases to injure the crop, and where the mild winters frequently give the plant a premature start only to be damaged or destroyed by late frosts.¹

Spring wheat, on the other hand, is highly localized in the Northwest, from Minnesota to Washington, with North Dakota the leading producer. The Rocky Mountain plateau cuts athwart this region so that the Washington area (the Palouse and Big Bend districts) must be considered a secondary zone of production.

It is apparent, then, that Duluth and Minneapolis are in position to command the shipments of spring wheat while Kansas City, Chicago, and St. Louis have ready access to the winter wheat areas. Omaha and Milwaukee are in position to derive a certain proportion from each crop. Kansas City is undoubtedly the leading winter wheat market, although the exchange publishes no figures distinguishing between the two varieties.

It appears, then, that geographical location with reference to production is essential to the development of a primary market. To illustrate further, it should be recalled that the western primary market for Canada is located at Winnipeg on the eastern edge of production and not at the lake shipping points, Fort William and Port Arthur. In order to handle a large volume of country shipments to the satisfaction of producers, a location relatively close to the productive areas seems to be essential.

3. DESTINATIONS OF COUNTRY ELEVATOR AND WAREHOUSE SHIPMENTS²

Of 1,541,391 cars of grain reported by country elevators and warehouses as shipped during the five crop years—1912-13 to 1916-17—about 70 per cent went to cities which received 5,000 or more cars during this period, or an average of more than 1,000 cars a year. Slightly less than 70 per cent of the total reported shipments went to terminal markets. Another and smaller proportion (7.08 per cent) of the total shipments went to various geographic points receiving less

¹ Finch and Baker, *Geography of World's Agriculture* (1917), pp. 14-15, 18.

² Adapted from Federal Trade Commission, *The Grain Trade*, Vol. I, *Country Grain Marketing* (1920), pp. 129, 131-41.

than 5,000 cars. The balance, or about $23\frac{1}{2}$ per cent, was sold to mills (13.51 per cent), feeders (1.96 per cent), interior brokers (6.05 per cent), maltsters, retailers, etc.

The direction of the movement of grain from the country elevators and warehouses is governed by a wide variety of conditions, the complexity of which renders any explanation more or less unsatisfactory. It is, however, possible at least to point out certain factors which undoubtedly exercise an important influence upon this flow.

There appears to be good reason for assuming that the proportion of terminal market shipments by country elevators from a given area as compared with shipments to other destinations will be considerably affected by the size of the terminal markets to which the area is tributary. Other things being equal, the larger the market the greater the number of buyers, the keener the competition between them, and the higher the resulting price that will be obtained for grain. Thus size may become an attractive force, leading to a high proportion of terminal market shipments by rendering it difficult for the smaller markets and local buyers to compete with such markets.

The size of the Chicago and Minneapolis markets as compared with the various other terminal markets is greatly affected by the direction of the grain movement and the location of the markets with reference to production. Broadly speaking, the general current of the grain movement is from the surplus to the deficit areas, or from west to east, with a certain amount of southern and southeastern flow, there being comparatively little westward, northern, or southwestern movement.

SIZE OF MARKETS AND THE DIRECTION OF SHIPMENTS

The size of the terminal market as a factor explaining variations in the proportion of shipments to various destinations is of course closely related to and intimately interwoven with the degree of organization of the terminal market mechanism. The more highly organized this mechanism and the more extensive its ramifications, both geographically and otherwise, the greater the attractive power of the market. Size promotes organization and organization promotes size. Neither can be regarded as the result of the other, but both are important causal factors in explaining the variations in the destination of shipments. The relatively high percentage of terminal market shipments by Iowa, Illinois, Minnesota, and the Dakotas may thus probably be attributed in part to the highly organized ter-

minal market mechanism of Chicago and Minneapolis, to which markets these five states are directly tributary.

In Minnesota and the Dakotas are hundreds of houses of line elevator companies, chiefly with headquarters in Minneapolis, and, although these companies will usually ship anywhere, they are exceedingly close to the Minneapolis market situation and ship in whenever prices are favorable for even the briefest period.

The necessity of buying malting barley by sample and the preference of the Minneapolis mills for buying country-run grain has tended to develop the sample market for both these grains at Minneapolis on an extensive scale. This in turn has greatly increased the cash commission business, since it has made it desirable for country elevators to consign to some house sufficiently expert in selling to be able to realize the best price for the wheat or barley involved. As a result of the competition between these cash commission houses, their representatives cover the entire Northwest, soliciting shipments for Minneapolis and also Duluth. To the south the wire houses out of Chicago have of late embarked extensively in the cash commission business, and the wire house, especially highly developed in Illinois and Iowa, is used both for the solicitation and purchase of grain for shipment to Chicago. This market having little consumptive demand, the grain business is largely shipping for domestic consumption or export, centered chiefly in the hands of the great terminal elevators. As a rule, this business can be handled satisfactorily on a grade as well as a sample basis. The result has been that the elevators and other dealers have reached out to bid the country for grain directly in competition with the commission houses soliciting consignments and have built up a huge volume of business. This is transacted chiefly upon the basis of acceptances by country elevators, shippers, and dealers of bids for grain of specified kinds and grades made by wire or otherwise directly by Chicago buyers "to-arrive" or to be shipped within a specified number of days. In this territory there is also considerable buying "on-track" in the country by representatives of terminal dealers.

It must, of course, be admitted that the territory under discussion is also in large measure tributary to Milwaukee and Duluth as well as Chicago and Minneapolis. Shipments to these markets tend to increase the importance of terminal market movement in this area above the average. Especially, perhaps, is this true of Duluth, whose dealers engage extensively in the financing of country elevators. Exporting through Duluth by way of the Lakes is also a factor of impor-

tance in directing the flow of a considerable portion of grain to the Duluth market, while the Milwaukee demand for barley was at least, prior to prohibition, an important contributory factor in the terminal market movement of this grain.

At the same time the average annual receipts of Minneapolis and Chicago are so huge as compared with those of Duluth and Milwaukee that the proportion of terminal market shipments from the area under discussion may safely be assigned in considerable measure to the drawing power of Chicago and Minneapolis resulting from size and organization of these markets.

Important contributory factors to the high percentages of terminal market shipments in Chicago-Minneapolis tributary territory are (1) the consumption of Minneapolis mills, (2) the sale of barley by sample, and (3) terminal market financing.

As is well known, the city of Minneapolis is the greatest flour-milling center in the country. To this market Minnesota and the Dakotas, three of the leading wheat-producing states, are directly tributary, and the enormous capacity of the mills at this market is supplied almost entirely with wheat and rye grown in these states. Owing to the mixing practices of the terminal elevators, the mills almost without exception prefer to buy country-run grain, and will usually pay premiums if necessary in order to obtain it.

It is probably owing largely to the huge buying power of these mills demanding country-run grain that country elevators in Minnesota and the Dakotas send much higher than average proportions of their wheat shipments to the terminal markets.

TERMINAL MARKET FINANCING

Another factor of considerable importance also in accounting for the high proportion of grain shipped to terminal markets from Iowa, Illinois, Wisconsin, Minnesota, and the Dakotas is probably the financing of country elevators by terminal market grain dealers.

It is interesting to note that those states which send the greatest proportion of their grain to terminal markets are, generally speaking, those in which terminal market concerns are most frequently reported as lenders of funds borrowed by country houses.

While there is no very exact correlation, the proportion of financing by terminal dealers is, on the whole, distinctly higher in those states which report the larger proportions of shipments going to terminal markets than it is in those states with lower proportions of such shipments.

Terminal financing, at least by commission houses, is usually done under arrangements whereby the country house accommodated agrees to ship all or a very large proportion of its grain to the financing house. This financing, therefore, is an important factor in influencing shipments to the terminal market.

The lower than average percentage of terminal market shipments shown by the principal producing states outside the Chicago-Minneapolis tributary area—i.e., Oklahoma, Kansas, Nebraska, Missouri, Indiana, Ohio, and Michigan—is probably due chiefly to the absence of those factors which have tended to produce a high proportion of terminal market shipments in the former section. The terminal markets located in this latter area are, as already indicated, very much smaller than Chicago or Minneapolis, less highly organized, and consequently lacking in the attractive power of these markets. None of the smaller markets possess the extensive sample markets nor such extensive buying interests as those represented by the Minneapolis mills or Chicago terminal elevators. Neither are there the large line companies operating from the terminal market, nor the highly organized system of commission house soliciting and financing which is found, especially in Minneapolis territory, nor the extensive wire-house soliciting and purchasing and the terminal elevator direct buying which exists out from Chicago. The absence of these factors weakens the attractive power of the smaller markets and thus gives greater scope to operations outside the terminal markets.

An important contributory factor to the low proportion of terminal market shipments in territory tributary to the smaller markets is the extent of the local milling industry in this area. Outside of shipments to terminal markets the mills absorb a larger proportion of the total shipments than do either the smaller markets, the feeders, the interior brokers, or the miscellaneous purchasers.

The proportion of shipments to mills ranges all the way from $4\frac{1}{2}$ per cent in Illinois to $46\frac{1}{2}$ per cent in Oklahoma. Broadly speaking, these variations may be assigned chiefly to the relative importance of the local milling industry and local mill buying.

SHIPMENTS BY KIND OF GRAIN TO SMALLER POINTS

The grain movement to smaller points—that is, those not sufficiently large to be classed as terminal markets—is relatively highest in the case of corn. Oats is second in this movement and rye and barley combined and wheat follow in order. The explanation of the higher proportions of corn and oats going to small points as compared with

the other grains may be found perhaps in the fact that the local use of both corn and oats for feed gives rise to a considerable distributive business from various local centers, and as a result a considerable proportion of these grains is shipped to these smaller points for local redistribution. The lower proportions of the other grains moving to these points may be assigned to the fact that the great bulk of the wheat and rye crops goes to the terminal markets and mills and the great bulk of the malting barley to the terminal markets for sale by sample.

4. WHOLESALE MARKETING OF CATTLE¹

The marketing of cattle in the United States is greatly simplified by the system of centralized market points with their stockyards and large slaughtering and packing plants. Of the total sales, the proportion disposed of through the central markets ranges in the different sections from 40 to 85 per cent. The proportion is highest, about 85 per cent, in the Middle and Central West. Here a large part of the corn crop is marketed in the form of cattle which are bought or raised to consume the grain. For the most part these go directly to the killers. On the other hand, a large proportion of the cattle shipped annually from the range country, as well as from the Appalachian and contiguous territory, is sold to feeders in the Corn Belt or in farming sections to the east; these are grass or corn fattened before reaching the market centers and meet a demand for the better qualities of beef. American corn-fed beef commands a price premium in the world markets.

The seven chief primary markets of the Corn Belt—Chicago, Kansas City, Omaha, East St. Louis, St. Joseph, Sioux City, and St. Paul—receive the great bulk of the annual shipments. In the years 1916–20 the annual receipts at these markets averaged 12,894,000 head, or 57 per cent of the average receipts of 22,200,000 head at 54 markets. These figures, however, do not adequately show the importance of the large primary markets because of duplication in reported receipts of cattle at the various centers. With but one exception, livestock unloaded in transit, for instance, is always included in receipts. Stockers and feeders appear at least twice and sometimes more than twice, at different markets, and there is also some reforwarding of fat cattle. Consequently, the slaughterings at these seven markets is a better index of their importance. In the period 1916–19, 8,894,000

¹Adapted from United States Tariff Commission, *Cattle and Beef in the United States* (1922), p. 27. (*Tariff Information Series*, No. 30.)

head of cattle, or 70 per cent of the annual average number of cattle slaughtered under Federal inspection, were butchered at these points.

5. THE CHICAGO LIVESTOCK MARKET¹

Chicago is the greatest livestock market in the world. The immense central stockyards, lying some miles to the southwest of the City Hall, are a feature of enormous magnitude in the life of the city. They cover about 500 acres, probably more, including Packingtown, where the packing houses are. These 500 acres are covered with some 13,000 rectangular pens, with double plank fences, paved with brick, concrete, and tile, and fitted with racks for hay and concrete troughs for water. There are 25 miles of streets between the divisions of pens. It is said there are some 300 miles of railway trackage, which intersect the divisions or blocks of pens, and connect the yards with all the railways running into Chicago and also belt the yards and pierce every section of the packing and factory sections. Separate accommodations, except at unloading and loading platforms, are provided for each kind of stock. The enclosures at the loading and unloading platforms each hold slightly more than one carload of stock. To economize space for better protection of the stock and to facilitate movement from one part of the yards to another, there are miles of overhead viaducts and runways. Sheds of two stories, covering 75 acres, have been built for hogs and there are also great covered sheep houses, both of which are in part double-decked. The water system, which supplies the yards from artesian wells and also from Lake Michigan, has a reservoir holding 10,000,000 gallons, and pumps whose daily capacity is 8,000,000 gallons.

The yards are managed by the Union Stock Yard and Transit Company of Chicago, which employs some 2,000 men to take care of the unloading and handling of the livestock. The company itself, however, is not engaged in the buying, selling, or slaughtering, or otherwise disposing of stock. The object of the company is solely to provide proper and adequate facilities for the reception, care, and handling of livestock.

This enumeration of facts already made does not give in any adequate way the impression or significance of the Chicago livestock market at the Union Stock Yards. Robert Shackleton, in his recent

¹Adapted from Rudolf A. Clemen, *The American Livestock and Meat Industry* (1923), pp. 540-42. (The Ronald Press Company.)

work, *The Book of Chicago*,¹ does achieve this. He describes the stockyards as follows:

The great covered sheds, with Rembrandt-like effects of light and shadow, give an odd picturesqueness, as also do the rounders-up, like cowboys on horseback, and the immense length of covered runways and buildings rising low or high, black or gray or some shade of red, above the twenty thousand pens that checker-board the hundreds of acres of space. There are bizarre color effects, from great signs in red or black, with great spaces of yellow; from the blackest of smoke in eddying clouds; from the whitest of steam; from yellows and blues and whites of the long lines of railway cars; from stockyard wagons painted all red or all yellow or all brown; from the colorful costumes of the foreign workers; from the cattle themselves, in reds and grays and blacks and browns. There is the sound of roaring machines, of scurrying horsemen, of the trampling of hoofs. There are the cries of the drivers, urgent and sharp, mandatory, the cries of the cattle with a premonition that it means the end, sounds that are expostulative, recalcitrant, making a strange chorus. At times there rises a volumed cry that goes from runway to runway, that is taken up from pen to pen, a dreadful, dissonant, swelling, many-throated cry. In his *Pelleas et Melisande*, Maeterlinck makes one of the characters describe cattle driven to their death, saying, "They cry like lost children; you would say they already smelt the butcher."

6. THE SOUTH ST. PAUL CENTRAL MARKET FOR LIVESTOCK²

Following is a discussion of certain features of the organization of the South St. Paul central market.

THE STOCKYARDS COMPANY

The St. Paul Union Stockyards Company is a corporation owning the stockyards and the exchange building. The capacity of the stockyards is 1,200 carloads. The 3,000 stock pens cover 83 acres.

The employees of the St. Paul Union Stockyards Company unload the livestock, count the number of animals in each shipment and notify the commission firms when consignments of livestock arrive and the amount of it. The stockyards company keeps a record of the time of arrival of every train and the numbers of all cars, also of the chute at which each car is unloaded and the number and kind of all animals unloaded, and of the number of dead and crippled animals.

¹Robert Shackleton, *The Book of Chicago*, pp. 183-84.

²Adapted from Edwin W. Gaumnitz and J. D. Black, *Organization and Management of Local Livestock Shipping Associations in Minnesota* (1922), pp. 15, 18-20, 22, 24. (University of Minnesota, Agricultural Experiment Station, Bul. 201.)

AN ILLUSTRATION OF CONCENTRATION AT THE TERMINAL LIVESTOCK MARKETS

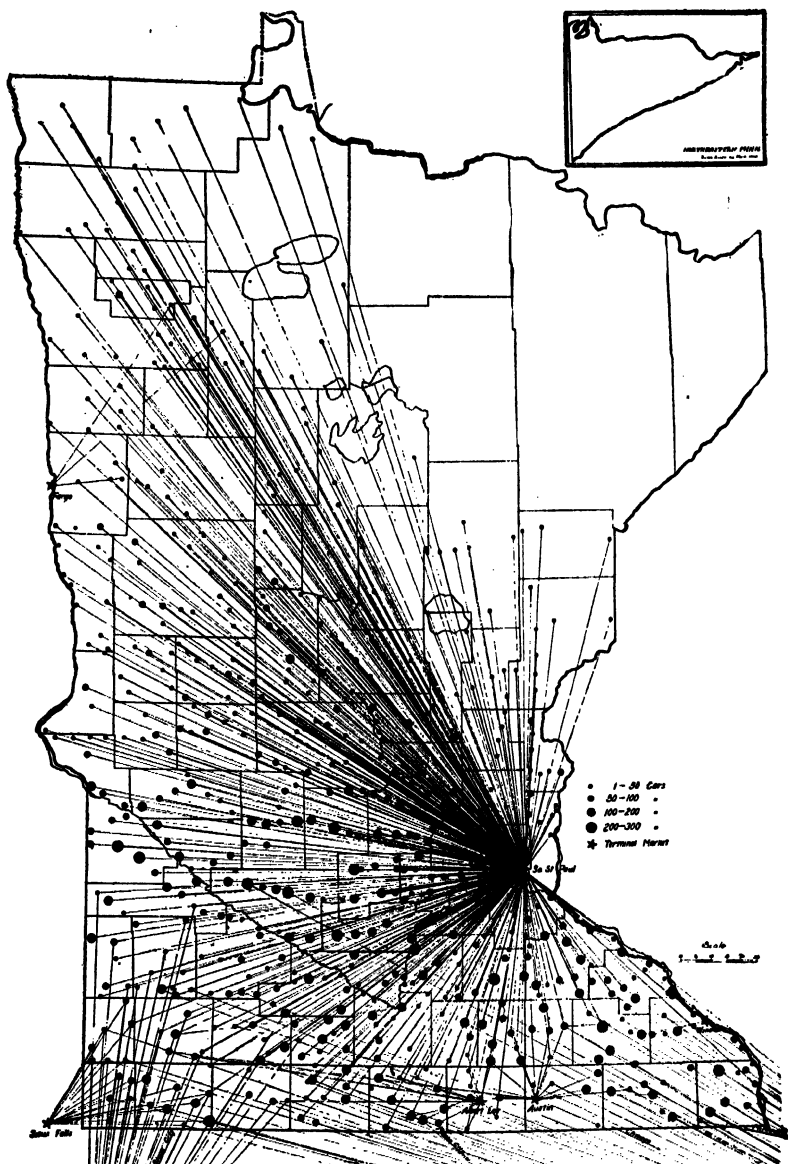


Figure 2.—Points to Which Local Livestock Shipping Associations in Minnesota Consign their Livestock, also Size of Associations.

The Stockyards Company derives its revenue from yardage fees, from the margins in selling feed and bedding, and from rental of buildings. It reserves the right to supply feed and bedding for use in the yards. The yardage fees are handled in a peculiar way. Each commission man or dealer in the yards is allotted a number of pens, for which he does not pay a regular rental, but instead a yardage fee on each animal handled. This charge is levied only as the animals are sold, no extra charge being made for those held in the yards more than a day. The Stockyards Company collects this yardage fee from the commission firms and the commission firms in turn include it in the central market expenses charged against the shippers.

The Stockyards Company buys its hay, corn, and straw at varying prices, but sells these commodities at uniform rates over long periods of time. Naturally this practice causes dissatisfaction among shippers whenever the spread between the market price and the price charged at the stockyards gets rather wide.

COMMISSION FIRMS

There are 34 commission firms operating at South St. Paul. The number of stockholders or members per firm varies from 2 to 9. These firms are organized for the purpose of acting as expert salesmen and buyers in livestock. Although any person may sell his own stock on the market, yet most stock is consigned to and handled by commission firms.

Most commission firms have hog, cattle, and sheep salesmen or specialists in addition to the office force. The yard force cares for the livestock in the yards, sees that it is properly bedded, fed, and watered, sells it, drives it over the scales, and gets the sale weights. These selling weights together with the selling price, buyer's name, and amount of feed and straw used are then turned in at the office. Here a full account of the sale is prepared which summarizes the selling data and the various expenses connected with the shipment. This "account sale" together with check covering the balance between the gross selling amount and the central market and freight expenses is either given or sent to the consignor. If prorating is done by the commission firm, work sheets and individual account sales for each shipper are also sent.

Each commission firm is under a \$10,000 bond to the St. Paul Union Stockyards Company, a \$20,000 bond to the Stockyards Exchange, and a \$5,000 to \$20,000 bond to the Railroad and Warehouse Commission. All dealers and commission firms are licensed by the

Minnesota Railroad and Warehouse Commission. The bond to the St. Paul Union Stockyards Company is to insure collections and remittance of yardage charge and feed and straw bills. The bond to the South St. Paul Livestock Exchange is "for the purpose of protecting owners of livestock and for the guarantee of payments to the owners of all livestock shipped out of this market and sold for this account and likewise for all stock bought of any member of this exchange." The bond to the Minnesota Railroad and Warehouse Commission is for the "protection of persons doing business with any dealer" at South St. Paul.

LIVESTOCK EXCHANGE

All the commission firms and dealers at the South St. Paul market except the two already mentioned [Farmers' Union Livestock Commission and the Central Coöperative Commission Association], are organized into the South St. Paul Livestock Exchange, which was incorporated in 1897. The purposes of this organization are to "inculcate just and equitable principles of trade; to acquire and disseminate useful business information; to regulate trading; to settle disputes among members; and to act in the same capacity as any other such organization." Any person of reputable character and in business at South St. Paul may become a member of the Exchange on payment of an initiation fee of \$250 if holding a membership and if accepted by the board of directors. Memberships in 1920 were worth \$5000.

Members of the Exchange are governed by certain rules which regulate the commissions charged, prohibit rebates on commission charges, and provide for settlement of disputes by arbitration. Infractions of the rules carry heavy penalties.

DEALERS AND SPECULATORS

In addition to the 32 commission firms, organized for profit, and the two coöperative commission firms, 61 other agents are engaged in buying and selling livestock at the South St. Paul market. These are dealers, scalpers, or speculators who act on their own account, who buy odd lots, group and resell, or perhaps buy and hold for a few days in the hope of a price advance. Certain of these dealers who specialize in particular classes of livestock or who confine themselves to particular operations soon have their specialties recognized and come to be called "milk-cow dealers," "arbitragers," "speculators," etc.

BUYERS AT SOUTH ST. PAUL

Buyers of livestock at South St. Paul may be briefly classified as follows:

1. Local packers—The principal packers are Swift & Company and Armour & Company. The most important of the smaller packers is King & Company.
2. Buyers for outside packers—Certain packing interests not having plants at South St. Paul have representatives there who buy for shipment to their plants.
3. Order buyers—usually commission merchants who buy “feeders” for feed-lot operators.
4. Speculators or scalpers—who buy and sell usually in small lots.
5. Stockmen who buy “feeders” or “stockers.”

SCALE FORCE

All scales at the yards are operated by government employees. All scales are in small buildings, are of late pattern, are equipped with automatic weight-registering devices, and are under constant inspection. All scales break on ten-pound points except three installed in 1920. All weighing is done openly where buyer and seller can watch. The weighmaster balances the scale, weighs the draft, issues the scale ticket, and records the scale ticket number and the time of weighing. The scale ticket is stamped with weight of livestock, and number of animals weighed, dockage, sale price, and names of buyer and seller. The “shrinkers,” four in number, are also government employees. They decide which animals are stags or pregnant sows and dock them accordingly. Stags are docked 80 pounds and pregnant sows 40 pounds per animal. The inspectors are also employed by the government. The weighing charge is high enough to cover very adequately the expense of weighing, shrinker and inspection services.

ST. PAUL BRIDGE AND TERMINAL RAILWAY

The only railroads connecting directly with the stockyards are the Rock Island and the Great Western. All other railroads entering the Twin Cities deliver their cars to the St. Paul Bridge and Terminal Company at Hoffman Avenue. This is a private corporation which owns tracks running from St. Paul to the stockyards. A set charge of \$4 per car is made for hauling cars to the yards and switching them there. All carload charges are paid by the Stockyards Company, which in turn collects from the consignor.

CENTRAL MARKET EXPENSES

Central market expenses include the following charges:

1. Commission charge for caring for and selling the livestock.
2. Yardage charge paid to the St. Paul Union Stockyards Company.
3. Weighing charge, covering the expenses of weighing and inspecting, and the salaries of the shrinkers.
4. Fire insurance charge.
5. Charges for feed and bedding.
6. If prorating is done by the commission firm, a uniform charge for this service.

7. THE PERISHABLE FOOD MARKETS OF
NEW YORK CITY¹

In discussing the New York perishable food markets, it is best to think of the metropolitan district as a whole regardless of state lines. For the purposes of this study New York will be taken to mean the metropolitan zone adopted by the United States census having a radius of 30 miles from the New York City Hall, and having a population of about 9,000,000, that is still rapidly increasing.

The estimated annual receipts of perishable food on the New York market approximate \$696,000,000 based on wholesale prices.

They are roughly distributed as follows:

Butter, cheese, eggs, and poultry	\$233,000,000
Meat	270,000,000
Fruits and vegetables	94,000,000
Milk	84,000,000
Fish, oysters, and other sea food	15,000,000
	696,000,000

TRIBUTARY TERRITORY

The territory made tributary to the demand of the perishable produce market of the New York zone reaches from ocean to ocean. It even extends overseas to Belgium and Germany for Brussels sprouts, chard, endive, cabbages; to Mediterranean ports for specialties; to Hawaii for pineapples; to Great Britain for potatoes; and it extends south to Central America and the West Indies for bananas, citrus fruits, and a few tropical specialties. A considerable supply of eggs

¹Adapted from Federal Trade Commission, *Report on the Wholesale Marketing of Food* (1919), pp. 201-10.

comes from China. Within the continental bounds of North America, New York reaches out to the State of Sonora in northwest Mexico for tomatoes; to southeast Texas and southern Florida for its early lettuce; to Florida and Louisiana for strawberries, new potatoes, and onions; to Georgia and Michigan for peaches, and Colorado and California for melons; to Oregon and Washington for apples; it reaches to the northern confines of Maine for its Aroostook potatoes, to Minnesota for the Red River potatoes, and to the Provinces of Canada for apples, cabbages and onions, butter and eggs.

With the advance of the season, the production for the New York market marches northward by definite zones. Each early zone makes its price until the next nearer zone "comes on," when the last previous zone drops out suddenly because of its disadvantage of the longer haul, affecting the condition of the produce on arrival.

The length of haul controls the conditions of the haul and indirectly affects the conditions of the marketing.

Immediately adjacent to the city is the so-called home-grown produce within radius of wagon haul, up to 30 miles, and now, with the advent of the auto truck, up to 50 miles. In fact, experimentally this last season an auto-truck service was inaugurated from Wilkes-Barre, Pennsylvania, to New York, and also from Vineland, New Jersey, to New York, considerably extending the farm-product haul by truck or wagon. It has been estimated, however, that such supply is not over 5 per cent of the present consumption. In the height of the season the three market places in New York for home-grown produce together have about 1,200 farm wagons, but it takes 10 wagon loads to make 1 carload, and the wagon season is shorter because their produce must come from within the 50-mile radius, while the railroad has a radius of 3,000 miles to embrace many successions of crop maturities.

In the area beyond this local zone there are some large individual shippers that use business methods and ship in carload lots, but the small shippers predominate as far south as Norfolk and to the Alleghenies in Pennsylvania and to western New York. All these small shippers throw the onus of marketing on the commission merchant. Whether the shipment comes by carload lots or in less-than-carload lots by express somewhat determines the class of commission men who handle it.

Outside this last area is the zone reaching to the coast and to Canada and Mexico, where the movement is by carload lots exclusively.

MARKET EQUIPMENT

The great primary produce market of the city consists of a series of railroad and steamship piers interspersed at irregular intervals along the Manhattan shore line on West Street, from Pier 7 to Pier 44, and further northward to include the West Washington Market District. It is interrupted by ferry stations, merchandise piers, and, planted upon the piers themselves, it extends into the city streets. In Manhattan alone, of all the five boroughs, is found this primary market, and in Manhattan it is concentrated at the southern end of the island. It is in a district whose center is roughly 2 miles from the center of population of the metropolitan district described by a 30-mile radius from the City Hall. There is no coördination among its parts; their arrangement is purely accidental. Nor is it coördinated with any system of warehousing, all storage involving a truck haul. At its northern end is the live-poultry market, and just beyond is the Gansevoort Farm Wagon Market, where some 300 Long Island produce wagons assemble in the night. The buyers gather at the primary market during the night hours from 12 until 7 in the morning, and the buying begins at the stroke of a gong. To reach this market, the retail dealer in the outlying sections of the Queens, the Bronx, and the Harlem neighborhood must be up all the night before in order to buy his produce and have it back at his retail store for the early morning trade. Because it is inconvenient for many of them to do this, the jobber breaks the receiver's car lot down to the wagon lot and sells some of it directly to these retailers at the point where first discharged by the railroad or steamship, and the remainder is trucked over to the produce dealers' private stores in the Franklin Street neighborhood.

The piers which serve for this primary market were first designed as transit sheds where incoming freights could be checked across the platform when breaking bulk from car to truck. But for market purposes, the produce must also be attractively exhibited. Yet here the buyers do not have easy, unobstructed, well-lighted access to all parts of a market nor do they have conveniences for negotiating, auctioning and settling. Market facilities for sorting and grading and conditioning are entirely lacking. As produce markets the piers have no protection from weather extremes, no facilities for temporary cold storage. In all these essentials of a well-ordered market place, the railroad and steamship piers are conspicuously lacking except at the Erie fruit auction pier, and at Pier 28, which have heating facilities.

There are said to be 127 rail and water terminals to which the freight of New York comes. Foodstuffs are delivered to a varying degree to over 100 of these points, counting each pier as a single point, and of this number 30 are for fruit and vegetables, dairy produce and fish.

DISTRIBUTING AGENCIES

The produce merchant stores which have attached themselves to the carriers' terminals cluster in and around an area roughly described by West, Jay, Hudson, Fulton, and Greenwich streets, all on the lower West Side and embracing Franklin Street.

The physical facilities of the individual commission merchants, the wholesalers, and jobbers are quite as crude as the carriers' piers. They, too, occupy buildings that have been converted from their first purposes. These buildings are old homes of early New Yorkers, of all sizes and inconveniences; the fronts have been knocked out and lean-to bonnets built out over the sidewalk to the curb to shelter the produce from the rain. To these stores the merchants "ride" what they do not sell at the pier. Few of these stores can handle through the house daily more than two cars of perishables at the most. As a considerable dealer will often have receipts of 5 to 15 cars in a day, it is plain that the dealer leans heavily on the carriers' facilities to make up for his own lack. It is variously estimated that 40 to 50 per cent of the produce arriving in Manhattan is sold either on railroad and steamship piers built and operated as such, or in the congested open street, leaving half or more to be trucked through the city streets to the commission merchants' stores.

To complete the perspective of the food distribution agencies, may be appended the following list of retail stores and public eating places in Greater New York:

Groceries.....	10,448
Butcher shops.....	5,583
Bakeries.....	2,262
Vegetable and fruit stores.....	2,095
Dairies.....	840
Delicatessen stores.....	1,883
Total retail stores.....	23,111
Restaurants and other public eating places.....	7,000

In Greater New York only (figures for the entire metropolitan district are unavailable) are 3,500 to 5,000 pushcarts, operating at nearly a dozen stands in the open streets up the East Side among the foreign-born population.

There are said to be some 400 storage places of all kinds in the metropolitan district. The cold-storage plants in this district contain about 35,000,000 cubic feet of space. In Manhattan and the Bronx, except at the private switches of the packers and except at the "Bronx," the "Merchants" and the "St. John's Park" cold-storage plants, there is no cold storage which can be reached except by truck haul. The plants having rail connections are all on the New York Central, which handles less than 20 per cent of the perishable produce.

8. WHOLESALE DISTRIBUTION OF FRESH FRUITS AND VEGETABLES—CHICAGO¹

Chicago is the largest center in the world for the distribution of fresh fruits and vegetables. It is the great transportation center of the country and from it radiate the great rail trunk lines that either tap all of the producing centers or reach the main points of consumption.

Fully twenty-seven railroads and many boat lines bring fresh fruits and vegetables to Chicago. It has a belt line system connecting all railroads which equals one-third of the total belt lines of the United States. It has the largest refrigerator car icing station in the world. In 1920 this station iced 200,000 refrigerator cars, and in one period of twelve hours 856 cars were iced, using 1,150 tons of ice, which will give some idea of the vast rail movement through the Chicago yards.

Its geographical and transportation location makes it the natural "billing" point for that enormous volume of fresh fruits and vegetables produced in the West, especially from the Pacific slope which to such a great extent supplies the needs of the East, as well as for that eastern and southern production that moves to the West and Northwest. This centralization makes possible the diverting of cars to those points showing the greatest need and the maintenance to the greatest possible extent of an even flow of commodities to the end that markets may not be glutted and an even division of supplies be reasonably maintained.

Its own needs for its population of nearly three millions and for the adjacent territory which it supplies are very considerable and its unloads are second only to New York. Its cold storages, devoted to the

¹Taken from R. G. Phillips and Samuel Fraser, *Wholesale Distribution of Fresh Fruits and Vegetables* (July, 1922), pp. 235-36. (Published by The Joint Council of the National League of Commission Merchants of the United States, The Western Fruit Jobbers' Association of America, and the International Apple Shippers' Association.)

storing of perishable food products, are by far the largest in the world and because of this it is the great cold storage center for the holding of those commodities which must be harvested during a short period and moved into consumption over a much longer period. A large volume is "stored in transit" in Chicago.

SOUTH WATER STREET

Its principal wholesale fruit and vegetable market is located on South Water Street where practically all of the wholesale and a large portion of the jobbing business of Chicago and its surrounding territory is performed. Second in rank is the large jobbing district on West Randolph Street and there are other lesser markets, such as that at Sixty-third Street, all of which are jobbing centers.

Some commodities, such as watermelons, are sold in the terminal yards; car lots are sold on-track or sold in-transit and diverted. The docks for the lake boats and most of the railroad terminals are located within a mile and a half of South Water Street. Carting, which is done under contract with concerns specializing in this business, is largely performed by horses and wagons. The goods are hauled either directly to the purchaser or to South Water Street and other markets where they are jobbed out in less than car-lot quantities. Trading begins at 7:00 A.M. and is usually over by 5:00 P.M. The fruit auctions are both located on railroad tracks close by South Water Street.

The South Water Street market may be divided into sections according to the type of business done. In one section of the street the business is largely with Chicago retailers. Other firms cater to jobbers from other parts of the city. Others specialize in catering to out-of-town jobbers, and still other firms to out-of-town retailers. Everywhere we see the trend towards specialization in business. Car-lot receivers, commission merchants and jobbers have adapted themselves to giving the particular kind of service which is demanded by their patrons at the lowest possible cost.

Some reconditioning is done on the Chicago market, perhaps more than on the average market. For example, packages of citrus fruits, cantaloupes and tomatoes are opened and replacement of sound fruits and vegetables is made for unsound ones. Celery is received "in the rough" and is trimmed, washed and bunched. Tomatoes are sorted, ripened and repacked. While this service adds somewhat to the distributing cost, it is a service of conservation and adds greatly to the appearance and salability of the commodities.

Usually fresh fruits and vegetables reach the consumer in Chicago through the channel of the retail grocer. The trade reports that between 9,000 and 10,000 retailers supply the wants of the 2,880,000 inhabitants, which is about 1 to 300 inhabitants, a factor which appears to be common to several large cities.

The wholesalers who furnish the necessary supplies are located in a relatively small area in and about South Water Street. Not only are the wholesale grocers located near by, but many of the firms which are important factors in the distribution of fresh fruits and vegetables also handle butter, eggs, poultry, etc. Taking the South Water Street business as a whole, 60 per cent to 65 per cent consists of butter, eggs, poultry, veal, etc., and 35 per cent to 40 per cent of the business consists of fresh fruits and vegetables. About 20 per cent of this total volume is handled on commission; 1 per cent on a brokerage basis; the rest is merchandised. During 1920-21 a close estimate of the business done on South Water Street showed that 7 per cent was potatoes, 33 per cent other fresh vegetables and fruits, 33 per cent eggs, 14 per cent veal and poultry, while butter and other commodities made up the balance. No thorough survey has yet been made to reveal the magnitude of the business done, but a record of 181 firms for the years 1918-1919 shows an average turnover of about \$1,250,000 per firm, and the total sales must amount to several hundred million dollars per annum.

Chicago's need of a properly located and adequate wholesale railroad terminal market to which all carriers would have access is urgent—the city authorities have decided to convert South Water Street into a boulevard and the orders have been given to condemn the property. The relocation of this industry and the establishment of a proper terminal market are problems still awaiting solution.

9. INADEQUATE FACILITIES AND POOR LOCATION OF CHICAGO PRODUCE MARKETS¹

The facilities for handling perishable food at wholesale in Chicago are both inadequate and uneconomical. This situation effecting an appreciable increase in the cost of foodstuffs has within recent years been brought to the attention of Chicago citizens, with the result that there is much agitation for a better arrangement.

The principal wholesale perishable food markets of Chicago, determining conditions of both supply and prices for the whole city, are

¹ Adapted from Federal Trade Commission, *Report on the Wholesale Marketing of Food* (1919), pp. 240-41.

those at South Water Street and West Randolph Street. Other smaller and less important centers where some fruits, vegetables, and produce are handled at wholesale are at Kensington, Sixty-third Street, Maxwell Street and Fulton Street. The latter is practically limited to poultry, veal, and other meats.

South Water Street, Chicago's greatest market for all kinds of perishable foodstuffs, and said to be the "busiest street in the world," lies between the downtown business district, "The Loop," on the south and the Chicago River on the north. The market extending on either side of the street for seven blocks contains over 200 stores where about 300 firms, mostly commission merchants and jobbers, handle the bulk of Chicago's perishable food. It is estimated that approximately 50,000 carloads, besides a correspondingly large amount of less-than-carload lots of fruits, vegetables, and produce are distributed through this market annually.

The market buildings are old, poorly equipped and not adaptable to the business for which used. Inadequate facilities for displaying and handling of goods make it necessary for dealers to use most of the sidewalk space for these purposes. So congested is the sidewalk during the busy hours of the day with barrels, boxes, crates, and baskets that buyers can generally pass only in single file. The street is even more congested. During the active hours of market it is so crowded with teams and trucks receiving and delivering purchases that traffic is seriously delayed. This sidewalk and street congestion, with little or no use of modern handling facilities, makes the conduct of the market slow and costly. Added to this is the extra loss and expense incurred on account of the general lack of storage and refrigeration equipment.

West Randolph Street is a smaller market and while it does not represent the features of extreme dilapidation and waste characterizing South Water Street, it also is inadequately equipped for the proper handling of perishable food. It is largely a market of smaller jobbers and commission merchants and of near-by producers who sell from their wagons and trucks parked in the center of the street. Compared with South Water Street, there is little car-lot business transacted at the West Randolph Street Market.

POOR LOCATION

The extra expense, loss and waste incurred on account of the inadequate facilities and arrangement of the South Water Street mar-

ket, large as they are, are small compared with the extra expense and waste involved on account of the disadvantageous location of the market with regard to freight terminals. South Water Street has no contact with and is not easily accessible to any of the 27 trunk lines entering Chicago. Practically all of the different railroads have their own distinct and separate freight terminals and freight yards. These are from a quarter of a mile to over two miles from South Water Street. This means that most of the goods handled on this market must be carted to it by teams and trucks these various distances from the different terminals. Inasmuch as "The Loop," or main business district, lies between South Water Street and the principal terminals, most of the traffic in carting goods to the market passes through this already too congested business section.

In addition to the expensive cartage feature, the cost and waste in distributing perishable food in Chicago are further increased by the fact that practically none of the freight yards is equipped to facilitate rapid and economic handling of fruits, vegetables and produce.

Cars containing refrigerated products are unloaded on platforms or in trucks exposed to the varying temperatures. Thus, it was found that goods arriving in good condition were damaged by this sort of handling. The team tracks and unloading platforms due to inadequate facilities are in a state of almost constant congestion. This delays distribution and causes additional deterioration of the goods.

A considerable amount of perishable foodstuffs both in car lots and less-than-car lots is sold at the terminal yards. The fact that freight terminals are widely scattered in Chicago necessitates extra expense and inconvenience in the matter of South Water Street merchants taking prospective buyers from one terminal to another to inspect goods. It is not uncommon for a firm to receive in one day five carloads of produce each at different terminals, thus requiring time and expense in locating, inspecting, and delivering.

Highly perishable fruits and vegetables arriving at the terminals in good condition quickly deteriorate in the process of being handled and carted to the market. Other produce, such as eggs, is frequently damaged. This loss and the expense, on account of the cartage of the great amount of perishable food that goes to South Water Street each day, involving as it does the employment of about a thousand teams and trucks, amount to several millions of dollars annually. About two years ago, when a survey of this situation was made by experts of the Chicago Plan Commission, it was calculated that these prevent-

able expenses and losses due to the unhandy arrangement and location of the South Water Street market amounted to \$5,000,000 annually.¹

¹It is unfortunate that the Commission relied so much on general statements. The indictment seems conclusive; nevertheless, one would like to know more definitely the costs here as compared with those in more favorably located markets—a thing the Commission seems to have made no effort to determine.—EDDOR.

CHAPTER V

MIDDLEMEN OF THE AGRICULTURAL WHOLESALE MARKET

1. "TO-ARRIVE" AND "ON-TRACK" BIDS FOR WHEAT¹

"TO-ARRIVE" BIDS

Following is the card issued by a Kansas City company for No. 1 hard wheat and No. 3 mixed, yellow, and white corn. It will be noted the wheat prices are bid on either a Kansas City or Gulf basis with prices varying in accordance with the time allowed for shipment.

Form 1—TO-ARRIVE BID CARD ISSUED FROM KANSAS CITY

BARNES-PIAZZEK Co. (INC.), NEW ENGLAND BUILDING,
KANSAS CITY, MO.

APRIL 16, 1921.

[Acceptance to reach us by 8:30 A.M. Monday]

We bid you the following prices for grain, Kansas City Official weights and grades, grain not to be mixed in transit, shipment direct from the country.

	Price	Basis	Shipments
1 hard wheat.....	\$1.29	K. C.	10 days.
1 hard wheat.....	1.28	K. C.	20 days.
1 hard wheat.....	1.26	K. C.	30 days.
1 hard wheat.....	1.51 $\frac{1}{4}$	Gulf	10 days.
1 hard wheat.....	1.50 $\frac{1}{4}$	Gulf	20 days.
1 hard wheat.....	1.48 $\frac{1}{4}$	Gulf	30 days.

[Special bid to originate west of Concordia, or Union Pacific west of Salina.]²

1 hard wheat.....	\$1.30	K. C.	10 days.
#3 or better mixed corn...	.47 $\frac{1}{2}$	K. C.	30 days.
#3 or better yellow corn...	.49	K. C.	30 days.
#3 or better white corn...	.49	K. C.	30 days.
#3 or better yellow corn...	.50	K. C.	5 days.

When consigning to the Kansas City or St. Joseph market for good prices, prompt returns, be sure your next car reads: "BARNES-PIAZZEK COMPANY."

¹ Adapted from Federal Trade Commission, *The Grain Trade*, Vol. III, *Terminal Grain Marketing* (1921), pp. 62-67.

² The special bid to originate west of Concordia or Union Pacific west of Salina is because of the freight rate adjustment. The freight rates from points west of Concordia or on the Union Pacific west of Salina being on a different basis from points east.

All offers or bids subject to following conditions:

- (1) Acceptance reaching us before opening on next business day and if received after opening subject to our confirmation.
- (2) Acceptances for more than 5,000 bushels subject to our confirmation.
- (3) Acceptances must specify capacity of cars or bushels.
- (4) State price and amount when accepting.
- (5) Prices quoted are basis bulk.
- (6) Demand draft B-L attached.
- (7) Overfilled contracts to be applied at market differences unless otherwise specified.

BARNES-PIAZZEK Co. (Inc.).

Grain sold on the bids shown in the card above must be shipped within the period specified (excepting the day of issue) and delivered at the terminal point shown in the column headed "basis." The seven conditions listed on the bottom of the card are typical of this class of business. That is, limits are usually placed upon the time of acceptance and the quantities accepted for, and it is customary to specify or agree that a demand draft with bill of lading attached will be accepted, although arrival drafts are sometimes employed. The specification that overfilled contracts may be applied at market differences protects the buyer in case more grain arrives than he has booked and the adjustment may result in favor of either buyer or seller contingent upon the course of the market.

The following bid card issued by the Quaker Oats Co. shows the conditions of "to-arrive" bids for corn and oats by a converter:

**Form 2—TO-ARRIVE BID CARD ISSUED FROM CHICAGO FOR
GRAIN TO BE DELIVERED AT MILLS IN IOWA**

Form 812 25M 3-10-21.
Codes—Robinson and Universal.

CHICAGO, Apr. 15, 1921.

Subject to wire acceptance to reach us at Chicago time prior to 9:30 A.M. to-morrow or next business day, we bid the following prices, errors excepted, basis Chicago for 20 days shipment to our mills at Cedar Rapids or Fort Dodge, Iowa, our option, our weights and approval.

White or yellow milling oats, 30 pounds or better, free from foreign, damaged, or stack burned grains, 35 $\frac{1}{4}$.

Yellow corn (milling quality), subject to discount for moisture, 53.

Over 17 $\frac{1}{2}$ per cent.¹

White corn (milling quality), subject to discount for moisture, 53.

Over 17 $\frac{1}{2}$ per cent.¹

Load cars to capacity. Sell bushels instead of cars. Grain shipped to our mills subject to our weights and approval. Grain not suitable for our milling requirements will be turned over to any commission firm requested

¹ The term "Subject to Discount for Moisture, 53. Over 17 $\frac{1}{2}$ %" means that should the corn on arrival at the mills show a moisture content in excess of 17 $\frac{1}{2}$ %, a specified rate of discount would be applied to offset this difference. This discount is usually based at the rate of 1c per bushel per 1% of moisture.

on payment of draft or we will sell same for your account charging usual commission. Other shipments must be made to replace those rejected.

All quantities over 10,000 bushels subject to our wire confirmation.

If grain is not shipped within time specified, seller agrees that contract is open until shipped or until we advise you that we have closed same.

Make no shipments until you receive our shipping directions.

Draw on us at Chicago with B-L and weights attached.

Draw not to exceed four-fifths value of shipment.

THE QUAKER OATS COMPANY,
1600 Railway Exchange Bldg., Chicago.

It will be noted that under the conditions of Form 2 above the grain is not bought subject to primary market official grades and weights, but subject to the weights and approval of the milling concern; and that grain not considered suitable for milling requirements, after delivery, will be sold on a commission basis or sold to a commission man.

"ON-TRACK" BIDS

The card below may be used for a bid f.o.b. country station, i.e., "on-track"; or a bid delivered Kansas City, i.e., "to-arrive"; or for both of these terms. The card as shown gives bids for wheat "on-track" at Elsmore, Kans. (addressed to the Elsmore Elevator Co.) indicating that the buyer will furnish billing instructions after acceptance and will pay the freight costs.

Form 3—ON-TRACK BID CARD ISSUED BY KANSAS CITY RECEIVERS AND SHIPPERS

Bell 3925 Main.

Home 9670 Victor.

HODGSON-DAVIS GRAIN CO.

BOARD OF TRADE, KANSAS CITY, MO.

E. H. SULLIVAN, *Mgr. Cash Grain Dept.*

We bid for acceptance to reach us before 8:30 A.M. to-morrow (Sunday excepted). Destination, official weights and grades, our option. Clerical errors excepted.

	F. o. b. Your Station	Delivered Kansas City	Shipment
2 hard dark wheat			Apr. 25.
1 hard wheat	116 $\frac{1}{4}$	.....	
2 hard wheat	113 $\frac{1}{4}$	.....	
1 red wheat	116 $\frac{1}{4}$	.....	
2 red wheat	113 $\frac{1}{4}$	.....	
3 or better corn . . . . .	.....	.....	
3 or better yellow corn . . . . .	.....	.....	
3 or better white corn . . . . .	.....	.....	

To avoid errors, acceptance should state price, grade, and number of bushels.

When shipments are not made according to contract, we reserve the right to extend the time of shipment or cancel sale or buy in the grain for shipper's account.

Inspection and weighing charges to be paid by shipper.

All shipments handled at Kansas City, subject to the rules of the Kansas City Board of Trade.

If acceptance reaches us later than specified time, we will enter the purchase unless you hear from us to the contrary by wire. This bid is based on 1,000 bushels to the car, except when only one car is sold it will mean capacity of car unless otherwise agreed. Our option to accept or reject more than 10,000 bushels of any one kind of grain at this bid.

Cars to be loaded to capacity required by railroad.

Unless otherwise provided, any grain failing to grade as specified in contract will be accepted at market difference unless unfit for our use, in which case same will be sold for shipper's account, by sample, at the usual commission, but can not in that case be applied on contract, and other shipments must be made to replace any so sold.

Subject to reinspection after arrival at unloading elevator.

If accepted, hold for billing instructions and bill as directed, making draft on us at Kansas City, Mo., with bill of lading attached, leaving a fair margin.

E. & O. E.¹

HODGSON-DAVIS GRAIN CO.

U. S. Food Administration license number, No. G-35952.

Bids from smaller markets appear to be most frequently on the "on-track" basis.

"On-track" bids are frequently issued by brokers.

Eastern shippers sometimes arrange their cards so as to base the bids on a schedule of domestic rates to a designated destination, thus making it unnecessary for the sender to determine the "on-track" price for each shipper on the mailing list.

CONFIRMATION

Direct purchases, whether "to-arrive" or "on-track," are usually contingent upon the exchange of written confirmations, especially where the shipper desires to accept for a quantity of grain in excess of the limit set in the buyer's bid. Confirmations are issued, also, to furnish shipping instructions.

THE SHIPMENT PERIOD

It will be noted from the cards previously shown that the shipment period for grain bought "to-arrive" and "on-track" is most

¹ This means "errors and omissions excepted," which allows for minor adjustments to be made should occasion arise after the general proposition has been accepted.

frequently stated as a definite number of days or as a designated month or half month. When cars are bought "20 days' shipment," for example, the plain inference is that the commodity must leave the shipping station or that instructions be issued by the shipper to the carrier within 20 days from the effective date of the contract. The cars must be shipped within 20 days from the date of contract as shown by written confirmation and the date of the bill of lading must indicate this fact. Under these conditions, where cars are shipped within the specified period, the cars can be applied upon the contract no matter what length of time may intervene before their actual arrival at the terminal.

On the exchanges at Minneapolis and Duluth the term "to-arrive" (without other specification) has a technical meaning, indicating that the cars must arrive at the terminal market within 20 days from the date of sale. Members are of course free to make special contracts regarding both the time of arrival and the period within which shipment must be made; and they may make contracts requiring that cars must not only be *shipped* within a certain number of days but that they must also *arrive* within a certain specified period. In Duluth the contracts often specify "to-arrive," calling for delivery at the terminal within 20 days in order to meet vessel sailings.

2. COMMISSION BUSINESS IN THE GRAIN TRADE¹

In the cash grain commission business three competitive factors appear to be of special importance: (1) The employment of traveling solicitors to canvass the country elevators; (2) the advance of funds on open account to country shippers; and (3) the use of private wire systems which were developed primarily for handling business in futures.

THE SOLICITOR

The primary business of the commission-house solicitor is to procure the business of country elevators and other country shippers. In the Northwest this solicitation is largely based upon offers to finance, and a commission house that is liberal in the amount and terms of its financing is very likely to procure the business. Where a country elevator is financed, solicitors are also expected to keep a check upon the financial condition of the house—that is, to serve as auditors as well as solicitors. In addition, solicitors may aid and assist in procuring country managers, advise as to correct operating and

¹ Adapted from Federal Trade Commission, *Report on the Grain Trade*, Vol. III, *Terminal Grain Marketing* (1921), pp. 2-4, 6.

business methods, and sometimes, when financing is involved, practically supervise the entire operations of the elevator.

The employment of solicitors appears to have been greatly overdone in the Northwest, entailing large items of expense. The inquiry showed that a majority of the Minneapolis commission houses employed from two to four solicitors and a few firms maintained as many as six solicitors in the field at salaries ranging from \$200 to \$350 per month. The employment of these solicitors in the latter area has been frequently criticized, and in many cases by the commission men themselves, on the ground of the large expense.

FINANCING IN THE NORTHWEST

Owing to a variety of factors the financing of country shippers has become in a high degree a function of the commission houses in a great part of the territory tributary to Minneapolis and Duluth. The proportion of open account shippers, i.e., elevators given a drawing account against the commission house up to a certain amount, as reported by firms in that area, has run from about 75 per cent to 90 per cent of the customers of each commission house, though there have been a few large receivers in the Northwest who have declined to finance country elevator consignors. It has been estimated that credit extensions by commission men in the Northwest have frequently aggregated over \$100,000,000 for a single crop year. Some idea of the extent of these advances can be gained from the fact that the commission merchants' association in 1917 at Minneapolis and Duluth proposed to restrict loans to a maximum of \$45,000 to each elevator.

Commission men usually have figured on a spread of about 1 per cent between country and terminal rates of interest, though in the last year or two the spread has been higher. Thus in 1920-21, according to the best available information, the commission houses were borrowing at about $7\frac{1}{4}$ and loaning at about 9 per cent. In practice a formal agreement as to the interest rates has been made each year by the commission merchants' associations at Minneapolis and Duluth, and deviations from the rate have been subject to action by these associations.

Personal notes signed by the directors and managers of the elevators have been required from a varying proportion of the financed elevators as security for the loans. In many cases, however, no security at all is required. This lack of precaution as to security is largely due to the severity of competition which leads to more liberal advances of funds than would be made by a bank. The fact that the financing

is carried on as a part of the commission business and not solely as a banking function, however, reduces the liability to loss. The financed shippers consign and ship the bulk of their grain to the houses extending the credit, and the money is practically always loaned with the assurance of receiving the actual grain. In some cases contracts to consign and ship to the financing house are made, but this is often regarded as unnecessary, since, as a rule, it is mutually understood that the advances are made upon this consideration.

Financing has apparently added undue elements of risk to the commission business, and probably tends to keep out of it men of small capital and credit facilities in this area. It is also due largely to financing that so many solicitors are employed.

Minneapolis and Duluth commission merchants' associations have at various times considered the matter of financing and passed resolutions advocating its restriction or elimination. On the other hand, there are certain arguments advanced in favor of the practice. Many of the country elevators in the Northwest have reported that they can obtain funds cheaper and in larger amounts through the commission men than through the local banks. The commission men apparently agree that it creates a steady volume of business and thus makes for economy. Furthermore, in order to finance country elevators, either considerable capital or credit is required, so that only men of reliability and standing can go into the business. The system also frequently results, as stated, in the commission men supervising the elevators in an effort to prevent them from sustaining losses. Regarding this form of financing the Federal Land Bank of St. Paul states that "it was about the only way the elevators could secure money, and the commission houses have really made it possible for them to run their farmers' elevators in many cases where they would otherwise not have been able to operate at all."

The Duluth commission firms have frequently been financed to a large extent by loans from terminal elevator companies rather than by banks. Two of the large terminal elevator companies have regularly loaned huge amounts, only partly secured by grain paper, to commission houses from whom they buy grain. The commission firms so financed have included most of the large commission houses in the market, handling probably 60 per cent of the grain received at that market during the period 1912-13 to 1916-17. An officer of one of the elevator companies declared that there was no written contract of any kind between a financing elevator and the commission house, but added: "We're not going to loan, unless he gives us his business."

PRIVATE WIRES

The use of private wires in connection with the cash grain commission business has been bitterly opposed by many of the commission houses on the ground that where the country elevator receives market advice, together with baseball scores and other information over private wires, it is influenced to give its business, both cash and future, to the house furnishing such service. The private-wire systems were established primarily for future trading, but in recent years have gone extensively into the cash business. It is asserted that a firm carrying on an ordinary cash business cannot afford the heavy investment required for even a comparatively small system of private wires. At an Interstate Commerce hearing in 1917, it was alleged that the cash grain business in Iowa coming to Chicago firms had become concentrated in the hands of six private-wire concerns. On the other hand, it is argued that the solicitation of cash grain shipments by wire houses, particularly at Chicago, is opposed to a certain extent to the efforts of terminal elevator people to buy direct, and that it thereby tends to sustain the volume of sample selling on the exchange floor. So far as the conduct of the cash grain commission business is concerned, the private wire is necessarily an expensive facility. Generally speaking there is not in this business any such necessity for promptness and speed in handling the transactions involved as in the case of future operations, and this is also true even of the hedging transactions of country elevators. While, therefore, it may be that this is an economical method of handling grain, so long as cash and future business is combined and the speculative business takes care of the largest share of the expense, it by no means follows that this would be true if private wires were employed for the transaction of only the cash commission business including hedges. This would necessarily involve sufficiently high commission rates to cover the expense of the facility and would probably tend to a high concentration of the commission business.

3. OPERATIONS OF CASH GRAIN BROKERS¹

GENERAL FUNCTIONS

The business of the cash grain broker is to bring together buyer and seller. He does not handle the commodity on his own account and assumes no risks for shipment, storage, delivery, or payment for the

¹ Adapted from Federal Trade Commission, *The Grain Trade*, Vol. III, *Terminal Grain Marketing* (1921), pp. 176-78, 181-82.

grain. The broker is primarily concerned with getting a brokerage from buyer or seller (occasionally from both) for bringing about the transaction. The bona fide broker is a middleman specialist acting as agent in individual transactions and disclosing the name of his principal whenever he arranges a trade. His volume of business depends upon a strategic location, an organized service, or extensive personal connections often acquired in other branches of the grain business. The cash broker frequently assists in clearing commitments in the futures market as between buyer and seller; he often buys a hedge for his principal and may later close out the hedge upon agreement with the second party; but these operations are supplemental to the immediate cash trade.

Brokerage frequently means a method of handling rather than a distinct business. Although many firms incidentally operate on a brokerage basis there are but few firms in the primary markets who operate solely as brokers in the strict sense of the term.

The broker is distinguished from the commission man chiefly in point of risk and responsibility for the movement of grain. The commission man assumes risks of shipment, delivery, and payment which are not assumed by the broker. The commission man frequently allows a country shipper to draw on him for a large percentage of the value of the grain which has been shipped or consigned. He runs the risks which attach to this procedure, such as overdrafts, or possible dishonesty on the part of the shipper. And he frequently assumes the risk of nonpayment by the purchaser after the sale has been made. The broker has none of these hazards. He is merely an agent, handling no funds in his own name and taking no responsibility for charges due on the transaction. His fee is usually not over one-fourth cent per bushel.

In the larger central markets the strictly brokerage business is very limited. Brokering is a minor and almost incidental part of the business done at Minneapolis, for example, and the number of strictly cash brokers in Chicago would embrace only a comparatively few specialists. In fact, several of the larger exchanges forbid members to act as brokers except between members in the local market.

Concerns operating strictly as brokers are found most frequently in the smaller markets or at points where there is no active exchange. Two Indianapolis concerns reported that they seldom sold any grain for shipment except through brokers.

The larger primary market dealers often operate through brokers in consumptive territory where they have no branch offices. Selling

to local distributors in the Southeast, for example, is frequently effected through brokers in that area. The smaller millers and manufacturers of grain products often depend upon brokers to negotiate their purchases.

TYPICAL OPERATIONS OF BROKERS ON EXCHANGE

The operations of a broker on the Chicago Board of Trade who has specialized in "to-arrive" business will illustrate the brokerage business at that market. This broker takes orders from members and sells only to members. For such a service he receives \$1 a car. His method of operation is as follows: A commission firm turns over to the broker an order received from a country elevator to sell grain for deferred shipment within a specified period. This order is generally at a flat price. The broker watches the bids posted on the board for "to-arrive" grain. These bids are generally based on an option; that is, a bid may be 4 cents above May; if May oats is selling at 81 cents and the order in hand is to sell on a 30-day shipment 3 white oats at 85 cents, he will wait until the bids as posted just cover the price at which he is instructed to sell. Then he will offer the oats to the elevator company making such a "to-arrive" bid, giving up the name of the commission house for which he is acting.

The typical operations of a Chicago cash-grain broker in arranging a trade for shipment out of the market are as follows: (1) A local concern, having a surplus, requests the broker to see what he can get for a given quantity of a given grade of grain; (2) the broker notifies one or more eastern brokers and asks for bids; (3) bids come in from the East; (4) the broker goes to the trading floor and secures prices from his principal on the quality of grain desired, adds insurance, freight, and other charges and submits an offer to the eastern broker; (5) as soon as the broker has named a price which meets the approval of an eastern bidder he is notified by the latter to close the trade; (6) the broker then collects his commission from his original correspondent and his interest in the sale is ended. Sometimes the Chicago principal may instruct the broker to offer a given grade and quantity of grain in the first place, and the procedure outlined is of course reversed when the eastern broker wires in bidding for grain or asking for offers.

A certain St. Louis broker acts chiefly as a selling agent for line companies but buys mainly for mills. The steps in a typical transaction as conducted by him are as follows: Offers and bids come in

by wire or telephone both from country shippers and from prospective purchasers. A line company may advise that it has a certain quantity of grain of a given grade to sell at a certain price. Immediately upon receiving this information he notifies purchasers whom he knows to be in the market. Having found a purchaser under the proposed conditions, he at once notifies the line company, giving the name of the firm who will buy. The next step is to send a confirmation to both purchaser and seller designating the quantity and grade of grain that has been sold and the price agreed to. Both purchaser and seller are requested to sign the duplicate of this memorandum and to return it to him as evidence of acceptance, though failure to return the duplicate within a reasonable time is understood as an acceptance of the contract. This concludes his services in the transaction. In case a trade is instituted by a buyer rather than a seller he notifies country dealers and the procedure is simply reversed. He relies for market price guidance chiefly upon the private-wire information distributed by large Chicago operators. They furnish this service free—apparently for the purpose of securing his patronage.

THE SEABOARD BROKERS

The eastern seaboard brokers operate between the great shipping and selling markets of the productive areas and the consumptive and export trade of the East. Their business differs from that of the inland operators in volume, in more elaborate selling organization, and in technical understanding of transportation and transshipment matters. The export broker, or forwarder, for example, must be able to figure on (1) freight rates and available tonnage, (2) ocean insurance, (3) foreign exchange rates, (4) the time difference between American and European markets, as well as (5) price relations based on the futures markets and quoted in foreign money. He must be prepared to exchange inland for ocean documents on sales f.o.b. or c.i.f. The latter practice requires business connections with steamship lines or freight brokers and forwarding agents. Frequently, also, the export broker represents a banking house and handles the sale of foreign exchange for exporters for whom he acts.

The seaboard broker handles transactions for all manner of shippers in primary and secondary markets, as well as for European buyers. The large elevator companies at western primary markets frequently sell to consumers and for export through brokers at the ocean ports because of the convenience of dealing through men familiar with eastern trade and export demand.

Since the eastern exchanges allow members to handle grain for nonmembers on a brokerage basis the seaboard broker has a latitude not always enjoyed by such an operator on certain primary market exchanges. Furthermore, although they do not take title to the grain, the export brokers, selling on the f.o.b. or c.i.f. basis, perform a greater number of services than is usually true of the interior broker.

The export broker pays the freight, supervises inspection, orders the transferring from elevator to steamer, arranges insurance, sells foreign exchange, and makes any negotiation necessary to forward the commodity, billing the costs plus brokerage back to the shipper.

4. TERMINAL ELEVATOR FACILITIES¹

The specific services performed by a terminal elevator company are (1) the storage of grain in the elevator bins or tanks; (2) the transferring of grain from one car, barge, or vessel to another, either directly or by transferring to the elevator storage tanks and subsequently loading out; (3) cleaning and conditioning, which processes involve screening, cooling heated grain, drying wet grain, smutting, bleaching, etc., and (4) mixing.

A survey of the elevator facilities for handling bulk grain shows the aggregate storage capacity of commercial elevators (i.e., not including mill storage) at the more important terminal points to be above 260,000,000 bushels. Fully 80 per cent of this capacity is operated by private dealers in grain. Nearly half of the total capacity is included in privately operated houses, i.e., not licensed nor operated as public warehouses. Over 30 per cent of the total is operated under state license, but largely for account of the operators. Possibly 20 per cent of the total is operated on a public utility basis, and this includes all the houses operated by railroads, public agencies, and public warehousemen not dealing in grain. From a commercial standpoint, therefore, the aggregate elevator capacity controlled by private dealers includes the bulk of storage in elevators licensed as public warehouses by the states. This is true of most of the licensed public elevators at Minneapolis, Chicago, and Kansas City, and is in marked contrast to the situation in Canada. Except perhaps at seaboard points, it appears to be generally true that terminal elevator companies can obtain a higher rate of profit by combining merchandising with storage and other functions, and that therein lies in part the reason for the existing situation in the United States.

¹ Adapted from Federal Trade Commission, *Report on the Grain Trade*, Vol. III, *Terminal Grain Marketing* (1921), pp. 6-10.

Grain elevators at terminal points have always been largely owned by the railroads as a part of their terminal facilities. Today approximately 35 per cent of the commercial terminal elevator capacity of the country is owned by railroads. At interior terminal points most of these railroad-owned elevators are leased to private dealers. At the seaboard points the railroads, on the other hand, own about 69 per cent of the total storage capacity and retain in most instances operating control.

There are various reasons for the development of the practice of leasing terminal elevators by the railroads. In the first place the railroads have found that tonnage can be obtained fully as well, if not more effectively, by leasing the house to a large dealer who has every incentive to route the grain over the lessor's line. As the interior markets are frequently the terminals of various roads, so that some lines have no interest in the grain after it reaches the terminal and others no interest in the grain except after its arrival, there has often been an advantage in the railroad company leasing a terminal elevator to an individual dealer with the specific agreement that the grain owned by the lessee shall be brought in or shipped out over the lessor's railroad where possible. The second reason for leasing frequently advanced is that of operating cost; that at competitive points in the interior a terminal elevator affords the railroad no profit and may be operated at a loss. To lease a house at a fixed rental may afford a reduction in expense and may also eliminate certain vexatious operating problems at the terminal.

PUBLIC ELEVATORS

Several of the principal grain-producing states have, in the exercise of their police power, passed laws declaring that the elevation and storage of grain under certain conditions is a business so affected with a public interest as to require license and regulation. These laws have, with but few exceptions, been upheld by the courts. One of the primary purposes of the state regulation of elevators and warehouses is to secure the validity and negotiability of warehouse receipts. The warehouse laws of the grain states invariably include certain provisions with reference to the form and substance of such receipts, the manner of issuing and canceling them, and the conditions demanded of the warehouseman.

Public warehousing has for a long time been on the decline. This is especially true in the case of forwarding markets such as Chicago and Duluth. Various causes have been assigned for this decline. It

has been attributed partly to the fact that the entrance of the public elevator proprietors into the grain business has made it impossible for a grain dealer to store in the public elevator in competition with such merchandisers who either have no storage to pay except to themselves or have low costs for such storage due to favorable leases of elevator property.

At those markets where members of the exchanges conduct trading in futures the exchanges declare certain houses to be "regular" for the storage and delivery of grain on future contracts. Grain in such houses is registered and subjected to inspection by exchange officials. The practice seems to have originated in Chicago in the decade 1870-1880. The requirements generally made of regular elevators indicate that the term bears no specific relation to the elevation and storage of cash grain. In Chicago and Minneapolis the regular warehouse must under the exchange rules be a public warehouse in conformity with state laws. At Duluth and Kansas City, on the other hand, the exchanges do not require that a regular warehouseman shall hold a state license, and houses operated wholly for private account have been declared regular and placed under exchange supervision for handling contract grain.

MIXING

Practically every private terminal elevator company engaged in merchandising makes a practice of mixing, cleaning, and conditioning, either to secure screenings, to improve the quality of the grain, or to take advantage of the latitude within the requirements of each standard grade by mixing to the bottom level of such requirements. Different grades are frequently mixed also in railroad operated elevators under the supervision of local inspection departments with a view to releasing additional bin space. Combined results of wheat-mixing operations in Chicago in six private elevators for a four-year period gave an outturn of 93.6 per cent No. 2 winter as compared with 42.6 per cent received, and an outturn of 90 per cent No. 1 spring wheat as against 38.9 per cent received. The mixing operations at Minneapolis during approximately the same period were of comparatively little significance. There is a considerable volume of selling by type sample to the mills in this market, and probably because of this fact there is less mixing to the lower level of the grade requirements than is the case in Chicago. A comparison of the mixing results for terminal elevators in Chicago, Minneapolis, Duluth, and Kansas City on all contract grades (No. 1 and No. 2 of both spring and winter wheat)

specified by rule on each exchange for four years was as follows: At Chicago, 45.7 per cent in, 95 per cent out; at Minneapolis, 31.4 per cent in, 34.4 per cent out; at Duluth, 36.9 per cent in, 72.4 per cent out; at Kansas City, 36.1 per cent in, 51.6 per cent out. An attempt to determine statistically the probable profits per bushel from mixing operations at Minneapolis and Duluth for five years gave a range of from about one-fourth to $3\frac{1}{3}$ cents per bushel at Minneapolis and from about two-thirds of a cent to about $4\frac{1}{2}$ cents per bushel at Duluth.

Mixing has provoked considerable criticism on a variety of grounds; that it leads to a discrimination in favor of country-run grain as compared with terminal elevator grain, since terminal elevator grain is always expected to be "skin" grade; that such mixing gives the elevator merchandisers who operate regular warehouses an undue advantage in the futures market and that it leads to manipulation of that market. It is defended by the elevator men on the ground that mixing makes a market for low-grade grains and permits a realization by the producers of higher prices for these grains through creating a competitive demand for them for mixing purposes.¹

5. MERCHANDISING BY TERMINAL ELEVATOR COMPANIES²

The elevator companies are the largest dealers in grain in the primary markets. A considerable part of this trading is for local delivery in certain markets, although the elevator companies as a class are predominantly shippers. The following statement gives a fairly typical picture of the merchandising process where hedging is employed, although there are many variations in methods among the different markets and individual concerns:

We put out our card bids. For instance, we have acceptances overnight of a hundred thousand bushels of wheat and a hundred thousand bushels of corn—I am speaking now of prewar times. The market opens in the morning and we sell an option against that grain. Then that would protect us against loss and would also protect us against any undue profit. It is a fixed purchase and sale—cash bought and future sold. After that grain was shipped, within a day or two we sell a hundred thousand bushels of wheat for export and buy in our option. The cash wheat would be sold and the option would be

¹The mixing of grain is discussed in more detail, Federal Trade Commission, *op. cit.*, pp. 154-61.
—EDITOR.

²Adapted from Federal Trade Commission, *Report on the Grain Trade*, Vol. III, *Terminal Grain Marketing* (1921), pp. 161-63, 168-70.

out of the way. In the case of the corn we might be able to sell only 50,000 bushels for domestic purposes. Then we would be long 50,000 bushels of cash corn and short 50,000 bushels of the future. If there was no other demand for it it would pay us to deliver that out on contracts. If the corn failed to meet the requirements of the grade we would clean it, dry it, put it in public elevators, and deliver it out to satisfy the requirements of the contracts we had out.

Theoretically the object of most terminal elevator companies is to earn a "carrying" or "storage" charge. The theory sometimes advanced is that the elevator companies accumulate grain in anticipation of future demands and tend to equalize the distribution of the crop to converters and consumers, and that the costs incident to carrying these surplus stocks after the crop has been moved from the farm (i.e., storage, insurance, interest, etc.) will be reflected in a gradual rise in the level of prices. This expected rise in prices toward spring frequently fails of actual realization because of the other factors besides the cost of carrying the grain which affect prices.

But the grain carried by a large elevator is usually hedged in the futures market. Under such circumstances the elevator man may cease to have any interest in whether the price change between fall and spring is a decrease or an increase. If he is to carry the grain through the winter, however, he is very much interested in the relation of the price (of the future) at which he hedges to the cash price. To illustrate, if he must earn 1 cent per bushel per month to meet storage costs, in order to carry grain from November to May (six months), he must be able to sell the future (his hedge) in November at 6 cents over the cash price he pays for car lots to go to his elevator. From this point of view, winter storage is practicable or not according to whether the future shows an adequate premium late in the fall. The elevator man may have other means of obtaining a profit from stored grain which will make him willing to hedge at a smaller premium or take a smaller carrying charge. The "carrying charge" theory, as it would usually be understood in the grain trade, refers to the situation described in this paragraph.

With few exceptions private elevator companies at terminal points sell a larger volume of grain for shipment than for local delivery. The selling for account of local wheat-flour millers at Minneapolis and to local corn mills at Indianapolis are perhaps the most conspicuous examples of the absorption of elevator stocks in the local market.

The transactions between elevator companies and local millers, as carried on in the Minneapolis market, require but brief description. The elevator companies buy largely on the exchange floor, and usually

by sample. The sales to local millers are largely on the basis of type samples, submitted by the elevator or by the mill, as the case may be. Sales are in round lots generally. The sale may be for immediate or for deferred delivery and there is no requirement that cash sales of this character be negotiated on the exchange floor. Delivery usually involves a switching operation from the elevator to the mill storage tanks. In the case of regular elevators located in futures markets some grain is delivered to mills on future contracts, although such deliveries usually comprise but a small part of the whole.

In some instances, notably at Duluth, sales for local delivery are made to shipping companies who do not themselves operate elevators. For example, the Consolidated Elevator Co., which operates elevators at Duluth-Superior aggregating more than 10,000,000 bushels storage, reported that it did little shipping on its own account, but sold to the local shipping companies, which in turn forwarded the grain, usually by lake, to eastern millers and dealers. Since the elevator company bought from local commission men, some of whom it financed, and sold to local shippers, its business was largely restricted to the local market. The general method followed was to acquire the country run of grain in large quantities, hedge it by equivalent sales of futures, raise its commercial value by mixing and conditioning, secure the screenings for sale to feed concerns, and carry the stocks until favorable prices were offered by the shippers, or, when necessary, make delivery on the outstanding futures. Statements made by officers of the company to agents of the commission indicate the manner of computing margins in this business, viz:

I think I can safely say that we are always ready to sell the grain for what it costs us. We get our handling charge out of it because we sell it in store, and the man that loads it out has to pay that $1\frac{1}{2}$ cents and we get the mix, and we get the screenings for the cleaning, so we are always ready to sell the grain for what it costs us The man that we sell it to, I think he sells it to Buffalo, I think his profit is around one-fourth cent A shipper will stand on the floor in a busy season and get one-fourth cent profit between us and the miller he sells it to.

The terminal elevator companies are sometimes referred to as "concentrators and shippers" by the trade. They operate at terminal points between the areas of supply and the consumptive territory in the United States and abroad. Grain applied on contracts may be from cars on-track or in-transit, although the elevator stocks generally furnish the basis for these shipping operations.

Many of the larger companies issue daily card offers based on the closing cash quotations.¹

Certain elevator companies specialize in selling to flour millers at distant points. For example, the Aylsworth Grain Co., of Kansas City, as operated in 1918, sold to millers located in Minnesota, Wisconsin, Illinois, Texas, California, and elsewhere. Ninety-five per cent of their business was reported to be with this milling trade. Frequently this class of business is carried on partly by means of type samples shipped to the millers, such samples being used sometimes as the basis of specific contracts and sometimes only as an indication of the quality of the grain in stock.

In many instances the shipping business of elevator companies is combined with other supplementary functions, such as operating country elevators, handling on consignment, milling and manufacturing grain products, operating a future commission business, etc. The most conspicuous example of such an integrated organization is the Armour Grain Co., of Chicago,² although there are several other large corporations which operate elevators at more than one terminal point and combine cash and future commission businesses with their merchandising operations.

MANIPULATION OF FUTURE DELIVERIES

Private elevator companies with houses that are "regular" under exchange rules are often in position to influence the course of the futures market through their control of a large quantity of deliverable grain. A large elevator, or a group of elevators, may make heavy deliveries on the first day of a delivery month with a view to such manipulation. By this maneuver, long buyers of futures who do not wish to bother with the cash grain will be impelled to sell hastily, thus depressing the current-delivery future price relatively to the price for the next delivery of futures. The elevators will then be able to transfer their open hedges to the next delivery on the basis of a profitable spread between the two options, buying in the current option and selling the next option. They may also be able to buy back the cash grain at a sufficiently depressed price to give them a larger carrying charge. Similarly, if the elevators withhold delivery on a large block of open future sales until the end of the delivery month, smaller traders may become apprehensive and start selling for fear of a re-

¹For typical cards see Federal Trade Commission, *op. cit.*, pp. 164-68.

²This concern operates terminal elevators at eight points, aggregating nearly 26,000,000 bushels storage capacity, is engaged in both the cash and future commission business, operates country elevators, and manufactures cereal products.

action when delivery is made. A large elevator company is usually on the alert for opportunities to make profits by spreading between options, and is sometimes in position to make such opportunities. The elevators with large stocks of grain hedged and storage available for additional supplies have advantages over speculators not so equipped; and if such elevators operate together they may sometimes control the local situation.

6. CONSIGNMENT AND DIRECT SALE OF WHEAT¹

GEOGRAPHICAL VARIATIONS

A trifle less than 70 per cent of the grain shipped by all country elevators and warehouses goes to the terminal markets and about 7 per cent to the smaller markets. Of 775,100 cars of grain shipped to both of these destinations and for which the method of sale was reported, about 71 per cent was disposed of on consignment, i.e., shipped to some commission man or other agent to be disposed of by him for a commission upon its sale. The balance of this grain (about 29 per cent) is sold directly by the country elevator or warehouse to grain-buying concerns with headquarters in these terminal and smaller markets. In most cases these latter sales are on the basis of acceptances of bids sent out by wire or by mail under the terms of which the grain is to be shipped to or is "to-arrive" at the market within a specified period of days; perhaps most commonly 10, 20, or 30, though any period may be fixed by the contract covering the shipment, subject in the larger markets to the rules of the various exchanges governing such contracts. In other cases the direct sales made were "on-track" in the country to the representatives of grain-buying concerns located in these markets.

Minneapolis, Duluth, and Milwaukee are the three leading consignment markets of the United States, while in Chicago and the other markets to the south, and the states tributary thereto, the consignment business is relatively less and the direct business relatively more important. This fundamental fact, which in large measure is responsible for the variations in consignment and direct business between the different grains, is itself explained in very large measure by certain of the same factors as were referred to in accounting for the general grain movement from the country elevator, i.e., financing by commission houses, the sale of barley by sample, and Minneapolis consumption.²

¹Adapted from Federal Trade Commission, *Report on the Grain Trade*, Vol. I, *Country Grain Marketing* (1920), pp. 144, 145, 147-50.

²*Ibid.*, pp. 134-37. See also *infra*, pp. 95-100.

While nearly three-fourths of the total grain sold and shipped by country elevators and warehouses to the various terminal and smaller markets is reported as handled on consignment, the variations in the proportions of consignment and direct sales as between the different kinds of grain are considerable, as appears from the following table:

TABLE 5.—PROPORTION OF CONSIGNMENT AND DIRECT SALES TO TERMINAL AND SMALLER MARKETS MADE BY ALL COUNTRY ELEVATORS AND WAREHOUSES REPORTING DURING THE CROP YEARS 1912-13 TO 1916-17.

Grain	Number of Cars Reported	Number Sold on Consignment	Percentage Sold on Consignment	Number Sold Direct	Percentage Sold Direct
Corn.....	210,114	131,528	62.60	78,586	37.40
Oats.....	172,869	120,097	69.47	52,772	30.53
Wheat.....	307,946	225,518	73.23	82,428	26.77
Rye.....	17,523	14,198	81.02	3,325	18.98
Barley.....	66,648	59,164	88.77	7,484	11.23
All grains, all elevators and warehouses.....	775,100	550,505	71.02	224,595	28.98

EFFECT OF FINANCING ON CONSIGNMENTS

In Wisconsin, and especially the four northwestern states which are tributary to Duluth, Minneapolis, and Milwaukee, the proportion of financing by terminal market concerns is far more important than in any other area. Most of this financing is done by commission houses under the terms of which arrangements the elevators financed usually agree to consign all or a very large proportion of their grain to the financing house. Competition among the commission houses in this financing which is largely peculiar to the Northwest has resulted in developing the consignment business in this area in a high degree.

The effect of financing is coupled with the further facts, also previously referred to, that barley and wheat, of which grains the area under discussion is a heavy producer, are sold largely by sample, the former generally and the latter particularly, in Minneapolis.

The milling requirements of the Minneapolis mills represent the greatest concentrated demand for grain, especially wheat, in the country, and this demand is an important factor in the development of the northwestern consignment business. Most of these mills in

the manufacture of flour endeavor so far as possible to standardize their various brands and to produce year in and year out under such brands a uniform grade and quality of flour.

Having in mind, therefore, certain milling qualities to conform more or less definitely to certain milling standards and also because of the mixing practices of the terminal elevators, the mills at Minneapolis quite generally prefer to buy country-run grain on a sample basis and will frequently pay premiums over current prices for particular grades because of certain milling qualities or peculiarities. In consequence, Minneapolis is extremely important as a consignment market for wheat and to a lesser extent for rye.

In the area tributary to Chicago and the markets to the south there is next to no financing by terminal market concerns outside of a small amount in Iowa and Illinois.¹ The barley crop is relatively very small and wheat consumption by terminal market mills inconsiderable as compared with Minneapolis. This area, moreover, is a heavy producer of oats and especially corn. Both of these grains are used largely for feed. In consequence they can be bought much more satisfactorily by grade than either barley or wheat and there is less necessity for sample buying. In this area, therefore, grain can, on the whole, be sold satisfactorily on a grade basis to a much greater degree than in the Northwest, and there is a much greater volume of "to-arrive" and "on-track" buying by terminal market organizations.

Explanations of Variations in Grains

These geographical differences largely explain the variations in consignment and direct sales as between the different kinds of grains.

The production of rye and barley is relatively highly localized in Wisconsin, Minnesota, and the Dakotas, the bulk of the grain from which states goes to Minneapolis, Duluth, and Milwaukee.

The average reported receipts of barley and rye at these three markets total nearly 65 per cent of the total average receipts of each of these grains at all 10 of the terminal markets tabulated,² while 87 per cent of the total rye and barley shipments made by all reporting country elevators and warehouses are from these four states.

¹ Except that mill sample buying probably tends to account partially for the large consignment business at Kansas City. Even more important probably at that market in creating a high proportion of consignments has been the action of the terminal elevators in engaging in the commission business and soliciting consignments in competition with the regular commission houses.

² These ten markets are Minneapolis, Duluth, Milwaukee, Kansas City, St. Louis, Chicago, Omaha, Cincinnati, Indianapolis, Peoria.

The situation with corn and oats is approximately reversed. Wisconsin and the Northwest produce comparatively little corn, and while certain of these states are among the very largest producers of oats the total volume of either of these grains raised in this area is considerably below the volume raised in the remaining 14 grain-producing states. Of the average corn and oats receipts at 10 primary markets, Minneapolis, Duluth, and Milwaukee, the principal consignment markets, received less than 10 per cent of the corn and only 23 per cent of the oats, while the other 7 markets received slightly over 90 per cent of the former grain and 77 per cent of the latter. This situation largely accounts for the fact that corn and oats, especially the former, are sold on consignment to a much less extent than either rye or barley.

The intermediate position of wheat in the proportion of consignment selling between corn and oats on the one hand and rye and barley on the other is similarly explainable. The Northwest is one of the largest wheat-producing areas, but the territory tributary to the other markets than Minneapolis, Duluth, and Milwaukee is also a producing area of great importance. As a result of this fact the proportion of wheat received at Minneapolis, Duluth, and Milwaukee (about 50 per cent) to the total received at all 10 markets is considerably higher than the proportion of corn or oats, but considerably lower than the proportion of rye or barley. Similarly, in the territory tributary to the other markets the reverse is true, and the proportion of wheat received at the other 7 markets to the total received at all 10 is considerably above the proportions of rye and barley, but considerably below the proportions of corn and oats.

7. A TYPICAL INCIDENT IN THE CENTRAL MARKET FOR LIVESTOCK¹

An illustration of how the buying of livestock goes on may be given by gathering a snatch of the conversation between a Swift buyer and a commission man, which goes with every sale. It runs thus:

"Lo, Eddie, come look at a load of dandy white faces from some farms near Des Moines, Iowa. Ever see such class? You can't touch 'em this morning in the yards, Eddie."

"How much?"

"Well, Eddie, I'll weigh them for you for 16 cents."

"See you later."

¹Adapted from Rudolf A. Clemen, *The American Livestock and Meat Industry* (1923), pp. 547-48. (The Ronald Press Company.)

"Now, Eddie, wait a minute. This is better stuff than I sold you last week at 17 cents and you know what the market is today. I know where I can get $16\frac{1}{2}$ cents a pound on this load. Now mind you, Eddie, this stock has been tied up three days near Clinton by a broken bridge. Six days in a car! Of course they look a little drawn. Give me $15\frac{3}{4}$."

An hour later the Swift buyer rides past the same pen and once more examines this load, comparing it with what other commission men are offering. The price may have dropped slightly, but he holds firm, and after another hour, on his third trip, probably compromises at a satisfactory figure.

After the buyer has decided on a purchase, he utters only a laconic, "Weigh 'em to Swift," and passes on to drive another bargain. He has made a purchase, but he has not written a notation of any kind. He carries the price asked by the commission man, his various bids, competitors' bids, the final price effected for a sale, and all of the details in his head. And so does the commission man. There exists a tacit understanding that neither will take advantage of the other, by shifting figures in this oral bargaining, and the Swift buyer completes his day's work in the pen without the aid of a pencil, but later he puts down the prices at the Swift office.

8. BROKERS IN THE FRUIT AND VEGETABLE TRADE¹

The broker handles car lots only, as a rule, and draws his business from coöperative associations, country speculators, large operators, private exchanges, and in some cases private shippers. According to strict interpretation, the term "broker" can be applied only to those middlemen who act as intermediaries between the principals in contemplated transactions and have nothing further to do with the contract itself. The broker normally does not have possession of the articles he deals in, but must carry on all business in the name of his principal. Commodities handled by brokers, as a rule, are sold to carlot wholesalers or jobbers.

At the beginning of each business day the broker looks over his business, ascertains conditions on other markets, and takes note of the number of cars he has on hand, number en route, etc. With all this well in mind, he is ready to approach the wholesale trade. His next step is to make a careful canvass of the wholesale district, visiting or calling up by telephone all those who may be interested in what he has to offer. When a possible customer is found, the next step, in case the car or cars have arrived, is to allow the prospective buyer to inspect the contents. After inspection, satisfactory terms

¹ Adapted from J. H. Collins, J. W. Fisher, Jr., and Wells A. Sherman, *Methods of Wholesale Distribution of Fruits and Vegetables on Large Markets* (1915), pp. 11-14. (U. S. Department of Agriculture, Bul. No. 267.)

are arranged and then before the sale can be consummated it is necessary that the shipper confirm the broker's action. Assuming that the broker is selling a car of apples, Ganos and Grimes for instance, he may telegraph the shipper as follows:

Jones offers on car MC sixteen eight fifty-four, two fifty Ganos, two seventy-five Grimes, delivered.

In case this offer is satisfactory, the shipper's reply may read:

Confirm car MC sixteen eight fifty-four Jones, two fifty Ganos, two seventy-five Grimes, delivered.

Or in case the price is unsatisfactory, the shipper might refuse as follows:

Jones too low; car MC sixteen eight fifty-four; must have three Grimes.

Collection is often made through a bank located at destination. The shipper sends the bill of lading with draft attached to a bank, at the time the car is shipped, and after inspection the purchaser pays the draft and secures the bill of lading. Some large shipping organizations whose responsibility is well known to railroad officials often temporarily retain possession of the original bill of lading and effect delivery by a signed delivery order somewhat as follows:

KANSAS CITY, MO., *September 21, 1914.*

AGENT, MISSOURI PACIFIC RAILROAD CO.

DEAR SIR: Please deliver on this order without bill of lading car of apples C. B. & Q. 36066 to John Jones, Kansas City. We pay all charges.

The bill of lading is retained temporarily in this case, as evidence of former ownership, or for use in case a dispute should arise later or claim be entered. It is absolutely necessary to insert the clause "We pay all charges," as in many cases railroads will refuse such delivery unless it is understood definitely which party pays the freight.

Sales by brokers are, as a rule, strictly cash transactions and collection is made when delivery is offered. All cartage expenses in getting the goods from the car to the dealers' place of business are paid by the buyer. In case the broker did not make a direct sale, but handled the goods through auction, his activities would be confined to seeing that the goods arrived at the auction and attending the sale to withdraw the shipment if prices were unsatisfactory.

The broker perhaps handles more business at less cost to himself than any other type of middleman. He has no considerable amount

of capital in his business and a large part of his expenses is practically fixed. His heaviest items of expense are usually rent, clerical help, and telegraph charges. The latter, of course, varies with the amount of business handled. As a rule, most of the broker's business is composed of association accounts and accounts of large private shippers, and a very small portion is drawn from small shippers. The broker acts as the exclusive agent on his market for each concern that he represents, and since he handles car lots only and moves large quantities in relatively short periods of time he is enabled to render important services at a very low cost to the shipper.

Brokers are often charged with misuse of their privileges in that they may sometimes speculate on goods passing through their hands. For instance, a broker may make returns out of his own funds for a supposed sale, but hold the produce for a rising market before actual sale is made. If the expected advance occurs, he pockets the increase in price. This practice would prevent a shipper from getting just returns and his goods would not be on an actively competitive basis with other market offerings. In other words, such sales would secure to the grower or shipper the lowest market price quoted on the day returns were made and he would get no benefit from either the expected rise in price or the broker's ability as a salesman. This tendency toward speculation is ordinarily done away with entirely when there is direct dealing between the vendor and vendee, so far as the handling of money is concerned. As a matter of fact, according to a strict interpretation of the term, the shipper's selling agent ceases to be a broker when he assumes responsibility for collecting and remitting, and so the term "broker" as here used is applied according to trade usage and common understanding. Brokers are charged sometimes with failing truly to represent the shipper. Being always in close personal touch with buyers and having no such close relation to the shipper, there is sometimes the tendency to favor the buyer unduly in order to retain his good will.

Brokers act as market salesmen for those producers who are unable to make direct sales and who have no other market representative. They represent shippers at large distribution centers, and by the payment of the very small brokerage fee the shipper can be certain that his goods will be accepted on arrival. The broker, by making prompt disposition of a consignment immediately upon arrival, often saves the shipper many times the brokerage fee. Brokers stimulate and expand the market to a certain extent by their expert canvassing of the trade and any influence that stimulates active buying and

selling must be regarded favorably. In general, their chief usefulness lies in the fact that their activities on the market tend to maintain a steady flow of business.

9. CAR-LOT WHOLESALERS OF FRUITS AND VEGETABLES¹

A very important factor in market distribution is the car-lot wholesaler. These men purchase fruits and vegetables from coöperative associations, country merchants, car-lot assemblers, traveling buyers, buying brokers, individual growers, speculators, and city brokers. They distribute goods to the jobbing and retail trade or to the country trade. Thus it will be seen that their activities cover a wider field than do those of almost any other type of distributor.

A large part of the business done by the car-lot wholesaler is transacted very early in the day. Most of these early morning sidewalk sales are for cash, and in a great many cases the buyer does his own delivering. Later in the day, beginning about 8 or 9 o'clock in the morning, telephone orders come in from grocers all over the city for deliveries to be made later in the day. The greater portion of this business is for credit, but settlement is usually demanded within a period of one or two weeks. Still later in the day shipments are made up for distribution to country customers in neighboring towns. Thirty to sixty days' credit is extended to these customers. The orders from this country trade may be by telegram, by letter, or through private traveling salesmen. As a rule, these sales to the country trade are the most uniformly profitable of any to the car-lot wholesaler. Prices charged are usually slightly higher than can be secured from resident buyers on the market. This, of course, is justified, as extra packing and cartage charges are involved. The country trade, as a rule, makes little attempt to keep in close touch with market prices, but prefers to place orders regularly with selected wholesalers or jobbers and depend upon receiving fair treatment.

In addition to selling to the retail trade, popularly known as "retailing," car-lot wholesalers distribute considerable quantities of goods to jobbers. The "jobbing price," it should be noted, is usually less than prices charged the retail trade for the same articles. This lower jobbing price is, of course, to protect the jobber and insure him at least a small margin or profit when he, in turn, sells to the retailer.

¹ Adapted from J. H. Collins, J. W. Fisher, Jr., and Wells A. Sherman, *Methods of Wholesale Distribution of Fruits and Vegetables on Large Markets* (1915), pp. 16-17. (U. S. Department of Agriculture, Bul. No. 267.)

Many car-lot wholesalers buy when prices are cheap and put the produce in storage, distributing later when prices admit of a fair profit. This involves a certain element of risk, as a market may not take on a better tone in time for the wholesaler to move his stored goods to advantage. Some of the heaviest losses in the wholesale trade are the direct result of dealing in stored goods.

After a heavy day's sale there is usually a considerable amount of miscellaneous produce left on hand. At this point hucksters and peddlers purchase the odds and ends that are unsold and clear the market for the next day's offerings. These sales are to be commended, as considerable quantities of low-grade stuff are thus placed within the reach of the consumer at reasonable rates, and the practice serves to rid the market of a surplus of low-grade produce.

Profits to the car-lot wholesaler vary greatly. Since he deals very largely in perishables in large quantities and on his own account, his aim is to make as much profit as possible on each sale. He has better chances to make wide margins than has the jobber, because in many instances he deals directly with the farmer, who is an inexperienced seller and unfamiliar with market methods. However, the car-lot wholesaler buys in large quantities for future sale and thus takes greater risks than the jobber, who buys in small quantities from day to day, moves goods rapidly, and in cases of sharp market declines is able to close out very quickly.

Average net profits at this step in distribution are usually less than is popularly supposed. For instance, during the fall of 1914 apples were handled in Chicago and Kansas City on a gross margin of 25 cents a barrel, oranges at 10 and 15 cents a box, and lemons at 25 cents a box. The margin of profit varies greatly on individual sales and ranges from less than nothing to 50 per cent. Business competition is usually very keen and prevents any long-continued, excessive margin or profit. The car-lot wholesaler's business is subject to all overhead fixed charges, such as interest on investment, labor, and rentals, and in addition he is subject to the costs of much extra service, such as resorting, repacking, and the making of special deliveries. Considering his costs of doing business and the services which he renders, the car-lot wholesaler probably operates on as small a margin of profit as any middleman concerned in food distribution.

These men perform the absolutely essential functions of acting as primary distributors of produce arriving at market in car lots. Some definite agency must undertake the work of breaking car lots and

starting distribution at market centers. Hence, the car-lot wholesaler is undoubtedly a highly important element in present-day distributing machinery.

10. COMMISSION MERCHANTS IN THE FRUIT AND VEGETABLE TRADE

The commission merchant is a professional agent whose business is the selling of goods on commission. He has possession of the commodities, and all transactions are in his own name. He may dictate terms and methods of sale, but must obey instructions if given, and he is responsible to the shipper only for a proper accounting in the final terms.

Commission men solicit shipments from growers, car-lot assemblers, and coöperative associations. It should be stated, however, that coöperative associations do not favor the promiscuous consignment of their products and seek to eliminate this method as far as possible. Consigning is a very common means for disposing of less than car-lot shipments and offers practically the only means for disposing of poor, unstandardized products which could find no direct sale to the wholesale trade. Commission merchants handle goods for 5 per cent to 10 per cent of the gross selling price. In many cases, however, the dealer, by sharp practices, increases his margin to 15 per cent or over. As sales are made he presumably keeps a careful record of each man's transactions, but may or may not give the consignor this detailed information as to the distribution of the shipment. As soon as the shipment is "closed out" the commission man deducts freight and other expenses and his charges and remits the balance to the shipper, together with an "account sales." Costs of doing business are much the same as for the car-lot receiver.

One charge made against dealers of this type is that they sometimes remit more than the market price to a new shipper in order to get future business. As this does not give the shipper a fair idea of the market and does give him a false impression of the dealer's ability as a salesman, it is a practice which should be regarded with great disfavor by all interests in the market. Another malpractice sometimes attributed to commission merchants is selling for more than the market price and remitting to the shipper on the basis of the market price. Many have regarded this practice as legitimate, because the increased selling price is not due to the superior quality of

¹ Adapted from J. H. Collins, J. W. Fisher, Jr., and Wells A. Sherman, *Methods of Wholesale Distribution of Fruits and Vegetables on Large Markets* (1915), pp. 17-19. (U. S. Department of Agriculture, Bul. No. 267.)

the goods sold but to the dealer's excellent salesmanship. These practices certainly are not common to most commission men and are not universal, as is generally supposed. Much that the shipper considers dishonest can be explained, his suspicions being due to misunderstanding, or the trouble may be traceable to the shipper himself.

The commission merchant occupies a rather difficult position with respect to his dealings with shippers and shipping associations. The handling of large quantities of fruits and vegetables involves a greater opportunity for mutual misunderstanding than almost any other line of business. The very facts that the commission merchant assumes complete charge of goods intrusted to him, that distribution is effected according to the commission man's own ideas, and that the shipper's returns are in direct proportion to the dealer's honesty and ability, all tend to encourage a suspicious attitude on the part of the producer. It is not because commission men as a class have proven to be dishonest, but the very fact that the commission man has great opportunities for dishonesty, if he chooses to avail himself of them, has caused shippers to condemn unhesitatingly any practices which did not appear to be perfectly plain.

A shipper is seldom able to inspect his own output with an unprejudiced eye. The car which he is shipping usually appears better to him than does his neighbor's offering. The buyers with whom the commission merchant must deal, however, have no such biased viewpoint. The shipper's goods are compared critically with competing offerings from many sections and quality and pack are the sole deciding factors which determine relative values. Often, therefore, the shipper who considers his goods on a par with the best market offerings is disappointed when returns are below the figures listed on current wholesale quotations. The dealer, who may have exerted every effort on behalf of his shipper, is then accused of dishonesty in that returns were not up to expectations.

Often, too, perishables which leave the point of origin in first-class shape arrive at destination in a greatly deteriorated condition, must be repacked or regraded by the commission men, and finally sold at a considerable loss to the shipper. The grower, who last saw his produce in first-class marketable condition, does not understand or appreciate the conditions which were responsible for this loss.

In general, it may be said that a large part of the stigma which attaches to the business of the commission merchant arises directly from the difficult position which this middleman occupies in the distributive machinery.

Commission houses offer almost the only good outlet for unstandardized goods which cannot be sold direct to the wholesale trade. Acting as primary receivers of less than car-lot shipments, they serve as a medium through which to market all goods which can not be sold direct to car-lot wholesalers, and, when honest and efficient, they offer to inexperienced shippers the valuable services of trained market experts in disposing of their produce.

11. JOBBERS' SALES OF FRUITS AND VEGETABLES¹

Next in importance to car-lot wholesalers on large markets is the jobbing trade. Jobbers are middlemen at distributing centers who usually buy in less-than-car-lot quantities from car-lot wholesalers or commission men and in turn sell to the retail trade; in other words, they are intermediaries between primary receivers and retailers.

Jobbers in fruits and vegetables get their supplies from commission merchants, car-lot wholesalers, auctions, and public markets, and in turn sell to the retailer or to other jobbers. The chief outlet for the jobber, however, is the retailer. Methods of sale by jobbers and car-lot wholesalers are practically identical. The jobber, acting as the intermediary between the car-lot wholesaler and the retailer, buys in less than car lots, as a rule, makes quick sales, operates on a relatively small margin, and secures his profits by rapidly turning over his capital.

In general, the jobber is subject to much the same charges and costs of doing business as the car-lot wholesaler. Often, however, these costs are relatively less in proportion to the quantity of produce handled. The jobber usually has a smaller initial investment than the car-lot wholesaler, hence his general expenses may not run quite so high.

The jobber's chief usefulness at the present time is in facilitating the rapid distribution of extremely perishable products. A car of strawberries, for instance, will usually be disposed of much more rapidly when handled by several jobbers than would be the case if a single car-lot wholesaler attempted to complete the distribution to the retail trade. With the growth of standardization, better grading and packing, together with greater efficiency in the business of car-lot receivers, it is possible that many of the present functions of

Adapted from J. H. Collins, J. W. Fisher, Jr., and Wells A. Sherman, *Methods of Wholesale Distribution of Fruits and Vegetables on Large Markets* (1915), pp. 19-20. (U. S. Department of Agriculture, Bul. No. 267.)

the jobber may be assumed by the car-lot wholesaler. This applies to our smaller markets especially. On the great terminal markets, however, the jobbers must remain important factors for some time to come. In these cities they sell to the vast number of those retailers who buy in small quantities and who can not take time or trouble to go to primary markets and select their goods.

If the entire retail trade were to attempt to get in direct touch with car-lot wholesalers on our large markets, the congestion of business would be so great as to block most seriously the economical movement of perishable food products.

12. WHOLESALE DISTRIBUTION OF FRESH FRUITS AND VEGETABLES¹

WHAT THE WHOLESALE DISTRIBUTOR DOES

We have spoken of specialists in distribution. Let us consider some of the services performed either in whole or in part by the wholesale distributor of fresh fruits and vegetables. Briefly this service may be classified under the following headings:

- (1) Assembling
- (2) Grading and Standardizing
- (3) Packing
- (4) Transporting
- (5) Storing
- (6) Financing
- (7) Producing
- (8) Distributing

Assembling

A large percentage of fruits and vegetables is assembled, graded, standardized and packed by the wholesale trade. In many cases they are taken by the wholesaler in the rough just as they come from the orchard and field and are graded, packed and shipped. In other cases they are stored and graded and packed or repacked as they come from storage. Varieties, sizes, quality and condition have to be separated and placed in the markets to which they are suited. Grading and reconditioning also have to be done at point of distribution.

¹ Adapted from R. G. Phillips and Samuel Fraser, *Wholesale Distribution of Fresh Fruits and Vegetables* (1922), pp. 223-27. (The Joint Council of the National League of Commission Merchants of the United States, the Western Fruit Jobbers' Association of America, the International Apple Shippers' Association.)

Grading and Packing

In many sections large quantities of apples and other fruits are sold and delivered by the grower to the wholesaler as orchard run or tree run, which means that all grades, sizes and quality are together. They may be stored in this condition. Before they can be marketed, however, they must be graded, packed and assembled as to variety, size, grade and condition. In other cases the wholesaler takes the fruit in the orchard as it comes from the tree, furnishes the package, does the packing with his own crew, hauls the commodity, loads it, pays for the picking and all other charges.

Onions in a large number of cases are drawn direct from the field in crates furnished by the wholesaler, stored and afterward screened or graded and sacked by the wholesaler. Large quantities of potatoes are assembled, graded and sacked by the wholesaler. A limited quantity of fancy potatoes is packed in boxes by the wholesaler.

There is a large number of commodities, and, taken as a whole, a very large number of varieties and sizes, with variations in grade and condition. The demand varies. One market may want one or two varieties of a certain size or grade. Another market may want something entirely different. This demand has to be met to secure the best results.

Transporting

Thus far the wholesale dealer or distributor has been the most important factor in the transportation field. He pays or finances the major portion of all freight charges. The major portion of the transportation hazard and the collection of claims falls upon him.

The needs and probable car requirements of practically every state and district have been and are kept constantly before the carriers; additional, new and better equipment has been emphatically pressed for years; reasonably definite running schedules have been insisted upon; box cars have been and are lined by the wholesale trade in order to move the perishable crops with some degree of safety and caretakers sent with the cars; false floors in refrigerator cars are frequently installed by the wholesaler; in a large number of cases cars are bedded with shavings, hay, straw, etc., and papered by the wholesaler at his expense to protect the commodity, and even ice supplies have been obtained for the carriers by the wholesalers.

The wholesaler is in a large number of cases the owner of the goods transported; in other cases he has financed the production; in still

other cases he is the agent of the grower or he may be the city receiver receiving from the grower or dealer at point of origin.

Storing

Wholesale dealers and distributors are expected to and of necessity must have supplies of fruits and vegetables available at all times during the season. In addition, such staples as apples, potatoes, onions, cabbage, celery, carrots, turnips, beets, and such other lines as permit, must be carried through the period of non-production. Some commodities like citrus fruit are practically stored on the tree and the same problem is not presented as in the case of the other staples which have to be carried in storage as against the season of non-production.

The wholesale trade is one of the important factors in providing this constant supply of fruits and vegetables throughout the year. As owners of the commodities or agents of the distributors, they may arrange for cold storage space, pay the charges and keep in constant touch with the commodity stored. The wholesaler may and does own common storage warehouses or leases them and provides special storages, as in the case of cabbage and onions. In other cases he has been a strong factor in developing cold storage. Many of the large jobbing houses are equipped with cold storage rooms or coolers holding a few cars, heating, ripening and washing rooms for bananas, tomatoes, celery, etc.

These temporary cold rooms and other facilities are of great service, prevent waste in the case of high perishables and enable the commodity to be gotten to the consumer in good condition.

The hazards of storage are by no means unimportant. Much depends on weather conditions during the growing and harvesting season, freedom from disease, methods and care in handling and packing, the time elapsing between packing and storage, the facilities for transportation to storage and the degree of care shown by the storage.

Apples, for example, have been known to turn black or scald almost in a single day, and at a time when they should be in their prime. All commodities stored, therefore, have to be carefully watched.

Financing

In many cases the wholesale dealer or distributor not only purchases the commodity at harvest time, financing the purchase, transportation, storage, insurance, distribution and in some instances the packing and packages, but, in a measure not appreciated by the public,

he is financing the production of vast quantities of fruits and vegetables, either by direct advances to the grower or by taking the financial responsibility for the enterprise, including such items as land rent, seed, fertilizer, labor, packages, paper, packing and loading costs and supervision. In many districts no interest is charged either on cash advances or materials furnished. In other sections interest is charged. In both cases, if the crop fails to sell for enough to pay costs, the loss usually falls on the wholesaler. In other words, the wholesaler assumes the financial responsibility and in return for this and his other services receives an agreed percentage of the final sales, providing of course the commodity sells for enough to make this possible.

The distributor has been the pioneer in production in many cases and much of the centralization of production which we now see is due to the foresight of these pioneers in the selection of suitable locations for the industry. It has been and is of national benefit to have had these developments made.

The following concrete examples will be illustrative:

(1) *California Cantaloupes*.—The production of 8,000 to 10,000 cars of cantaloupes in the Imperial Valley is made possible only by the wholesale trade.

With rare exceptions the wholesaler pays the land rent, furnishes the seed, advances the money for labor, for growing and harvesting, furnishes the package and the paper for wraps, supervises the grading and packing, loads the commodity, guarantees or pays the freight, and distributes and sells it in the receiving market. As an example of what has been stated above, no interest is charged for advances made under the contract. For all of this service he receives a limited commission or percentage compensation. If the cantaloupes fail to sell for enough to pay the costs and advances, the loss falls on the wholesaler. In addition he takes the production hazard. If adverse weather conditions reduce the yield per acre or destroy the crop, the loss is his. Many times these losses are severe. In other words, he has the possibility of a limited profit on the one hand and the possibility of a total loss on the other hand.

Extensive financing is performed by the wholesalers in connection with other California crops, both fruits and vegetables.

(2) *Texas Bermuda Onions*.—The production of many thousands of cars of Texas onions is made possible primarily through financing extended by the wholesale trade. They furnish seed and fertilizer, finance the labor and in many cases pay the land rental. In short, in the majority of cases they supply practically the entire production

cost with the exception of the labor of the individual grower and the services of his mules and implements. It is through the wholesalers that standards as to seed, grading, and packing have been obtained and the industry established on a stable basis. They furnish the crates, supervise the harvesting and grading, load and brace the cars and guarantee or pay the freight charges. During all this time and for weeks in advance they have been finding a market, keeping in touch with all sections and even world conditions and pushing sales in every available market.

They not only have the market hazard but the production hazard. Adverse weather conditions, freezes, excessive rains, low yields, poor quality and market hazards, have many times caused serious losses. In 1921 they were caught in the wave of deflation, low buying power and high freight rates, with heavy losses resulting.

(3) *Texas Spinach and Cabbage*.—This production is also largely financed by the wholesale trade, covering the same factors of seed, fertilizer, labor, packages, etc.

If all the financial support by the wholesalers were withdrawn from Texas, production would be reduced from 60 per cent to 75 per cent.

(4) *Arizona and New Mexico*.—Practically the same financial backing exists as above.

(5) *Southeastern Crops*.—Extensive financial backing by the wholesale trade is given in Florida, Georgia, South Carolina, North Carolina and other states covering such crops as citrus fruits, tomatoes, lettuce, beans, peas, cucumbers, cabbage, eggplant, potatoes, sweet potatoes, strawberries, etc.

In one section producing on an average of 550,000 barrels of potatoes per year, 80 per cent of the output is financed by the wholesale trade. Advances for seed, labor, packages, and fertilizer run all the way from \$75 to \$125 per acre. The crop is marketed by the wholesaler on a small percentage basis.

13. AUCTION MARKETS FOR FRUITS AND VEGETABLES¹

In more than a dozen of the receiving markets of the country there are auction companies through which large quantities of fresh fruit and, to a relatively unimportant extent, other kinds of produce, are sold. In most of these cities there is only one such company. In New York there are three, but these are united by a contract fixing

¹ Adapted from Federal Trade Commission, *Report on the Wholesale Marketing of Food* (1919), pp. 56-58.

commissions and providing for the pooling of profits. Most of the fruit thus handled is received in carload lots from distant shippers, though the latter are in some cases large organizations handling the fruit of a considerable number of different growers. The services of the auction companies are therefore available to many small farmers as well as to large ones. Ordinarily the fruit is not consigned directly to the auction companies, but is sent to brokers, to salaried representatives of the shippers, or to dealers of some other sort. One reason for this seems to be that the auction companies prefer to have someone on the ground with whom any disagreements can be considered.

The auction rooms and warehouses are commonly located on railroad property, and the goods are unloaded directly at a point where they can readily be inspected by possible buyers. The goods are divided into lots or "lines," catalogued, and sold by the auctioneer to the highest bidder. In general, the buyers include both large and small dealers as well as representatives of the restaurants, though the relative importance of these differs in different places. Ordinarily purchases may be made on credit, but the auction company pays the seller within 24 hours, advancing the money and assuming the responsibility for its collection. For its services the auction company charges the seller a commission which is usually 2 per cent, though in one or two cities it is as low as $1\frac{1}{2}$ per cent, and in a few cases it gets as high as 5 per cent. In some markets there is also collected from the buyer a "terminal charge," which is usually a flat rate of 5 cents or less per package. In one or two places there is nothing called a terminal charge, but a "delivery charge" which is reduced, but not eliminated, if the buyer carts away the goods himself. In at least one case there is a delivery charge with no chance for the buyer to escape, even in part, by doing his own carting. This is not necessarily an unreasonable requirement, since under certain circumstances serious congestion can be avoided only by an organized system of deliveries.

Quotations, based on auction prices, are used to a certain extent as an indication of market conditions. The sales are public, a record is easily obtained, and, at least in some of the auction markets, a catalogue, showing the prices received for each lot of goods, is printed by the auction company for the benefit of the sellers. In some cities these quotations are not without their influence on the prices paid at private sale. The New York Fruit Exchange, which is not itself an auction company, has a committee which makes up an official

auction report, which is supposed to be used as basis for quoting New York prices to distant customers. In so far as auction prices are the result of open competitive bidding and the volume of sales is large, the quotations probably indicate fairly well the conditions prevailing in the market. Manipulation for the purpose of affecting the quotations is not impossible and is said to have been practiced in some instances. Cases of the sort, however, are probably exceptional.

One of the chief advantages claimed for the auction method is the free play of demand and supply that public sale makes possible. As a result, the shipper is assured of as high a price as the conditions warrant. Advocates of the auction method claim that the thing that counts is the quality of the goods rather than the quantity offered for sale or the ability of the dealer. All grades can therefore be sold for full value. If there is a glut in the market peddlers and pushcart men buy heavily in order to take advantage of the low price, and by pushing the sales prevent the price from falling as low as would otherwise be the case. The auction market, moreover, is a quick one. After the sale opens there is no long wait for buyers to appear. This is of special importance in the case of highly perishable goods. It is further contended that the cost of selling at auction is low, and it is pointed out that one auctioneer can do the work of many private salesmen. Finally, the publicity that attends auction sales furnishes some assurance of fair dealing.

The advantages of the auctions, however, must not be exaggerated. Under proper conditions demand and supply may work smoothly at private sale. At the auction they represent conditions at a particular moment of time. Neither party can "shop around." The would-be buyer must purchase the goods when they are offered or not at all; and the seller must accept the best price then tendered, subject, in some cases, to his right to withdraw the goods from sale. To permit a seller to bid on his own goods in case he is not satisfied with the prices offered by others, as is sometimes done, is to open the door to a rather bad form of price manipulation. Again, it is sometimes said that those whose goods are sold first in the auction have an advantage over those whose goods are sold later, since the buyers after securing enough to satisfy their needs, leave the market and the subsequent buying competition is reduced. In the case of small shipments the economy of the auction is at least highly doubtful, since the goods can not be directly consigned to it, and they might be sent to a commission man or to a merchant of the type that would

otherwise buy them at public sale. While it is claimed that agricultural products of practically all sorts can be sold at auction there is no doubt that it is a material advantage to have the goods come in carload lots properly packed in standardized packages. As a matter of fact, it is chiefly fruits so shipped and so packed that are handled at public sale.

14. INTERRELATIONS IN THE PRODUCE TRADE¹

The complexities of organization which have grown up in the modern produce trade might be illustrated by taking a cross-section through the business at the point where some one individual stands in the system. Such a picture is presented quite vividly in the newspaper account of the business affiliations of a prominent produce merchant who died in Pittsburgh recently:

Mr. _____ was president and director of the California Fruit Distributors; treasurer and director of the Connolly Auction Company of New York; secretary-treasurer and director of the Connolly-Fanning Company; president and director of the Fanning-Charters Fruit and Distributing Company of New York; president and director of the James M. Fanning Company of New York; treasurer and director of the Earl Fruit Company; treasurer and director of the James B. Coll Company; president and director of the Pittsburgh Fruit Auction Company; vice-president and director of the Producers' Fruit Company, and secretary and director of the Union Fruit Auction Company.

Besides these connections this man's activities included the promotion and direction of a trust company which was the principal banking agency of the produce district in his city. His case could be fairly paralleled amongst the dealers in the Chicago market. To make the list of possible interlockings complete, we should remember that the produce merchant is frequently interested in cold-storage enterprises and in producing operations as well as the array of business affiliations presented above.

15. THE TREND FROM COMMISSION DEALING TO OUTRIGHT PURCHASE OF PRODUCE²

From the time the produce merchant enters business he begins to acquire familiarity with consumers' needs and fancies; he learns about many markets and the lines of access to them. But perhaps few or

¹Adapted from E. G. Nourse, *The Chicago Produce Market* (1917), p. 69. (Published by Houghton Mifflin Company, copyright by Hart Schaffner & Marx.)

²*Ibid.*, pp. 52-59.

none of the goods which come to his hand through the voluntary activities of producers match up precisely in quantity, quality, character of package, or time of arrival with those desires of buyers. Here lies the merchant's opportunity; it consists in effecting a readjustment of these misfit conditions.

One of the first things he sought to change was the form in which goods were offered. Much has been done in this matter of securing high-grade products and of the proper sorting, packing, and transportation of such goods, but even today it stands in the forefront of the produce dealer's problems. In the earlier days much that was delivered to market was in a condition so unattractive as to cause a serious scaling-down of its price or even to render it unmarketable. The dealer who knew the tastes of his own and perhaps of outside markets might sort out and repack such goods so as to obtain a fancy price for the best, but fair values also for the inferior grades, and a total return much above what could have been secured from the shipment in its original condition. Naturally, he added this cost of grading and repacking to the charges which he deducted from the "account sales" which he returned to the consignor of the goods. But such charges were often viewed with suspicion by the shipper. Likewise, the produce merchant observed that frequently the advance in price which was secured by this process of repacking considerably exceeded the cost of doing the work. There was then a strong temptation for him to buy the goods upon arrival and thus himself to profit by the whole of this improvement. Even though the price paid were quite all the goods would bring in that condition on the open market, such a practice would hardly satisfy a man of high ideals, but if the transaction were moved back to the producing territory and the dealer bought from the grower at his farm or at the shipping platform, he might entirely meet the demands of fair and open dealing and yet secure this margin of profit for himself.

Such a movement has gone on to a considerable extent and has been one phase of the development from consignment to outright purchase as a marketing method. In most cases, to be sure, the dealer has not desired to have this clutter of sorting and repacking going on at his Chicago place of business. Rent and labor are too expensive here and it is poor business to pay freight or express charges on that portion of the goods which is eventually culled out. In many cases, therefore, the Chicago dealer has built or rented a packing shed at the shipping station, where he buys goods as they come from the producers' fields or orchards, has them packed according to his own standard by his own

employees, loaded (and perhaps pre-cooled or iced) under their supervision. In some cases this desire of a Chicago dealer to provide for a very particular quality of goods to supply a definite trade has led him to erect expensive packing houses, permanent warehouses, and cold storage plants at numerous points throughout the producing districts. In such a case every effort is made to capitalize these efforts into a trade reputation and to market the goods under the dealer's private brand or trade-mark.

Some dealers purchase in advance the whole or some stipulated portion of the output of one or more growers whose producing ability is already known. Others lease farms or orchards and have goods produced under their own supervision or upon contract. In a few cases the dealer (generally a partnership or incorporated company) actually owns the producing property. For example, one of the large apple-distributing firms claims that nearly half of the goods which they handled in a given season—they handled more than one hundred thousand barrels—"was off our own orchards and *all* packed by our own men to insure pack and quality up to our usual standard."

On the other hand, many produce merchants prefer to specialize exclusively in the marketing function and to leave these supplementary tasks to others. Such dealers will purchase from growers, and seek to secure satisfactory grades and packing by refusing to purchase inferior goods or by offering prices which show a profit to the producers of goods of superior quality. It is evident, too, that commission transactions may continue alongside this newer type of dealing—flourishing, in fact, with this growth of the movement toward better and more dependable quality in the goods offered by producers. Likewise certain lines of the trade seem to lend themselves more readily to the consignment system and to resist the movement toward outright sale to dealers, and some part of practically every line of the business seems bound to continue upon that footing.

A second aspect of the movement toward outright purchase by wholesalers and jobbers connects itself with the effort to secure supplies of goods at the times best suited to the satisfying of consumers' demand. When the merchant found that some consumers in his market wanted fruit or vegetables out of their local season, he was able in some cases to secure these supplies upon a commission basis. But as the sources of such supply were far away and the goods highly perishable in character, he often found the distant producer loath to assume the risk of shipping on consignment. Under these circumstances the offer of cash in the producing territory was often the only

means whereby the produce merchant could secure goods for his trade at times when they were not available from local sources. And the same proposition would apply to the securing of goods in a poor season when near-by supplies had failed. The produce merchant must then seek to get his stock from more distant producing sections and, in meeting the competition there of merchants already having connections in those fields, outright purchase on a competitive price basis would be the surest way of getting the goods.

But perhaps the most important work of the produce merchant in the way of securing time utilities for his patrons has come about in connection with the development of storage methods. In the old days enormous quantities of produce went to waste for the lack of an immediate market. Other quantities were stored after a fashion, but suffered much loss through deterioration. Not less important, however, was the fact that both consumption and production were curtailed because of the lack of proper means of equalizing supplies. Here again the dealer saw the road to a profit if he could secure control of the goods so that he might obtain the margin of price which would accrue from better distribution in point of time. This commonly meant purchase of the goods.¹ It also meant the erection of frost-proof warehouses, cold storage plants, buildings which were damp-proof or specially ventilated, and—in the case of sweet potatoes—even dry kilns.²

In a general way it may be said that the more recently developed parts of the produce business—and they constitute a very large fraction of the whole—have inclined to the purchase rather than the commission method of dealing. The increasing importance of the wholesale receiver and the jobber results from the growth of their business in these new directions more than to an actual falling-off in the older departments of the trade. This would apply noticeably to those commodities which, thanks to modern methods of refrigeration, may be stored in the flush season and marketed over the larger part of the year. On the other hand, such goods as are dealt in in small lots and locally (such as the express receipts of eggs and live poultry) must of necessity continue to be consigned. Thus, many supplies of fruit, vegetables, eggs, and poultry are gathered by dealers at primary

¹ In some cases the commission merchant now stores goods for a consignor's account, later disposing of them upon instructions from the owner or acting upon his own judgment.

² An important aspect of all this is that we were getting a better machinery for handling our perishable food products and that the produce dealer was contributing much of the capital for this special equipment. Many of the warehouses he built and operated for himself, either at shipping points or at the market center. Others, such as the cold storages, were built by separate companies, but such companies often secured their capital in whole or in part from members of the produce trade.

marketing points, who receive goods on consignment from small, local producers. These dealers—often called “concentrators”—in turn may send their car-lot shipments to commission men or brokers or they may sell them at their shipping point to buyers representing the dealer of the central market. For example, an Iowa farmer sells two cases of eggs to a local merchant, who consigns them to a concentrator at Sioux City; he includes them in a carload which is sold outright to a Chicago wholesaler, who sends them to a broker in New York City. There they are sold to jobbers or to an exporter.

16. SPECIALIZATION IN THE PRODUCE TRADE¹

The old-time produce dealer had to handle practically every line of goods available in his market in order to make his active season as long as possible. But present conditions demand that he shall have expert knowledge of widely scattered and remote fields of production; that he shall master the technical details of an elaborate system of transportation, refrigeration, and business finance; and that he shall be deeply versed in the precise demands of all portions of the market, a connoisseur of quality and a master of the art of market promotion and salesmanship. This has suggested the wisdom of specialization in a limited number of produce lines so chosen as to be mutually complementary and to give a tolerably steady volume of business. A few concerns still handle poultry, eggs, and butter along with fruit and vegetables, but “The House that’s Strong on Onions,” “The Cabbage Kings,” “Headquarters for Southern Truck,” “Apple Specialists,” and similar advertising phrases indicate the character of the trend toward specialization. “The House that’s Strong on Onions” also handles cabbage, root vegetables, and apples; and another firm has evolved an effective organization based on Texas onions, Northwest apples, and Imperial Valley cantaloupes. Other minor lines will be worked into such an arrangement, as opportunity offers, but in their main specialties these concerns have built up a permanent clientele and an efficient business organization.

In developing such a business, the merchant seeks to create or to organize a certain volume of demand in such a way that it will constantly turn to him for supplies. Let us suppose, for example, that he thus holds himself out to buyers as a dependable purveyor of peaches. In order permanently to hold his trade he must be in a position to get

¹ Adapted from E. G. Nourse, *The Chicago Produce Market* (1917), pp. 57–58. (Published by Houghton Mifflin Company, copyright by Hart, Schaffner & Marx.)

peaches if anyone can, and this means being ready to buy peaches wherever they can be found, be it Georgia, Arkansas, or California. Furthermore, even the produce house which has developed its main line or lines of business upon a commission basis may depend upon purchased goods to fill out and equalize the volume of its business. Such minor lines may be of a temporary character and show considerable changes from year to year.

17. THE COLONIAL WOOL SALES OF LONDON¹

The wool from Australia, Africa and elsewhere, either washed or greasy, is skirted and classed before packing and arrives in compressed bales, consigned to certain brokers. Ships are unloaded at some of the various wharves and the bales are stored in large warehouses in that vicinity. Each of the sales is always held in the same month, year after year, the exact date of the opening day being fixed some time in advance and advertised in the usual way. Catalogues are printed and issued by the brokers the day before the sale. As soon as an intending buyer secures a catalogue he proceeds to the warehouses where the wool is stored and placed ready for inspection. One bale of each lot is cut open to enable anyone to pull out sufficient wool for careful examination. The intending buyer after a close examination of the wool, makes notes in his catalogue to guide him in bidding during the sale that afternoon.

The sale takes place in one large room in the wool exchange on Coleman Street, some distance from the warehouses where the wool is stored. Selling begins at 3 o'clock precisely. The room is constructed similar to an amphitheatre, all the seats facing the auctioneer's desk and rising abruptly towards the back, so that each row of intending buyers may see and be seen distinctly. Auctioneer, broker and clerk take their respective seats at the desk, while press reporters are also seated at the front in the extreme right and left corners. The densely packed audience is as quiet and sober as a church congregation, with the exception of a keen, eager look in their eyes indicating the intensity of suppressed excitement within. The moment the first lot is called out, they burst forth in one wild chorus of yells and howls, and may continue shouting and gesticulating in a frantic manner until that particular lot is knocked down. For a fraction of a minute there is dead silence again until you can almost hear your heart beat. In that brief moment the buyer's name and the price of the lot has been

¹Adapted from The Livestock Commissioners, *The Sheep Industry in Canada, Great Britain and United States* (1911), pp. 104-6. (Dominion of Canada, Department of Agriculture.)

recorded. Suddenly the subdued but clear metallic voice sounds the next number from the desk and immediately a dozen or more excited bidders leap to their feet, shouting louder than before and continue those hideous yells and frantic movements for about twenty seconds until that lot is knocked down and so on. Excitement on the stock exchange is tame compared with it, whilst the excitement at a heated election meeting is mere child's play compared with the terrific eagerness displayed here. We met an Australian coming out one afternoon and he said "We call our wool sales in Sydney the dog fight, but this is the world's menagerie turned loose."

Most of this pandemonium is made by foreigners, but the usually excitable Frenchman is by no means the worst. Strange as it may seem, the generally stolid German is the most impetuous buyer of all, and yells and shouts louder than all the others. The Frenchman has a knack of starting off quickly, and his characteristic gestures readily catch the eye of the auctioneer. The Englishman is usually found a row or two further back, and although he is less excited and less noisy, he has a way of elbowing himself forward beyond others in the same row, and thrusting his rolled catalogue upwards like a conductor's baton, he also succeeds in attracting attention. The American, always frowning with the hard-set expression of a Roman gladiator, generally jumps up on his seat and "hollers," not so loud as the German by any means but just loud enough, and he is frequently the highest bidder. Like the Englishman, he is always keen on choice lots. The Englishman, with large export orders on hand for high class goods, must have a certain high grade quality to produce a certain finish. The American wants the pick of Australia because he has plenty of low grade cross-bred wool at home and something better is required for blending. Americans buy very little scoured wool, but they are large buyers of fine wools in the grease. Light shrinking wool is of vital importance to them, and whenever they overbid European buyers you may be sure they have figured on that lot shrinking less than fifty per cent. Germans and Frenchmen usually favor the finer grades, while Belgians are keen on smaller lots of the same description.

About four huge catalogues belonging to different selling brokers are cleared in one afternoon. Fresh occupants take their places at the desk as each broker's catalogues are cleared. Auctioneers on this continent who flatter themselves as being great "hustlers" should visit "Coleman Street" and get an eye opener in quick selling, because it is quite a common thing to see 100 lots sold in fifteen minutes. Frequently, these lots will average upwards of 18,000 pounds each.

18. THE COTTON FACTOR¹

There are about 52 factors and 81 buyers at Memphis. The business of factor and buyer differs in many essential respects and there is, as we understand it, practically no competition between them. The factor does not buy cotton. He simply represents the cotton grower in selling it, in which case it is consigned to the factor who ultimately sells it to a buyer, for which service he receives a commission from the grower. The buyer who purchases the cotton either from the grower, factor, or country merchant may be a middleman or the agent of the foreign or domestic manufacturer.

The factor exercises, in no small degree, a present and prospective control of the cotton crop. It is an established custom for him to advance to the grower money to enable the latter to plant, cultivate, and gather his crop, such advances usually being made upon the basis of \$15 per bale on the number of bales which the grower contracts to deliver to the factor. Upon advances so made the factor charges interest at the rate of 8 per cent. When the cotton has been ginned and, in accordance with the contract, delivered to the factor, the latter sells it and in settlement with the grower deducts his 8 per cent interest on money advanced, a commission of 2½ per cent, and expenses consisting usually of freight charges, drayage, storage, and insurance. Where all these charges attach to the handling of a bale of cotton by the Memphis factor the average, it is said, amounts to approximately \$3 per bale.

In the early part of the season buyers gather at country points where compresses are located, the number of buyers at one place depending upon the prospects in that vicinity. As many as 20 or 30 buyers may sometimes be found at an important point. The greater the number of buyers the greater the competition, and consequently the higher the price received by the seller. Cotton is sold upon a narrow margin, sometimes as small as one-sixteenth of 1 cent per pound or 31 cents per bale. The buyer's profit is usually not over 50 cents per bale. The buyers are not always experts in judging the value of staple cotton. As the season advances and expert knowledge becomes necessary in order to determine the true value of the cotton, most of these buyers return to the larger markets.

¹Adapted from Interstate Commerce Commission, *Reports*, Vol. 26 (1913), pp. 589-90.

CHAPTER VI

MARKETING RAW MATERIALS

1. THE IMPORTANCE OF RAW MATERIALS TO THE INDUSTRIAL BUSINESS¹

In many industries the value of materials used amounts to 80 per cent or 90 per cent or even a higher proportion of all operating expenses, including interest. Normally more than half of the current assets of the average manufacturing company are in the form of merchandise inventory in different stages of production, and the inventory item very frequently amounts to more than 25 per cent of all the assets of a manufacturing concern. In distributing enterprises, materials (in finished form) constitute a much higher proportion of all tangible assets, in fact they are sometimes practically the *only* assets aside from the small proportion of cash.

It is further significant to find that in the year 1909 the average net income of all manufacturing businesses in the United States was 10.8 per cent of the value of their product. Ten years later the net income of all incorporated manufacturing concerns, after depreciation and interest, but before deducting federal income taxes, was 9.28 per cent of the total gross income (\$52,290,000,000), while for trading corporations the ratio was much lower, 5.42 per cent. It is evident, therefore, that in order to gain one dollar of net income, the average manufacturing business must sell about ten dollars worth of goods. In other words, for every dollar lost in connection with the purchase of materials it would be necessary to sell a quantity of goods equal in value to ten times the amount of the loss. Reduced to a *quantity* basis, six units of finished product would have to be sold in order to recoup the loss incurred as the result of unwise buying, since the average value of materials purchased is equal to 60 per cent of the selling price of the product. Every dollar saved in the purchasing department is clear gain, while every dollar lost would require a ten-fold increase in the *volume of sales*, so far as that dollar is concerned, in order to recover the particular loss, provided the unwise purchase policy were spread over all materials bought! Obviously, no business could expand at

¹Adapted from E. E. Lincoln, *Applied Business Finance* (1922), pp. 512-13. (A. W. Shaw Company.)

this rate, nor would it in most cases be possible to recover the loss through greater operating efficiency. Also, competition of the better managed concerns would normally prevent the seller from passing on this additional expense in the form of an increased price to the consumer in order to cover the additional costs incurred in connection with the purchase of materials.

Apparently, therefore, any purchasing department can through bad judgment and bad buying lose money for a business at a rate so rapid that all profits can be speedily wiped out.

2. DETERMINING THE PURCHASING POLICY¹.

Purchasing policies are rules of action established to govern the purchasing phase of the business. No general rules can be laid down as applicable to business in general; in each business the management must formulate its own rules. The management has in mind certain purposes that it wishes to accomplish, and it establishes such rules or policies as, in its opinion, will obtain those objectives. Determining policies is therefore a matter of judgment; and policies will ordinarily be effective, harmful, or indifferent as the judgment of the management is sound or otherwise. The value of study of considerations that affect purchasing policies is accordingly proportionate to the extent that it broadens and improves the judgment.

In a business of appreciable size, matters to be considered in determining a purchasing policy are very numerous and complex. Some of the more important considerations are:

1. Value of continuous and adequate source of supply.
2. Value of friendly attitude on part of supply houses.
3. Need of credit leniency or extensions.
4. Trend of business conditions.
5. Desirability or necessity of long-time or short-time contracts and feasibility of sliding scale contracts.
6. Buying futures and hedging.
7. Speculation.
8. Control by budget and production schedule.
9. Fluctuation of the market.
10. Buying against specifications.
11. Desirability of requiring competitive bids.
12. Need of buying from brokers.
13. Buying through subsidiaries.
14. Relative importance of price or service.

¹Adapted from Arthur E. Swanson, "Determining the Purchasing Policy," in *Administration*, Vol. II, No. 5 (Nov., 1921), pp. 616-22.

15. Credit of supply houses.
16. Methods of supply houses.
17. Deferments and cancellations.
18. Influence of sales policy on purchasing policy.

1. The importance of maintaining a continuous and adequate source of supply depends, to a large extent, on business conditions. When the supply of raw materials is very plentiful, as in periods of depression, this consideration is not so significant as in periods of great activity. Ordinarily, however, a large business must carefully consider the problem of continuity and adequacy of its supply of materials. The majority of purchases must accordingly be confined to a limited number of sources, so that the favored supply houses will feel under obligation to provide for special demands. On the other hand, the purchases must be distributed over a sufficient number of sources, so that if one source should be suddenly cut off by labor difficulties, fire, financial adversities, and the like, the major portion of the supply will not be endangered, and the substitution of another source will not be made too difficult.

2. The value of a friendly attitude on the part of supply houses should not be overlooked. It is frequently possible to drive hard bargains, to take advantage of technicalities, to force supply houses to carry out contracts that have become very disadvantageous to them, and to shop around freely in buying—all of which are legitimate. It is sound policy, however, to deal with supply houses in such a manner as to create a friendly attitude—a willingness on their part to go out of the way to grant a favor; for at times a business needs special favors, such as rush shipments, special designs, etc.

3. The need of credit leniency or extensions is oftentimes not anticipated at the time of organization of the business. It frequently happens that a business, though prosperous, is limited financially. By concentrating purchases with a few supply houses, the amount purchased from each becomes considerable and the supply houses are more likely to work closely with the purchaser and extend more credit to him in times of stringency. Buying from a few houses in order to secure more credit and to insure temporary protection in times of trouble has its disadvantages in that the purchaser is restricted and partially controlled by the supply houses. That is the premium that must be paid for credit services.

4. In the determination of a purchasing policy the trend of general business conditions is a vital factor. A rising price level, particularly if it is accompanied by increasing business activity, makes buying in

advance for longer periods than ordinary advantageous in that it gives greater assurance of adequate supply and permits of lower prices by quantity buying without running an undue risk of loss in inventories. The trend of business and the price level must be carefully watched, however, especially if the price level is ascending rapidly. Under such conditions the temptation to buy further and further in advance is exceedingly strong, and a sudden change in the trend may easily force on the business a tremendous loss through price reductions on inventories and goods on contract. This temptation is very subtle and, for that reason, hard to resist. Moreover, the difficulty, or threatened difficulty, of securing sufficient materials oftentimes looms so big that it tends to submerge the fact that one is buying far in advance and thus running the risk of making inventories top-heavy.

A falling price level has the opposite effect. The possibility of buying goods in the near future at reduced prices, and the ease with which goods can be procured tend toward "hand to mouth" buying. The difficulty which even very experienced and well-trained business men encounter in predicting even approximately the trend of price levels and business activity, has caused many to follow a sort of straddling policy in reference to economic trends. They do not buy very far in advance when the level appears to be on a long upward swing or very close when the level appears to be on a downward swing. They are satisfied with an average buy.

5. The general trend of price levels and business activity is a large factor in determining whether goods should be purchased on long- or short-time contracts but not the only one. Frequently the initial cost that a plant incurs in order to manufacture supplies is such a large factor that it can make a marked concession in price if it is assured of continued operation for a definite amount of business. If the purchasing firm wishes to take advantage of such concessions granted on long-time contracts, it should, when the trend of prices is downward, arrange to have prices readjusted each month or at other definite intervals on the basis of a predetermined scale. A contract for cotton fabric, for example, may stipulate a monthly revision of the price based on a change in the rate of wages and provide for a change in the price of cotton from the base rates which obtained when the contract was drawn.

6. Buying futures and hedging to eliminate speculation in buying may be desirable. Sales in a business may be made for future delivery but at fixed prices. It may then be advisable, in fixing a price, to know definitely what the raw material will cost. To illustrate, the cost

at the time of accepting the sales contract may be assumed to be \$1 per unit; at the time the material will be needed the cost may be \$1.50 per unit. A purchase for future delivery is accordingly made at the time the sales contract is accepted, so that the business is protected in case of an increase in cost. If the price falls instead of increasing, the business does not gain thereby. Hedging consequently eliminates the speculative feature.

7. The question of the extent, if any, that purchasing should involve speculation is present in a falling as well as in a rising market. Whether speculating is to be a phase of purchasing policy depends on opinion only. In the main, purchasing departments are not equipped to speculate successfully, and frequently the management is of the opinion that in other respects speculation in the purchasing department is harmful. The purchasing policy should define the management's position in regard to speculation.

8. The type of control of purchases has a very decided influence on policy; budgetary control, which is coming into favor in many enterprises, does so in particular. The sales estimate is used as a basis for establishing the production schedule. This schedule in turn determines the amount of stock required by periods, and the stock requirements govern purchases. Based on the production schedule, a purchasing budget is set up for materials, which gives the limits within which the purchasing department must operate. Such a control restricts the purchasing to the buying of balanced stocks and in that manner affects policy.

9. Markets frequently fluctuate. This may be utilized for purposes of speculation or met in part by hedging. It may be met also by continuous equalized buying as prices ascend and fall so as to realize an average price. This procedure has many advantages as it simplifies the handling of fluctuations and eliminates the temptation to speculate.

10. If specifications are established for the materials to be purchased in order to secure standard materials or to meet technical requirements, the purchasing is affected. Specifications frequently limit the range of sources of supply. Moreover, it makes purchasing a narrower function than when purchasing also involves determination of the quality of goods to be bought. In certain kinds of business, buying can not be narrowed in this manner because of the factor of human judgment in determining quality. While steel, machinery, and scores of other goods are subject to exact analysis, cloth and other similar goods, although they can be analyzed to a degree, have factors of pattern and style which can be gauged only by personal judgment.

11. In order to provide against favoritism and to encourage competitive bidding, it is often desirable to adopt the rule that specifications must be submitted to a number of supply houses, and that the lowest bidder receive the contract, provided he is otherwise satisfactory. Such rules, of course, have their limitations. They tend to slow up buying and place restraints on the buyer. Moreover, by including in the specifications certain requirements [which only favored houses can meet] the competitive bidding may be limited.

12. In determining a purchasing policy, the relative advantages and disadvantages of buying from brokers or direct from the supply house must be carefully weighed. Price advantages in buying direct may be so substantial as to warrant so doing even if it means long-time contracts. To confine all buying to direct sources, however, places the business out of touch with the market. To maintain this touch it may be advisable to do some buying from brokers, even if there is a price disadvantage in so doing. A purchasing agent needs to have persons in close touch with the market upon whom he can call at any time for price information. Unless some buying is done from such persons this information in time becomes unavailable. If buying must be in small quantities there may be no price advantage in purchasing direct and buying may be done exclusively through indirect sources.

13. In order to have a satisfactory control over sources of supply, or to secure a lower cost it is sometimes advisable to acquire the sources of supply outright and operate them as subsidiary companies. This process is known as integration and, while it has very distinct advantages, it also has limitations. The greatest limitation is that such sources are ordinarily industries allied to the principal one and are consequently affected in the same manner as the main business by changes in economic conditions.

In the distribution of a number of products, such as building materials, the best prices can often be secured only by regular dealers. Subsidiaries are sometimes organized to serve nominally as dealers but primarily as agencies through which materials are purchased.

14. The purchasing policy is compelled at times to take into consideration the relative importance of price or service. Assuming that certain standards of quality must be met, the purchasing policy may have to emphasize price or service. Ordinarily, of course, both of these factors are emphasized, but when purchasing is balanced very closely with production such factors as promptness in shipping, uniformity in quality, condition of packing, disposal of adjustments and the like may be so important as to warrant a slight increase in price.

15. The financial standing of the supply houses with which a firm deals affects the purchasing policy; for in case the houses have to be paid promptly, no leeway is left open to the purchaser in case of a financial stringency. Furthermore, a large buyer may find that if he acts within his legal rights and suddenly closes down on his purchases, he will financially embarrass the supply house. While this would be altogether legitimate, the management of many concerns would dislike very much to do this and to a limited extent, would be inclined to sacrifice themselves.

16. Methods of management differ; some concerns are slovenly and dilatory in their methods, others tricky. Some have very definite policies which they maintain in fair and foul weather, others have policies which are trimmed according to the wind that blows. A purchasing policy is not complete which does not consider the methods and policies of supply houses from which goods will be purchased.

17. The question of deferments and cancellations ordinarily does not arise on a big scale except in periods of economic depression. The possibility of deferment and cancellation is, however, too vital a matter to be overlooked in determining a purchasing policy, because periods of depression may find the business without any method of securing relief from the in-rush of goods not needed by the business.

A method of providing for deferment or cancellation is to have the purchasing contracts contain a provision stipulating that the delivery of the purchased goods may be deferred a given period in return for a specific consideration, or that the contract may be canceled in return for a fixed payment. It is ordinarily difficult to get the supply houses to agree to such a provision in the purchasing contracts. It can be done, however, and if confined to the important contracts only, the burden placed on the purchasing department in this respect is not heavy.

There is considerable opposition to deferment or cancellation on the part of many business men but that is directed to deferments or cancellations which are not provided for in contracts, but are forced on the supply house in one way or another. This opposition should not apply when provision for deferment or cancellation is made in the contract.

18. Another factor which may have to receive careful handling in the determination of purchasing policy is the influence which sales policy should be allowed to exert. A business frequently sells its product to houses whose goods may be purchased by it. For example, tire manufacturers sell tires to makers of automobiles, and purchase

a large number of automobiles for testing and traffic purposes. In such instances, an automobile manufacturer may press the sales department of a tire manufacturer to exert its influence upon the purchasing agent in order to get him to buy trucks or passenger cars from the former. The purchasing department may wish to standardize on one kind of truck or passenger car in order to have the advantages that come with standardized equipment, but the influence of the sales department may be exceedingly great. Thus comes the question of weighing the advantages of standardization against the need of helping the sales department. The advantage even to the sales department usually lies, however, with standardization. The sales department frequently has so many customers who want to be favored that it cannot possibly please all. It has a much stronger position then if it can show that it has no influence in the purchasing department where considerations of standardized service govern.

These eighteen considerations which have been discussed in somewhat summary fashion do not comprise all the elements which must be considered in determining a business policy but they serve to indicate the many factors that must be given attention. The relative emphasis which should be attached to these considerations cannot be given for business in general, nor can they be given even for the same kinds of business; for the reason that the weighing of these factors depends, in a large measure, on the objective of the management and the conditions under which the business is operated.

In an industry, for example, with which the author is familiar, two competing concerns follow almost diametrically opposite courses relative to speculation. One business has, as a matter of policy, equalized buying whether the market is going up or down. The other follows the policy of trying to forecast the market and buys heavily when, in the opinion of the management, the price is low. There is nothing to indicate that either business should change its policy. The management, in one case, does not feel it is equipped to forecast the market rightly, and believes that it is following a safe course by purchasing regularly regardless of the market. The other believes it is equipped to anticipate the trends and that it can do better by bunching its buying.

Given certain circumstances it would be possible to indicate how a purchasing policy should be affected by some of the considerations mentioned. For example, if a business is limited financially it would be undoubtedly wise to adopt a policy of buying from a limited number of supply houses.

A classification of these considerations discussed above should be helpful in arriving at a method of determining the policy to be pursued. In the main, the purchasing policy of a business is not static. On the contrary it is continually evolving. Certain phases of the purchasing policy can remain the same throughout the life of the business; a second group of phases depends on the growth of the business, its financial condition and its policies in reference to production; and a third group depends largely on external economic conditions.

The factors or phases which can remain more or less fixed are: Value of friendly attitude on the part of supply houses; buying against specifications; relative importance of price or service; control by budget and production schedule; desirability of requiring competitive bids; credit of supply houses; and methods of supply houses.

Those which are dependent on the growth of the business and its condition, are: Value of continuous and adequate source of supply; need of credit leniency or extensions; desirability or necessity of long-time or short-time contracts and feasibility of sliding scale contracts; need of buying from brokers; buying through subsidiaries; buying futures and hedging; fluctuation of the market.

Those of the third group which are dependent on external economic conditions are—speculating and trend of business conditions.

The evolutionary character of the purchasing policy makes it desirable that the policy be subjected to review at definite intervals. In a large company the author has found it very practicable to have the purchasing policy reviewed in such a manner once a month by the executive board. As the executive board consists of the heads of the principal divisions of the business, the purchasing policy is being continually moulded in the interest of the various phases of the business. Prior to the meeting, the individual members are supplied with a recent analysis of the fundamental conditions so that the purchasing policy can be shaped in the light of that information.

In a smaller company the responsibility for the review of the purchasing policy lies with the manager, except so far as it has been delegated to the purchasing agent.

3. THE PURCHASE OF WHEAT BY MILLERS¹

The successful miller must be an expert judge of wheat, must have skill as a miller, and must be a shrewd business man in buying his wheat and selling his product. The miller buys his wheat from

¹Adapted from J. Chester Bowen, *Wheat and Flour Prices from Farmer to Consumer* (Aug. 15, 1913), p. 33. (U. S. Department of Labor, Bureau of Labor Statistics, Bul. 130.)

different sources. He may buy directly from the country elevator; he may buy from a jobber or commission man; he may buy from a grain-dealing firm; or, if in the wheat-producing section, he may buy to some extent from the farmer direct. The miller likes to see the grain before he buys it, and much of the wheat bought by millers in the larger wheat markets is bought by sample. If the miller buys by grade it is from a person whose judgment and honesty he trusts. By experience the miller is able to determine very closely from an inspection of wheat its quality and the character of flour that he can make from it. The mills in the wheat field generally limit themselves to one kind of wheat. Thus most of the mills in Kansas and some in near-by places grind only hard winter wheat. A few mills grind both hard wheat and soft wheat according to their opportunity to purchase soft wheat and to find a market for the flour. The mixture for milling in this territory generally contains dark, yellow, and turkey wheat in varying proportions. Wheat differs in price and milling quality; thus, at times, No. 3 wheat, or even No. 4, is said to grind more successfully than No. 2, and No. 3 turkey wheat may make a better flour than a No. 2 yellow wheat. In order to keep the mill in operation more or less wheat is necessarily kept on hand by the miller, but aside from this, the conservative miller buys wheat only as he sells his product, which gives him an opportunity to determine just what his profit for milling shall be. A speculative miller may contract for the sale of his product before he buys the grain, in anticipation of a decline in the wheat market before he is called upon to deliver his product, or he may stock up with a considerable amount of grain with the expectation that the market price of flour will rise. This speculative buying is not a part of the milling business proper; the miller simply speculates as any other person may do and his profits on speculation are quite apart from the ordinary profits of conservative milling.

4. THE PURCHASE OF CATTLE BY THE LARGE PACKERS¹

The livestock buying system in Chicago is as efficient as any of its kind in America. The men who do the cattle buying are old hands at the business, and the extent of their responsibility may be judged from the fact that the 50 or 60 men of all companies in the several markets buy all the cattle disposed of through, in some cases, as many

¹Adapted from Rudolf A. Clemen, *The American Livestock and Meat Industry* (1923), pp. 544-47. (The Ronald Press Company.)

as 400 branch houses and by a force of 3,000 managers and salesmen. These men must not only possess the faculty of judging all manner of cattle by sight and in large numbers on the hoof, but must, at the same time, keep in mind the needs of the sales organizations regarding assortment of weights, kinds, and quality.

To this end one man in Chicago supervises all the buying of cattle for each company and keeps in telegraphic communication with the buyers at Fort Worth, Kansas City, East St. Louis, Sioux City, and St. Joseph. This head buyer has offices in a specially constructed building in the heart of the stockyards of Chicago, where he and his assistants do business with an army of commission men and against the competition of other packers, speculators, and feeders as well as a number of order buyers, who ship live cattle and killers throughout the East. The number of men in the buying department of Armour and Company, for example, is about 200. This number includes men who act as scalers, weight takers, yard men, and cattle drivers.

In giving daily instructions to his assistant buyers at Chicago the head buyer assigns to each man a certain section of the extensive cattle pens—for instance, four or five divisions. To each man he gives authority to buy a certain number within a certain price range, but each buyer may govern himself according to market developments, buying more than his orders if the price is low, or less if the price is high. Among all of them the day's aggregate will be made up according to what the requirements are as indicated by the dressed beef sales department and the class of stock he has to select from.

Most of the cattle coming to Chicago arrive at the Union Stock Yards between the hours of 5 and 9 A.M., although shipments frequently appear at later hours in the day. Those arriving after 3 P.M., however, are counted in the following day's receipts. Upon their arrival employees of the Union Stock Yards and Transit Company, the independent corporation which owns and operates the yards, take charge and "yard" them. They are then turned over to the employees of the particular commission house to which they have been consigned, who feed and water them and endeavor to put them at their ease before offering for sale.

In all the big markets, cattle buyers are mounted. A corps of men, including the buyers of several packers, speculators, order buyers for eastern houses, and feeder-buyers, who sometimes pay higher prices than the packers, ride through one section of the pens after another until they see an opportunity of making a trade with some commission man who has a string of cattle which they like.

Each lot of cattle is stirred up in its turn and examined, and bids are made. For instance, a commission man shows a string of cattle of 10 or 20 carloads and sometimes lots as large as 50 to 100 carloads at seasons when cattle are plentiful. If the demand is keen the market will open high, and it is often wise for the buyer to "go slow" early in the day, depending upon the prospect of getting his requirements at a less cost than what was asked early in the morning.

5. METHODS OF BUYING BUTTER FAT¹

The butter fat manufactured in the centralizing creameries is purchased and collected in four different ways; i.e., through local "stations," "independent buyers," "direct shippers," and "concentration points."

One of the largest creameries in the country bought all of its raw material on the "direct-shipper" plan; another obtained 80 per cent through its concentrating points. Some small creameries buy their butter fat principally from independent buyers. The creamery that reported the largest production in 1918 received in 1919 2.5 per cent from independent buyers, 8.2 per cent from direct shippers, 23.37 per cent from concentrating points, and 66 per cent from regular stations. In general the "station plan" is the favored method of buying cream.

LOCAL STATIONS

The "station" of a large creamery is usually run as a side line to some other business (except in areas of heavy production). The station agent is employed to buy cream, test it, and pay for it, using the money and equipment of the creamery and receiving in return a commission ranging from 1½ to 6 cents per pound of butter fat. Apparatus for testing is installed in his building; cream cans are sent him; and he is kept regularly informed of the price to be offered for cream.

The farmer delivers his cream to the station in any sort of container from a teakettle to a regulation milk can. It is stirred and a sample taken. The sample is then tested and the cream weighed. The testing shows what percentage of butter fat is contained in the cream, and on that basis the producer is paid. The container is cleaned (by steam in the larger stations) and returned to the producer.

After the day's purchases of cream are made the station operator ships his receipts in the company's cans to the creamery, where the

¹ Adapted from Federal Trade Commission, *Report on Milk and Milk Products, 1914-1918* (1921), pp. 96-104.

cream is retested and manufactured. Testing at the creamery station is seldom accurate, but for large shipments errors tend to equalize each other.

The prices paid at stations are supposed to be the same throughout any district (although in practice they are anything but that). The regular station price for cream is generally 4 or 5 cents below the delivered price. This margin represents the average transportation charges, with average station expense and agent's commission added. There were some stations, however, which the investigation showed paid more than this "regular station price" and a few which paid less. The reasons for these price variations were largely competitive.¹ The actual variations were from 1 to 5 cents, and they existed in almost every dairy section of the country.

The station plan of collecting and buying cream presents several difficult problems to its users. In the first place a cream station is a very insecure link in the creamery organization. The agent may resign or be lured away by a competing concern and the business built up through him be lost to the original employer. It is often necessary to pay a minimum salary to an agent when his station is new, but when it is developed he sometimes threatens to stop buying or to change creameries, and thus forces an unjustifiable commission from his employer. The agent may demand the payment of rent, light, or fuel bills without regard to the quantity of butter fat purchased, making this cost to the creamery per unit of purchase an uncertain item. The most pressing problem, however, is to keep tests and prices within reasonable limits. The agent knows his customers personally and has no interest in keeping their cream checks down. On any pretext whatever he may raise prices; to "overtest" a friend is frequently considered a favor. Sometimes he informs his principal that "because of competition" he is forced to raise prices, when in fact he originated the movement, or had agreed with his rival down the street to raise prices and bring the farmers to his town instead of another near by. The creameries, however, keep a check to some extent upon their local agents by means of traveling agents who visit the stations periodically and report on the accuracy of testing apparatus, the nature of competition, the justice of a demand for rent payment, and similar matters. Then, too, when the local agent of one creamery reports that he has been forced to increase prices by the local agent of another company, it is customary for the creamery to call the competitor over the

¹ These are considered under "discriminatory prices," Federal Trade Commission, *op. cit.*, pp. 102-4.

telephone immediately. As a general rule prices raised by one agent prove very short-lived.

In addition to the foregoing, there are other objections to the station plan. It requires a considerable investment in cans and other equipment, which carry heavy depreciation charges. There is a great deal of legitimate competition to be met and the making of prices in such cases is a real problem. Traveling agents made necessary by the stations are a heavy burden on the industry. All of these disadvantages are charged up against the station method of buying cream.

On the other hand, the station constitutes a personal link between the manufacturer and the producer. It is a sort of branch house, and is tangible enough to give the producer a sense of security in dealing there. Uncertain as it is, it is more permanent and dependable than a mailing list of direct shippers. To a centralizer a dependable supply of butter fat is everything. Despite all the disadvantages to which it is subject, the station plan provides that supply. With one or two exceptions the large creameries depend principally upon stations for their supply of butter fat.

INDEPENDENT BUYERS

An independent cream buyer is one who is in business for himself, using his own money and equipment, and is under no binding agreement as to where he will ship his cream purchases. From the point of view of the producer there is no difference between such a buyer and an ordinary station agent. From the manufacturer's point of view, on the other hand, he is an undesirable kind of direct shipper.

Cream bought by an independent buyer goes through much the same channel as that marketed through contracted station agents. It is tested and paid for upon delivery to the buyer and again tested and paid for by the creamery when received. The independent buyer pays all transportation charges and all costs incident to the carrying on of his business. The rule to which creameries try to adhere is that they shall pay only for butter fat received.

There is usually greater delay in the handling of butter fat by independent buyers than by stations. The absence of a definite contract by which the independent buyer can be controlled makes for looseness in all details of the business. In the matter of tests and weights it is sometimes possible for an independent buyer to force an acceptance of his own measurements. Cleanliness, too, may be more or less sacrificed by the independent buyer. If one creamery which received cream protests against his lax methods, the

independent buyer ships to another. Competition for butter fat is so strenuous that most creameries are fearful of offending any independent buyers shipping to them.

The prices paid independent buyers are not standardized. Each receives his own price, dependent upon competition and his own bargaining power.

A tendency on the part of independent buyers to speculate arises as a consequence of their position as merchants. On a rising market, e.g., in late September, an independent buyer may hold his cream purchases as long as possible in order to take advantage of general price increases. Or, in order to bargain more effectively, the buyer may wait until he has three or four days' accumulation to sell. The creamery will usually bid higher to obtain 300 pounds of butter fat than it will for 50 or 60 pounds.

There are three main classes of independent buyers—unions of producers, individual or associated merchants not seeking a profit on cream purchases, and regular commercial dealers in butter fat and general produce.

The Farmers' Union

The farmers' union is very well organized in some states. In addition to owning several creameries, the locals of the union in many cases become the marketers of cream to privately owned centralizers. The union distributes among the producers the profits on cream handled. In many communities they have virtually the entire production at their disposal. Such control of a regular supply of butter fat produces both high prices and high commissions from the centralizers.

The Merchants' Association

The merchant, or merchants' association, buying cream as a side line carries on the business only as a "drawing card." The farmer will go to the merchant or town where he can best sell his produce. It is to the interest of a merchant, or a commercial club, to provide a better market than competing buyers. The regular agent cannot as a rule pay a higher price than competition warrants.

Regular Dealers

In connection with the normal "independent buyer" there are certain factors that should be pointed out. The station agent receives a normal commission of 2 or 3 cents per pound. A competing

independent buyer may decide to buy cream on a 1-cent margin, and if he does he can increase prices to the producer without increasing cost to the manufacturer. Or, by auctioning his cream shrewdly, the independent buyer can obtain more from the manufacturer, and thus raise prices to producers without cutting below a normal commission. This type of buyer can do both of these things for a time or as a permanent policy. Such advantage and the general freedom of independent buyers are responsible for their handling of a considerable share of the butter fat that goes to centralizers in the Missouri Valley.

The small creamery usually suffers more from the exactions of independent buyers than the larger concern. Independent buyers are located in areas of keen competition, which are also the areas of heavy production and small creameries. The regular stations are at a disadvantage in such areas unless under contract to a creamery large enough to carry on a price war. The tendency has been for the agents of small creameries to go over to the larger companies or to become independent buyers. In either case the small creamery suffers in having to pay an independent buyer's price or lose its supply of cream.

DIRECT SHIPPERS

Cream purchased on the direct-shipper plan is transported to the churning point in the producer's cream can and tested and paid for at the factory. The cost of transportation is paid by the producer.

The factory advantages of the direct-shipper plan are the higher quality of cream, the elimination of an unnecessary step in handling, and the greater stability of prices. It is much more satisfactory to perform all of the services involved in buying at the factory point, where expert supervisors and a minimum of overhead can be secured. Cream shipped direct to the factory comes usually from large producers. The small producer with a half can of cream cannot afford to pay the minimum transportation rate on butter fat, which is based on a 5-, 8-, or 10-gallon can. Large producers, in general, employ more scientific methods in dairying and ship a high quality of butter fat. There is a minimum of time lost in the marketing of butter fat by the direct-shipper method and less deterioration on the way to the factory. The testing of cream at the churning point can be done much more accurately than at cream-buying stations. Greater skill of the tester and better apparatus for use in testing are available at the factory; losses incident to incorrect butter fat measurement

can be practically eliminated. Solicitation for direct shippers requires only a mailing list and stenographers. The buying costs are at the lowest level, increasing either profits to the manufacturer or prices for butter fat to the producer.

This plan also has disadvantages which operate to decrease the volume of shipments made thereby. A direct shipper is obliged to own his cream cans, and the more distant he is from a churning point the greater the number of cans he must own to permit additional shipments of cream while cans are being returned. As already indicated, unless he has at least a full can of cream he can not economically ship to the factory on account of transportation cost. Then he has to accept the test of a company which he knows only through circulars, and wait two or three days or longer for payment.

From the manufacturer's point of view the irregularity of direct shipments and the lack of contact with the producer are the principal objections to the direct-shipper plan. A list of shippers that yielded 75,000 pounds of butter fat in June, 1919, might have yielded only 25,000 pounds of butter fat in June, 1920. Any one of a hundred causes may operate to cut into the volume of shipments, and it is difficult for the manufacturer to determine the reason. Competition is hard to meet where direct shippers are concerned.

CONCENTRATION POINTS

A concentration station is a point for accumulating cream delivered both by rail and wagon. Relative to the local station the quantities received are large owing to rail receipts which do not figure in local station buying. The concentration point may or may not pay different prices for cream received in these different ways.

Butter fat purchased at a concentrating point is paid for at that point and cans are returned immediately to the producers. Shipment is then made to the churning point, the creamery paying all costs of transportation to that point. The concentrating point is operated by salaried employees of the creamery, its equipment is owned by the creamery, and the station is in every way a permanent branch of the creamery. It performs for the territory tributary to it all of the services performed at churning points, except that no butter is manufactured.

There are serious objections to the concentrating point as a method of buying butter fat. Cream received at a concentrating point is often in transit to that point as long as other cream to its churning point. It also has to stand an additional shipment which may occupy

as much time as the first, and transportation charges on the cream are thus increased, as well as handling costs.

One or two advantages should be noted, however. Testing at concentration points is much more accurate than at ordinary stations. The large volume makes it economical to secure better equipment and more highly skilled labor, and practically no losses are incurred through inaccurate testing. There is apparently some "side line" business developing at certain concentrating points. Thus the largest "concentrator" creamery sells through its concentrating points a line of goods running from pork and beans to cleaning compounds.

COMPETITION FOR RAW MATERIAL AMONG CREAMERIES

All indications point to intense competition in the creamery industry to secure a supply of raw material, especially in the Missouri Valley. Unlike most manufacturing lines, the creamery cannot contract in advance for its raw material. Fluctuations in the supply are very wide, and no creamery knows positively that next week will not see a disastrous cut in its butter fat receipts. Added to this is the fact that through eight or nine months of the year most creameries are running at well below a "capacity" output and could use a much greater supply.

PRICE INFLUENCES

A supply of butter fat can be secured in one of two ways: First, by obtaining the services of cream buyers with an already developed business; second, by offering to producers inducements sufficient to divert their cream from other manufacturers. Questionable practices develop under each of these methods of "getting the business."

Station prices are subject to a wide variety of competitive influences. Ideally, they are at a point far enough below "factory delivered" prices to pay the costs of station operation. Actually, they represent the price necessary to "get the business." Independent buyers' prices must be met at the same or near-by towns, as well as "on-track" quotations. The prices of any near-by creameries have to be met, and, finally, the competition of concentration points in the same territory. In addition, some competition may be encountered from buyers in other milk-product industries, pasteurized cream dealers, ice-cream manufacturers, and the like. The general practice of meeting the price of a neighboring town, on the basis of the competition for cream from intervening territory, tends to magnify any local price disturbances.

6. COTTON MILL PURCHASES¹

Two classes of supplies are purchased for a cotton mill. The first includes machinery, repair goods, and other materials bought in small quantities. The second is the raw cotton, by far the more important of the two.

The purchases of repair goods and incidentals, such as sizing materials, oil, and ring travelers, are usually made by the agent or superintendent. When a large order for new machinery is given, the treasurer transacts the business but such purchases are made only at infrequent intervals. For receiving and disposing of the current supplies of this sort a separate supply department has been established in the larger and more progressive mills. In it is kept a record of all supplies received and given out, thereby ascertaining the requisitions from the separate departments so as to prevent continued abnormal use of materials in any one department. The management may limit the amount of supplies to be issued to one overseer within a certain time. If no such limit is set, an excessive demand on the supply department is investigated. Economy is thus fostered among the overseers and the determination of the distribution of the expense burden facilitated.

The purchase of the raw cotton constitutes one of the most important duties of the treasurer.

With the machinery and methods in vogue a century ago "cotton was cotton," but, as a result of refinements in technique and diversification of product, nowadays the spinner must give careful attention to the exact quality of the cotton which he purchases.

NORTHERN MILLS

The northern mills, to discuss the manufacturing regions separately, buy their cotton through cotton merchants. These merchants have offices in the large northern cities and agents in the important mill centers. A few of them also have branches in Europe. They obtain the cotton through buyers located in the cotton-growing section and at the shipping points in the South. The sale to the mill treasurer is consummated on the basis of samples made up by taking several handfuls of cotton from each bale, the samples being submitted for inspection. If the cotton on delivery proves to be of a lower grade than the sample, the merchant makes restitution to the purchaser.

¹Adapted from Melvin Thomas Copeland, *The Cotton Manufacturing Industry of the United States* (1912), pp. 178-84. (Published by Harvard University Press, copyright by Harvard University.)

The spinner, to safeguard his interests, generally employs an expert to test all cotton received at the mill, since the protection against the loss that would result from the substitution of an inferior grade offsets the extra expense. A contract, calling for delivery either of the total quantity at one specified date or by monthly installments, may be entered into at any time during the year, but the greatest activity in the purchasing of raw cotton is in the months from October to January. At that period the New England mills provide for future needs, purchasing supplementary supplies in steadily diminishing amounts during the ensuing months. The new crop begins to come upon the market in September, and the bulk of it is picked during the next four months, thus becoming available for delivery to the mills. The manufacturers of the highest grades ordinarily buy at an early date a larger proportion of their total supply than those using ordinary staple. The former wish to exercise a wider choice in their selection and also to make sure of an adequate quantity. The demand for long-staple cotton is frequently so great that the manufacturer who delays is unable to obtain the quality which he desires, or can secure it only at a very high price.

The cotton is shipped as soon as purchased and warehoused at the mills, which are provided with commodious storage rooms. The merchant does not have a warehouse of his own, and public warehouses in the northern cities are seldom utilized for storing cotton. Payment for the cotton is made ordinarily within three days after its receipt at the mill. Thus the northern manufacturers bear the burden of carrying a large quantity of raw cotton from the time that it is harvested till it is manufactured.

The mills found it advantageous in the first half of the nineteenth century to buy their cotton early in order to make sure of their supply and also to have a basis for price quotations. With the cotton in their own warehouse they could quote prices for cloth with less risk of loss. The development of organized speculation, with its steadying effect on prices and opportunity for hedging, has made this factor less potent at the present time. Another reason was that the credit conditions encouraged the mills to carry the cotton. During the period of the cultivation by slaves the southern planters had to realize upon the cotton as soon as it was marketable. Capital was relatively more available in the North, and interest rates lower; hence the manufacturers could better afford to bear the burden directly. There is not the same difference now, yet the financial strength of the mills is of sufficient superiority to induce a continuation of the former practice.

However, prosperity is rendering the southern planters more and more independent, and the erection of warehouses in the South is a step toward enabling the farmers to hold their cotton and obtain higher prices later in the year.

SOUTHERN MILLS

In the South there is wider variation in the practice of the manufacturers in buying their cotton. The few mills in that section which use long-staple cotton purchase their supply early for reasons the same as those which influence the fine goods manufacturers in the North. But with the great majority of the southern mills, which manufacture coarse cloth, the practice depends upon the location, size, and financial strength of the individual mills. In North Carolina, around Charlotte, about fifty per cent of the year's supply of cotton is bought during the picking season.

While it is common for the southern mills to carry cotton for which they have not immediate requirements, the proportion bought during the season is probably less than in New England. The southern manufacturers do not obtain the cotton entirely from merchants, but frequently deal directly with the farmers, in a few instances sending out their own buyers through the district in which cotton suited to their needs is grown.

The manufacturers, especially those in the North, are giving more and more attention to the selection of their raw cotton. During the last twenty years the spinners have become more insistent on the terms of the agreement, and on the actual fulfillment of these terms by the merchant. The grade of the cotton and the length of staple are more carefully selected. For example the merchant is asked to specify the grade and staple which he will deliver, and such fine distinctions are made as those between "average middling" and "middling;" between "middling to good middling" and "middling and good middling." To take the second of these examples, where the distinction is between "to" and "and," if the agreement was "middling to good middling" the merchant might deliver ninety per cent middling and ten per cent good middling; but if it was for "middling and good middling" he would have to deliver approximately half of each. The manufacturer wishes to know which proportion he is to receive. The same attention is given to length of staple.

This more careful selection of the raw material shows that more attention is being given to the demands of customers, and especially that the machinery is more nicely adjusted. It is significant of more

careful management and greater specialization. With the increase in the spinning of fine counts and in the manufacture of fine goods, it has become necessary for the manufacturer to discriminate in the quality of cotton which he buys, and in the manufacture of coarser yarn and cloth the machinery adjusted for a certain grade of cotton cannot be operated advantageously on a lower grade, while a higher grade adds a needless expense. The spinner must also be careful in his selection of the raw cotton because of the preference of the operatives to work continuously upon the same grade. If an attempt is made repeatedly to substitute an inferior grade, it is difficult to retain the better class of operatives.

7. THE EFFECTS OF DEMAND CONDITIONS ON THE SUPPLY OF RAW WOOL¹

Early in this investigation it was observed that the characteristics of the woolen and worsted industries are determined, not so much by problems of raw material supply, or of cloth-production, as by the problems involved in marketing the finished fabrics. It became evident, for example, that the present relative importance of the output of worsteds, as compared with woolens, is not due to the greater number of sheep being grown which produce wool suitable for such fabrics. On the contrary, it appeared that whatever connection exists between these phenomena, the change in the character of the demand for fabrics is the cause, and the change in the character of wool-growing the effect, rather than vice versa. Again, the large scale of the worsted mills and their marked geographic concentration seem to be largely due to the conditions under which staple worsteds are sold. In other words, it became plain that in both industries, the causal forces in the development of the production activities are the wants and habits of the buying public. Therefore, the course of this development can only be satisfactorily explained as primarily a result of efforts to adjust these industries to developments and changes in the problems of textile-selling.

Each of the principal types of raw material has its own separately organized trade. The yarn trade, for example, is highly specialized, and even the trade in recovered wools, shoddy, mungo, extract, flocks, etc., is in a large measure handled by concerns doing this business exclusively.

¹Adapted from Paul T. Cherington, *The Wool Industry* (1916), pp. viii-ix, 18. (A. W. Shaw Company.)

8. THE PURCHASE AND SALE OF RAW WOOL: THE WOOL MERCHANT¹

The quantity of wool consumed in the United States is now over five times as great as it was in 1860. Since that year American wool growing has been radically changed in methods, location, and in character of output, and the wool-manufacturing industries have been completely reorganized. But the commercial link between these two—wool dealing—has remained practically unchanged. The dealers are of the same type, and the buying and selling methods remain very much as they were a half century ago. This lack of change has been advanced repeatedly by some as an evidence of the inherent efficiency of the system. Nevertheless, it is declared by others that the wool-marketing methods in this country are cumbersome, unscientific, and needlessly circuitous and expensive. Unquestionably there are defects, but the system is, in the main, an effective intermediary between the grower and the manufacturer. Any attempt to overturn the existing methods of the trade must at least offer some other method equally well adapted to American conditions. Relief from such ills as may exist is not to be looked for by modeling our system precisely on that employed elsewhere.

Although the United States is the third largest wool-producing country in the world, its trade in domestic wools is almost entirely intramural. No appreciable quantity of our domestic wools is exported. The fact that the price of wool as a rule is higher in the United States than elsewhere, apparently would be enough to account for this. This eliminates from our wool-handling system a form of buying [for export] prominent in the colonial wool markets, and very important even in the British. British exports of wool in normal years amount to about one-third of the importations, for England assembles to distribute as well as to manufacture. Buying for reexport to dealers is clearly a much simpler commercial operation than buying for separation into closely graded lots to be sold to mills for specialized manufacture.

Furthermore, our American-grown supply is very promiscuous and uneven in its character, calling for much greater risk and demanding much more detailed knowledge in handling profitably; and this variety is increased by the fact that the domestic supply is inadequate in quantity for our own consumption and is supplemented each year by large quantities of imported wools.

¹Adapted from Paul T. Cherington, *op. cit.*, pp. 58-65.

THE WOOL MERCHANT

The buying side of the American wool merchant's business has been built up to take care of these complicated conditions. Wool-buyers form the conspicuous part of the working force of the American wool-marketing system, and it is their work which constitutes the chief draft on the wool merchant's expense account.

The selling side of the business, on the other hand, has been influenced largely by the high degree of geographic concentration of the wool-manufacturing industries in New England and the Philadelphia section. Massachusetts, Rhode Island, and Pennsylvania produced over 60 per cent of the United States output of the manufactures of wool in 1910. This, more than any other one factor, seems to explain the present localization of wool-dealing in Boston and Philadelphia. In selling, the organization of the business is simple as compared with that in buying. Although the sale of wool determines the dealer's ability to make his business profitable, it involves no problems or methods analogous to those in its purchase. Most of the dealers are constantly in touch with the wants of their own clients or of other large manufacturers, and wool-selling is largely a matter of promptness to take advantage of indicated conditions, personal touch with buyers, and a normal amount of luck. Such, in brief, are the buying and selling sides of the wool merchant's equipment.

CHANNELS OF DISTRIBUTION

As a result of the conditions under which it is grown, the greater part of the "fleece" wool supply is first assembled in ungraded lots by local merchants. These middlemen may be either local wool merchants, who usually buy outright the small lots brought in by farmers, or they may be local general merchants, who handle wool in connection with a general merchandise business, either on a factorage, or on a regular purchase basis. It is nearly always from these, rather than from the wool-growers, that the Boston or Philadelphia merchant draws his eastern supply, and during normal years most of the business is done on a merchant, rather than a commission basis. In sluggish seasons the commission method is employed more freely by those small initial collectors of wool, but in years of wide fluctuations in price, all risks are shifted to the coast merchant as soon as he can be induced to take them. In a few cases eastern mills buy, in the "fleece" wool sections, direct from representatives who collect small lots for them. Occasionally, an eastern merchant may attempt to secure his

supply direct from the farmers, but this method is expensive, slow, and pays only under exceptional circumstances. Most of the purchases in the East are of "bunched" lots bought by the representatives of eastern dealers who make regular circuits among the "country" merchants.

Throughout the western wool-growing states the typical flock is very large (often five thousand sheep, and sometimes eight or even ten thousand), and consequently the wool comes into the market in big lots. The accompanying large capital and the characteristic business sagacity of the western flock-master almost entirely eliminates any middleman like the country merchant of the East, except in the Pacific Coast states. Throughout the West the characteristic form of sale is direct to the "buyer" sent out by the wool merchants, or even by the mills of the Atlantic Coast.

The work of the "buyer" sent out by the eastern wool merchant houses is the most important, most complex, and most uncertain feature of wool-marketing as it is practiced in this country. The wool buyer is required to be a clever judge of the profit-yielding powers of each lot of wool bought, but the price he offers cannot be based on that judgment alone. There are crop data for the wool clip of the various wool-growing countries, but in the United States these find no centralized mechanism for their interpretation, such as is offered by the London wool auctions, or as may be found in the cotton and wheat exchanges which do so much to stabilize prices in those commodities. The individual interpretation of these data lies at the bottom of the whole wool price-making system in this country. It is responsible for such sudden outbursts of speculation as occurred in the "sheep's back" buying craze in 1909, and it makes the buyer's position often very precarious. Collusion on the part of the buyers, or pooling by the flock-masters may be resorted to, but under ordinary conditions uncertainty and instability characterize this branch of the business.

FUNCTIONS OF THE WOOL MERCHANT

The functions of the eastern wool merchant, so far as the domestic wools are concerned, resolve themselves into two main tasks. The first is the purchase of large blocks of high-grade "territory" wools, and the purchase or marketing on commission of numerous small lots of medium- or low-grade "fleece" wools. The second task is the assembling of these wools, grading them, and storing them in lofts at the chief buying centers for eastern mills, ready for purchase in graded

lots for delivery in quantities and at prices to suit their manufacturing customers. Many of these merchants also assume functions of a financial nature. It is not an uncommon practice for them to advance to the growers of the West, or to the small merchants of the East, substantial sums of money on consigned wool, or even on prospective clips, and it is sometimes necessary for the merchant to carry his manufacturer-customer for months or even, in some cases, until he can realize on his manufactured product.

The marketing of imported wools, while sometimes conducted as a special business, is more often combined with trade in domestic wools. As a rule it involves outright purchase, either direct through buyers sent out from here to cover the London, Liverpool, or Australian auctions, or to buy in the Argentine or Cape markets, or else through brokers or agents permanently located abroad.

9. AN EXAMPLE OF INTEGRATION

SUBSIDIARY COMPANIES SUPPLY IMPORTANT RAW MATERIALS TO THE INTERNATIONAL HARVESTER Co.¹

In the manufacture of farm implements use is made of a number of raw materials and of other materials wholly or partially manufactured. In general, these materials are principally iron, steel, and wood. But there are numerous other materials which either go into the finished product, or, like coal and fuel oil, are of use in the manufacturing operations. The following list gives the principal materials used by a large company manufacturing practically a full line:

Steel bars	Coal	Sheet steel
Pig iron	Fuel oil	Fiber, sisal and manila
Iron castings	Paints	Wire
Cotton duck	Varnishes	Wire springs
Lumber	Iron pipe	Leather belting

Metal castings are an important part of the manufacturing process and many of the large companies have their own foundries to do this work. The castings are principally of gray iron or malleable iron. Companies which have no foundries purchase their castings according to specifications from independent foundry shops. With the exception of the International Harvester Co., none of the implement companies manufactures or controls the manufacture of its raw materials to any extent. These materials are purchased from other companies

¹ Adapted from Federal Trade Commission, *The Causes of High Prices of Farm Implements* (1920), pp. 48-49.

under contracts which sometimes cover only one delivery, or, again, cover deliveries extending over a contract period of from four months to a year or more. These contracts may work out to considerable advantage for manufacturers in periods of rising prices where the market price goes greatly above the contract price.

The International Harvester Co., either directly or through subsidiary companies, manufactures or controls the manufacture of practically all the raw materials it uses with the exception of paints. It owns iron ore and coal properties and operates iron, steel, and coke plants. One of its subsidiaries, the Wisconsin Lumber Co., owns extensive timber property and produces pole stock and other materials. The Harvester Co. has also special facilities for obtaining from the Philippine Islands and Yucatan manila and sisal fiber used in the manufacture of binder twine. In addition, the company owns and operates several small industrial railroads. Through the foregoing and other auxiliary operations the International Harvester Co. is able to obtain most of its raw materials at production costs. This gives the company a large advantage, as few of the other companies control their raw materials.

10. MARKETING COUNTRY HIDES AND SKINS¹

Hides and skins, the most important raw material of the tanning industry, are products of the farm and range, whether they are sold directly as such or are disposed of in the sale of the animals.

PACKER AND COUNTRY HIDES

Packer hides and skins are taken off in establishments where the slaughtering is of a wholesale character, and where men usually are employed exclusively for the purpose of removing hides. In the plants of the large packers the labor is so divided that each worker has a particular task to perform, in which he becomes very proficient. Since they are taken off in large numbers, the hides are uniformly selected and cured, and generally are free from salt stains and excess salt or pickle. The result is a product of uniform selection, of good pattern and trim, and with few imperfections, making possible a maximum yield of leather of the best quality.

Country hides and skins are taken off by farmers, ranchmen, and local butchers, or by their helpers, who generally are inexperienced in

¹Adapted from R. W. Frey, F. P. Veitch, R. W. Hickman, C. V. Whalen, *Country Hides and Skins, Skinning, Curing and Marketing* (1923), pp. 3-4, 46-49. (U. S. Department of Agriculture, Farmers' Bulletin No. 1055.)

skinning. This classification includes "fallen" hides, or those from animals that have died from disease, accident, or natural causes, as well as those from animals that have been slaughtered for food. Country hides originate in small numbers, in scattered and remote sections of the country, and seldom are treated in a careful and efficient manner with respect to skinning, curing, and marketing. The result frequently is a poor product of irregular pattern and trim, with many imperfections; such hides and skins are usually handled several times before being available in uniform selection. Not only is the yield of leather from such hides and skins comparatively low and uncertain, but the leather is capable of only limited use.

Many of the hides and skins used in this country, including practically all the goat and kid skins, are imported.

Problems Concerning Quality, Grade, and Volume

While improvement of country hides and skins and consequent increase in returns for them are possible, yet even with hides and skins similar in quality to those produced by the packers it is not possible for the individual producer, who must operate on a small scale and market more or less indirectly, to receive the top prices paid to the packers, who generally sell directly to the tanners.

Each tannery, as a rule, specializes in certain kinds of leather, and consequently must have uniformity in its supply of hides and skins. Since the tanner is not in position to handle all kinds and classes of these materials, some central collecting and classifying agency is necessary.

It is here that the packers have an incalculable marketing advantage over the country-hide producers. The packers deal in large numbers of hides and skins, and as a result can assort and classify them in marketable lots and sell them directly to the tanner or with the occasional intervention of only one agency, namely, the hide broker or tanner's buyer. The extremely scattered sources and the comparatively small individual production of country hides and skins make it impossible for the country-hide producers to obtain this advantage. These widely scattered materials first must be collected and classified in large lots. Consequently, before reaching the consumer or tanner they pass through many hands, each one of which exacts its toll.

CHANNELS OF DISTRIBUTION

The relative efficiency of the three prevailing methods of marketing domestic hides and skins is illustrated by Diagrams 3, 4, and 5. The movement to market is shown by lines, the heavier ones of which

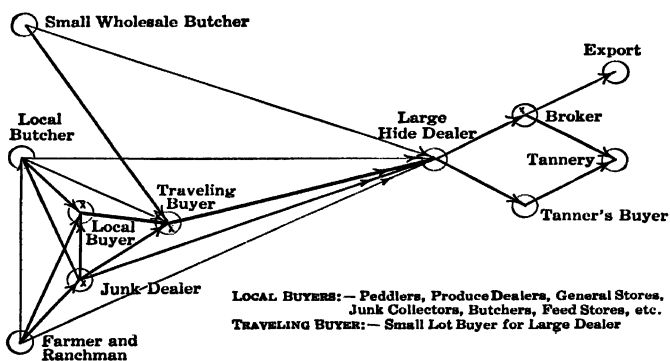


Diagram 3
Steps and Agencies Employed in Marketing Country Hides

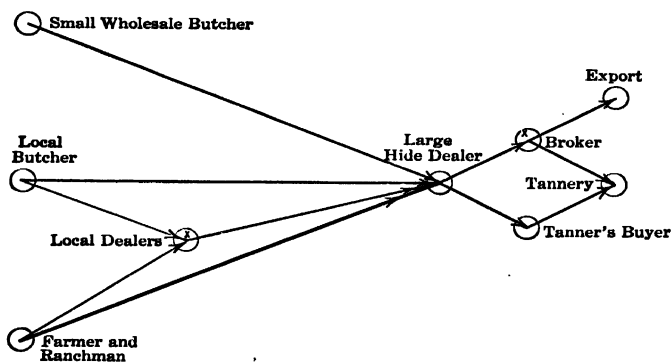


Diagram 4
Steps and Agencies Employed in Direct or Consignment Marketing

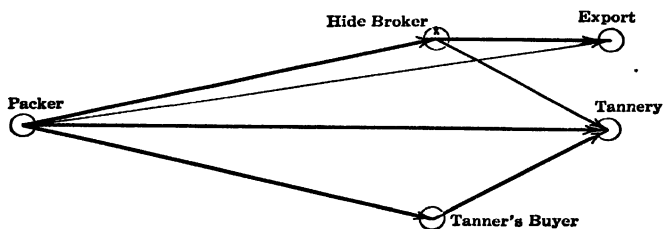


Diagram 5
Methods of Marketing Packer Hides

show the course taken by the greatest number of hides. The circles with X inscribed represent agencies whose services are considered by many producers, dealers, and tanners as not essential to economic hide marketing. The operations between hide dealers of equal importance, which often reach considerable proportions and are considered by many as uneconomic, and those between tanners, which are negligible, are not shown in the diagrams.

The extravagant system generally followed in marketing country hides is illustrated by Diagram 3.

Diagram 5 shows the agencies and channels used by the large packers in marketing their hides and skins. The superiority and advantages of this system are apparent at a glance. There is no lost motion, and small opportunity for speculation at the expense of the producer. The only intermediary is the broker or the tanner's buyer, and even his services often are dispensed with. By this method the cost of marketing is negligible as compared with the other two methods. In it the producer—that is, the packer—participates much more fully in the market prices of his products.

The direct or consignment method, illustrated by Diagram 4, eliminates much lost motion, much of the speculation, and many of the abuses which are now practiced in marketing country hides. It approaches more nearly the packer's method, and provides a means whereby the small producer may participate more fully in the prices that his hides and skins bring on the market. Consignment marketing presupposes mutual confidence and fair dealing by both producer and dealer; otherwise it can not succeed. The principal obstacles in the way of this method are the producer's preference for ready cash, his distrust of the distant dealers, and the elimination of local competitive buying. Unfortunately many producers prefer to accept any price obtainable from local buyers, such as general stores, produce dealers, junk collectors, peddlers, and traveling hide buyers, rather than to consign their hides to unknown car-lot dealers in central markets.

11. THE PURCHASE AND SALE OF LEATHER— A HIGHLY SPECULATIVE BUSINESS¹

Tanners, as a rule, buy hides through brokers, ordering several carloads at a time, often as many as ten or twenty. Owing to the length of time consumed in process from the rawhide to the finished

¹ Adapted from Federal Trade Commission, *Report on Shoe and Leather Costs and Prices* (1921), pp. 133-34.

leather, tanners generally sell leather on a basis of replacement cost for the hide content. Some leather is sold "spot" and other leather is manufactured and delivered on orders taken in advance. Selling practices vary widely; in some cases tanners maintain their own warehouses in the principal leather districts although their plants may be located some distance away; the leather is shipped to the warehouse and sold therefrom; other tanners sell entirely on a commission basis; while still others sell on consignment, through agencies, etc.

Schedules were sent to 1,085 shoe manufacturers, but the returns were not in all cases properly made, and, therefore, the total number of replies varied with each question. Shoe manufacturers were asked to state whether the price of leather when bought for future delivery was agreed upon at the time of placing the order. Of 611 replies, 601 stated that the price was agreed upon at the time of placing the order. With only a single exception, all the manufacturers making replies stated that they preferred to have the price agreed upon at the time of placing the order. While a great deal of leather is bought for future delivery a larger proportion is bought "spot," i.e., for immediate delivery. That more than 50 per cent of their leather purchases were "spot" was reported by 354 out of 486 manufacturers replying to a question on this subject. A total of 351 manufacturers out of 531 stated that they would prefer to buy all "spot" leather. In reply to a question as to whether their plan of purchasing had changed since 1917, 100 manufacturers replied that it had changed and 494 replied that it had not changed.

While the practice of buying leather at "spot" seems to be the most prevalent one and the one preferred by shoe manufacturers, it is one which permits of and even necessitates a certain amount of speculation in hides and leather by the tanner. Selling as he does on a replacement basis he must guess at the future trend of raw stock prices in determining the time and amount of his purchases. In periods of rising prices there is a tendency to accumulate more and more hides to be made into leather and sold at replacement cost. This aggravates the demand for hides and the increase in hide prices. At the same time leather may be withheld from the market in anticipation of better and better prices. In periods of declining prices there is a corresponding reluctance to purchase stocks of hides since the leather made therefrom, if sold on a replacement basis, may bring less than cost. This may aggravate the slump in hide prices. At the same time there is a tendency to throw leather stocks on the market at sacrifice prices and still further to demoralize the industry.

The leather industry is perhaps more subject to extreme fluctuations than other industries because of the fact that hides, the raw material of the industry, are the by-product of another industry and the supply is not responsive to the demand for hides but to the demand for meat. Consequently an increase or decline in the demand for hides brings about increases or declines in prices which are not checked (as in most other industries) by a resultant adjustment of production.

12. THE BUYING AND SELLING OF ORES AND METALLURGICAL PRODUCTS¹

INTEGRATION

The types of companies that handle ores and metallurgical products may be classified as follows:

1. Mining and smelting companies or mining and milling companies, which control all the operations from the mining of the ore to the production and selling of the finished metal.

2. Mining companies, which mine and sell ore on certain schedules to smelting or milling companies.

3. Custom smelters or mills which purchase ores and also (a) operate refineries and produce refined metals or (b) sell intermediate metallurgical products to refineries.

Concerns of type 3 may control mines that furnish a part of their ore supply.

4. Refining companies, which purchase metallurgical products, such as matte, and crude metals, and some ores, and produce refined metals.

5. Selling agencies, which place the refined metals on the market.

It is apparent that an ore or the products derived from it may go through many hands before the finished metal reaches the market, and that metallurgical business may be complex.

COMPOSITION OF ORES

It is most important to know the contents of an ore in gold, silver, copper, lead, and zinc, if any or all of these metals be present. In smelting work such other constituents are determined as may be necessary to make proper smelting mixtures. Analyses of ores are made to determine silica, iron, alumina, lime, and, less often, mag-

¹ Adapted from Charles H. Fulton, *The Buying and Selling of Ores and Metallurgical Products* (1915), pp. 5-10, 13, 28-31. (U. S. Department of the Interior, Bureau of Mines, Technical Paper 83.)

nesia, barium, sulphur, and arsenic. Many other substances may be determined as occasion demands.

In gold and silver milling work it is usually unnecessary to make analyses of the ores, except to determine gold and silver, although sometimes it is desirable to know the other constituents of the ores, particularly as regards the presence of elements or compounds such as copper, lead, zinc, tellurium, selenium, sulphur, arsenic, and antimony, that interfere with the extraction of the precious metals. In lead and copper smelting, however, it is essential, in order to control smelting operations, to know within narrow limits the proportions in the ores and flux of silica, lime, magnesia, alumina, sulphur, and iron, aside from the metallic contents for which the operations are conducted. These facts make a chemical or assay laboratory an essential part of a smelter or mill. This laboratory must furnish the requisite data promptly on short notice in order that the technical operations of the plant may be properly guided. Such laboratories daily turn out a great many routine analyses with accuracy and dispatch.

SAMPLING, BUYING, AND SELLING

In order that assays and analyses may be of value, the samples assayed must truly represent the lots of ore, the value and composition of which it is desired to know. For this reason it is necessary to sample given lots of ore as they come to the mill or smelter. If ores or metallurgical products, such as matte, pig or blister copper, or lead bullion are sold by one company and purchased by another, accurate sampling is essential. Consequently reliable methods of sampling such products have been devised. If a company both mines and treats its ores, careful sampling may not be necessary, but in most instances will be desirable, in order to verify the technical work and aid in the accounting. In order to facilitate the selling and buying of ore, public sampling and ore-purchasing companies have been established. Such a company acts as a disinterested party between buyer and seller, sampling the ore for a fixed charge per ton.

As an example of how transactions in ore are conducted, the practice at Cripple Creek, Colorado, may be cited. The shipper who sends his ore under contract to a milling company has the right to sample his ore in any of the public sampling works at his own expense. He may then either sell the ore to the sampler, who buys it under the milling company's contract rates, or he may reconsign it to the milling company direct, where it is again sampled, the results of this sampling becoming the basis of settlement for the ore. In any event all ore

passing through the sampling works on contract must go to the mill holding the contract. Ore that is reconsigned and not purchased by the sampling company is sampled for 60 cents a ton, but if it be purchased by the sampling company the charge is \$1 a ton. As to ore not under contract, the owner has the choice of either selling it to the public sampling works or shipping it directly to the mills or smelter.

The deductions for treatment made by a sampling company are governed in every instance by those quoted by mills and smelters, as the sampling company has no other outlet for the purchased ore. Public sampling companies give the ore shipper the advantage of having his ore sampled in the camps and purchased by the sampler under mill or smelter contract and of receiving his money several days earlier than if he ships directly to the mill or smelter.

By reason of the fact that the public sampling companies have no other outlet for ores purchased than the mills or smelters, it is obvious that such companies are more or less governed by the methods employed by the smelters and mills. This statement applies generally throughout the West to the sampling of gold, silver, lead, and copper ores. The real function of the public sampling works is to aid the miner and the smelting and milling companies.

All well-regulated custom milling and smelting companies maintain their own sampling departments. The ore received is sampled and the results obtained form the basis on which the ore is purchased. This procedure is strictly followed whether the ore has been sampled once or a number of times before being shipped to them.

At present the general attitude of the ore seller, in regard to sampling, appears to be one of satisfaction. Occasionally, of course, some individual shipper complains, but in general complaints are not common.

The facilities afforded by the public sampling companies and the mills and smelters for the sampling of all classes of ore have been developed to a high degree of efficiency.

No mill or smelter can treat each lot of ore separately. Such a procedure would be impossible because of cost and of technical difficulties. If separate treatment were possible, sampling might be unnecessary, for then the product of the operation on a given parcel of ore, or the value of the ore, could be turned over to the seller. But as this procedure is impossible the only method of determining the amount of valuable metals in the parcel of ore is by sampling, as above outlined.

Sampling

Sampling formerly done by hand labor and by crude methods, often inaccurate, is now largely done by automatic machinery.

The final sample is a small part of the original lot of ore; perhaps 1 part in 60,000 to 30,000. The final sample is usually divided into 4 equal parts, which are placed in paper sacks and distributed to the interested parties, one being retained for reference. Glass bottles, instead of paper sacks, are used for sample containers by some companies.

The practice followed in settling for ores after the metallic content has been ascertained is to split the results of the assays of the shipper and purchaser according to a previously arranged plan. On a gold ore, for example, assaying between 1 and 2 ounces, the practice is, if there be a difference of two to five points (0.02 to 0.05 ounce), to take the average, or "split the difference," of the two assays. If the ore contains 2 ounces or over, the allowance is 4 points (0.04 ounce), the purchaser and seller splitting this difference. If the purchaser's and seller's assays do not agree close enough to permit splitting the difference, a sample is submitted to some reliable independent assayer for an "umpire" determination. Should the result of the umpire fall between that of the two disagreeing assays, his assay is taken as the basis of settlement, the interested parties sharing in the cost of the umpire's services. On the other hand, should the umpire assay be lower or higher the assay result nearest the one obtained by the umpire is then taken as the basis of settlement, and the cost of the umpire is paid by the one whose assay results were rejected.

The umpire assayer is usually chosen by agreement between the ore buyer and the ore seller. In drawing ore contracts specifying the terms under which ore is bought it is customary to name three reliable assayers of reputation, satisfactory to both parties of the contract, from which the umpire assayer for any particular lot of ore may be selected. Frequently the ore purchaser, either a smelting or a milling company, pays the umpire, irrespective of whether the cost be assessed against the buyer or the seller of the ore. If the seller is liable for the cost, this is deducted on his "settlement sheet," which gives the net return on his lot of ore. Umpire assayers are sometimes criticized by the sellers of ore on the basis that no umpire assayer could exist in business if he incurred the displeasure of smelting and milling companies, as such companies receive so many parcels of ore and thus control so much umpire work that their displeasure would mean a large

loss of business to the umpire. The suggestion has been made that some central authoritative board of umpires be created to finally adjudicate disputed cases.

FREIGHT RATES

The freight rates on an ore from mine to smelter or mill necessarily differ greatly in different districts. They are usually based on distance and on ore value; that is, a base rate is made on a certain grade of ore, and an additional charge is made for a certain increment in value, so that the highest grade ore pays the highest rate for freight. This system of rates is based on the assumption that, as the railroad company is responsible for loss in transit, risk on high-grade ore is greater than on low-grade ore, and also that the more valuable ore can bear a comparatively higher freight rate, an increase in rate that is in part remitted by the lower rates on less valuable ore. The general effect is to stimulate the mining of low-grade material that might otherwise be wasted. The following table shows the relation of freight rates in Colorado to the value of the ore:

Freight rates on ore from Cripple Creek, Colorado, to Colorado City, Colorado, and vicinity.

VALUE OF ORE	RATE PER TON
\$20 and less	\$1.00
\$20 to \$25	1.25
\$25 to \$30	1.50
\$30 to \$40	2.00
\$40 and more	2.50

MARGINS

It is apparent from the foregoing discussion [omitted here] that the deductions made for the smelter from the gross value of the ore is much more than the smelting charge alone, for it consists of that charge, plus the deductions resulting from the lesser price paid for the metals, the lesser amount of metal paid for, and the charge for penalties.¹ The smelter also deducts the freight charge on the ore and makes settlement for this with the railroad company.

In discussions of the smelter business, the term margin is often used; it may be briefly defined as the difference between the actual

¹Penalties are extra charges added to the smelting charge on account of the presence in the ore of certain undesirable substances. The matter of penalty for excess silica is discussed rather fully in this report, as well as the reason for the payment of a bonus for iron. Substances, the presence of which is commonly penalized, are zinc, sulphur (in lead smelting), arsenic (sometimes loosely called speiss), and antimony.—EDITOR.

value of the ore to the smelter and the amount paid the shipper of the ore. What is paid the shipper of the ore is the difference between certain credits and debits, the credits consisting of the sum due on metals at the agreed amounts and prices as per the contract, and the bonus allowance on iron or lime; the debits consist of the freight and treatment charges and the penalties imposed. The difference is the net amount paid the shipper.

The gross value of the ore to the smelting plant, of the ordinary type, not refining its own product, is the total metal content (100 per cent) at a certain price per metal which is arrived at by taking the market quotation for the metal and subtracting from this a sum to cover the refining charge and the freight of the metal to the market.¹ For example, if copper is quoted at 16.3 cents per pound at New York, a western smelting plant will figure copper to be worth 14.7 cents per pound at the plant, the difference, 1.6 cents, being allowed to cover refining and freight to market. In the same way, with lead quoted at 4.35 cents per pound at New York, a certain smelting plant will figure lead to be worth 3.34 cents to itself at the plant, the difference of 1.01 cents covering refining and freight. Similar allowance is made for the cost of recovering and refining silver and gold.

The gross value of the ore to the smelting plant, determined as outlined above, less the net amount paid the shipper, is the margin on the ore to the smelting plant. This margin is the amount that the smelter has to cover his cost and profit and loss. As he has charged himself with 100 per cent recovery of the metals, the loss of metal in smelting will appear as a charge against the margin. In calculating the final outcome to the smelting plant it is again desirable to consider debits and credits, the margin plus the value of the iron and lime contents being the credit, whereas the metal loss placed at the smelter's value for the metals, the charges for the silica and sulphur contents of the ore, the base cost of smelting, the cost of converting copper, and the interest charge for holding the metal stock, are the

¹In estimating the value of an ore or an intermediate metallurgical product (other than a refined metal) the basis used is the price of the refined metal at some principal market center, such as New York, at the time the valuation is made.

If the metal contents, in pounds for the base metals and in troy ounces for the precious metals, per avoirdupois ton be multiplied by the prevailing price of the refined metals, the sum of the products will be the gross value of the ore.

There is, however, a wide difference between the gross and the net value of a ton of ore. From the gross value must be deducted, first, the total cost of mining the ore, and then the total cost or charge for treatment, which includes some or all of the following items: Freight to treatment plant, milling or smelting charge, charge to compensate for losses of metal in treatment, charge for penalties imposed on undesirable constituents in the ore, charge for freight to refining center, charge for refining the metal, charge to cover the selling costs of the refined metal. Which of these charges are imposed and what the amount of each charge is depend on the ore, the method of treatment, and the number of firms that handle the ore and metals in the process from ore to refined metal.

debits. The difference between debits and credits is the profit or loss. The refining company will conduct its accounts in a similar manner.

RÉSUMÉ

It is evident from the foregoing that smelting rates and schedules are of a complex nature, although the principles on which they are based are reasonably simple. It is frequently stated that these rates and charges are made willfully complex by the buyer, in order to obscure the amount of the deductions made. This view may perhaps have been correct in some instances, but the main reason for the complexity of present rates and schedules is to be found in the fact that the details have been increased from time to time as the smelting industry grew, new processes were invented, and new types of ores were found. It certainly seems desirable that the rates and schedules should be simplified in order that they may be more comprehensible to shippers of ores, particularly the small shipper who often is not familiar with the intricacies of the business and hence is not in a position to know whether justice is done him.

There is little question but that the principles upon which the rates and schedules are founded are just enough. However, individual deductions and charges for smelting might not be so reasonable. At first sight it would seem that when lead is worth 4.7 cents per pound, a deduction of over 60 per cent of this value to cover smelting, refining, and freight is too much. Determination cannot be made superficially, but there is no question but that, per ton of metal recovered, the smelting of low-grade lead or copper ore is much more costly than that of high-grade.

13. COPPER: A MARKET IN WHICH A FEW LARGE BUYERS AND SELLERS PREDOMINATE¹

HOW COPPER IS SOLD

The selling agencies are reservoirs which receive for distribution four streams of primary copper:

(1) Copper from their own mines;²

(2) Copper in ores, mattes, or other forms which refiners have bought outright, at prices based generally on current prices as published in the *Engineering and Mining Journal-Press*;

¹Adapted from F. Ernest Richter, "The Organization of the Copper Market," in *Harvard Business Review*, Vol. 1 (January, 1923), pp. 203-7.

²The term "own mines" includes the mines of parent companies (Anaconda's copper sold by United Metals Selling Co.) or those of totally owned subsidiaries (Copper Queen's copper sold by the Phelps, Dodge Corporation).

(3) Copper sold for producers, on commission, on exclusive long-term contracts;

(4) Copper sold for producers, on commission, on orders covering specific quantities of the metal.

The chief causes determining the choice by producers of a selling agent would seem to have been and to be the following:

(1) Identical or allied control;

(2) The fact that the selling agent has previously smelted and refined the copper or is identified or affiliated with the refiner of the copper;

(3) The fact that the seller has financed or otherwise aided the producer;

(4) Friendly relationships, without actual financial alliance;

(5) Sundry business reasons, such as particular satisfaction with selling policies and results.

In 1916, the first cause apparently accounted for the placement of sales of fully three-fourths of the total American production; probably the proportion is not greatly different today, in spite of such changes in alignment as have taken place. The principal sellers of copper at the present time are Guggenheim Brothers, United Metals Selling Co., American Metal Co. (Ltd.), Phelps, Dodge Corporation, Nichols Copper Co., Calumet & Hecla Mining Co., American Smelting & Refining Co., A. Lewisohn & Sons, and the United States Smelting, Refining & Mining Co. The great bulk of the copper sold by these agencies for others than themselves is sold under terms of long-time contracts with mining companies; much of the rest represents copper purchased in one stage or another of reduction. Characteristic of these contracts between selling agencies and producers of copper are certain features which were called to the attention of the stockholders of the American Smelting & Refining Co. in the annual report of that company for the year 1920. In this report the stockholders were advised of reasons for the termination of the copper sales agency by the company, and the provisions referred to appear in a statement by the Chairman of the Finance Committee of the company. Stockholders were told that the contracts provide:

"(1) That the Smelting Company must sell its copper at the same price as the copper of other companies;

"(2) That it can not sell more nor less than its pro-rata of the total amount;

"(3) That it must endeavor to get the best going market price for all."

Occasionally sales contracts giving the producer control over the time and prices at which his copper may be sold are made, but these generally cover specific transactions and are not long-term agreements.

THE PURCHASE OF COPPER

So much for the selling of copper. Who buys the copper and how is it bought?

Prior to the inauguration of the electrical age, the main uses for copper—especially after the passing of copper-bottomed wooden ships—were military, ornamental (generally as brass) and in coinage. The electrical industry in its various phases, including power and light, telephones and telegraphs, and other uses, more than any one influence or factor has made possible, and been made possible by, the sustained and increasing large production of copper by the mines of the United States and the mines elsewhere under control of American copper interests.

No data that are both adequate and reliable, especially for long series of years, are available showing the consumption of copper by industries. The following table, compiled from figures of the United States Geological Survey, shows the proportions of the forms in which copper was cast in American refineries for either domestic or foreign consumption in the years 1919, 1920, and 1921, according to the records of the Survey.

	Percentage		
	1921	1920	1919
Wire bars.....	61	53	55
Ingots.....	20	27	25
Cakes.....	12	13	8
Cathodes.....	2	2	7
Other forms.....	5	5	5
	100	100	100

Wire bars are bought principally by drawers and manufacturers of wire; ingots are used primarily in brass making. These two forms in each of the years accounted for about 80 per cent of the copper cast. Mr. Joseph Clendenin, of Guggenheim Brothers, is authority for the statement that "in pre-war years about 54 per cent of our domestic shipments of refined copper was in the form of wire bars, which affords a rough index of the electrical consumption."

About one-quarter of the total domestic consumption is assigned to the four industries of automobiles, shipbuilding, railways, and building.

In what has been said about the selling of copper, emphasis has been laid on the concentration of the sales in a few hands. Buying of raw refined copper is also, to a very considerable extent, closely concentrated, though manufacturing consumers of copper are numbered by the scores. This situation has resulted not merely from the large size of some of the principal consumers, but also from an evolution in buying methods. The five or six principal buyers of copper doubtless together account for half or more than half of the annual domestic consumption of the metal, and probably a list of the twelve leading buyers would represent 75 or 80 per cent of domestic consumption. In so far as any of these leading buyers does not fabricate products which it sells, it could, of course, leave to the fabricators the purchase of the raw material as well as the working-up of it into the finished product. The custom has evolved more and more, and naturally enough, for the large companies to buy the copper required for their needs, either spot or for future delivery, and have the metal shipped to the fabricators and pay them simply the working-up charges. The extreme homogeneity of refined copper has made this possible. A company with large financial and other resources should naturally have a greater advantage in trading with the large selling agencies (or, as occasionally, with small dealers) than would a large number of smaller fabricators, each perhaps entering the market whenever it received an order covering only a few hundred thousand pounds of copper. A consumer with a capacity of 50,000,000 or 100,000,000 pounds a year not only has a better trading position both because of its size and because it is more likely to be able to estimate fairly closely its requirements for the next six or twelve months than a smaller company manufacturing on order; it also has the resources that enable it to buy ahead whenever copper looks cheap and probably, often, has enough elasticity in its functioning to permit it to stay out of the market temporarily if copper looks dear.

The domestic market-place for copper may be said to be the telephone, except to the extent that personal conferences in the offices of the principal producers or consumers, in lower Manhattan Island, may take the place of telephone conversations. With conditions of both sales and consumption what they are, the producers and their sales agents have in general eschewed dealers or "second hands" and dealt directly with primary consumers. This is not to say that dealers do not exist or that they must rely solely on secondary or scrap copper for the means of trading. From time to time, producing interests have been known to get rid of some of their copper to dealers,

and at times, of course, overbought consumers find it convenient to unload a surplus on dealers. Dealers' copper is frequently a real menace in a sensitive, thin market, and may at times for brief periods be price-determining, with the keen "shopping" that goes on. As for exchange dealings, while copper is among the commodities on the list of the New York Metal Exchange, the Exchange is but a nominal market for the red metal, lacking completely as it does the support of producers and sellers of copper.

THE INTERNATIONAL COPPER MARKET

The international aspect of the market for American copper is similar to the domestic aspect, in so far as direct selling by the great American selling agents is the rule. Before the war, at least a half-dozen principal agencies had affiliations or agents abroad through whom they placed export sales. Of course, the control of the market in European countries was and is shared with production of non-American copper, and the proportion of direct sales to consumers was and is probably much less than in this country. In London, the Metal Exchange, while stripped of much of its importance of former years as a regulator of world copper prices, still functions, and copper is dealt in there both for cash and for future delivery. The Exchange is by far the most important European speculative market for copper. In spite of the fact that before the war Germany was the largest consumer of copper outside of the United States, all efforts to establish dealings on an important scale in copper on exchanges in Berlin and Hamburg proved rather futile; and in Germany, as elsewhere, the product of American copper refineries, probably shipped largely on order, has been the principal source of supply of the red metal.

Since the formation of the Copper Export Association, that body has, of course, been the principal exporter of copper from this country. Some of the important producers are not members of the Association, but the membership does include the very great bulk of American copper refinery production; and since its members agree to sell no copper abroad except through the Association, and since, apart from any other copper the Association has had, the 400,000,000 pounds which it specifically pledged in 1921 was to be devoted solely to export purposes, the overshadowing importance of this Association in the export field is clear. The Association, like the individual selling firms before the war, has maintained agencies and affiliations abroad and has shipped moderate amounts of copper abroad on consignment in order that it might be able to fill orders promptly.

14. THE IRON AND STEEL INDUSTRY¹

The mining of iron ore, from which iron and steel products are made, is confined largely to two regions, namely the Lake Superior district and the Birmingham region in the state of Alabama. Approximately 90 per cent of the ore mined comes from these two regions. During the last ten years iron ore production of the United States has varied from forty million to seventy-five million long tons a year.

It cannot be said that this country is at all dependent on foreign sources for its supply of iron ore, for not more than 2 per cent has been imported and in most instances where importation has taken place it has been less than 1 per cent of the total used.

The Lake district, including the states of Michigan, Minnesota, and Wisconsin, mines fully 75 per cent of the country's output of iron ore. This large traffic of forty to fifty million tons a year is handled mainly by a combination rail and water haul. The ore is shipped by rail from the mine to the shipping docks at the port of shipment on the Great Lakes. The more important upper lake ports of shipment are Duluth, Two Harbors, Superior, Ashland, Marquette and Escanaba. Here the ore is transferred to barges and carried to the lower lake ports, such as Buffalo and Cleveland and then by rail to the furnaces in Pennsylvania and Ohio.

OWNERSHIP AND LEASE OF ORE LANDS

The tendency is for the mines to be owned or leased by the iron and steel companies. This is so generally true that there is practically no system of selling ore, for the companies that own or lease the ore fields often operate the mines. Where ownership exists the getting of the ore involves the cost of mining and shipping; while in case of a lease it involves the payment, in addition, of an agreed price per ton of ore mined. Most lease rates were from 25 to 28 cents per ton, and, as many leases were signed before the war, this is still true. Often the royalty increases when the grade of ore is high and decreases when a low grade is mined.

The most important states that are users of iron ore and therefore large producers of pig iron are Pennsylvania, Ohio, Indiana, Illinois, Alabama, and New York. These same states are likewise the most important in the manufacture of steel.

¹ Adapted from R. H. Kinney, *Lefax*, Feb., 1923, pp. 25-28.

PIG IRON

The greatest producer of pig iron in the United States is the United States Steel Corporation. This concern, however, produces only for its own needs. The pig iron usually passes directly from the furnace to the rolling mill in the molten form where it is made into finished iron and steel products.

There are other great steel concerns who likewise are heavy producers of pig iron for their own use, but there are many companies who run blast furnaces solely for the purpose of selling the product. Others produce more than they can use and of necessity must sell the balance.

The great buyers of pig iron are the United States Steel Corporation and the other large steel works and rolling mills, but there are of course hundreds of iron-working concerns who are also purchasers. In this connection it is to be noted that the United States Steel Corporation attempts to stabilize prices in the industry by being a heavy purchaser of pig iron during dull times and refrains from purchasing pig iron during boom periods. In Germany the method of stabilizing prices is to restrict production. This is possible because of the syndicate plan in use in that country.

This plan is to have producers form a pool among themselves and pool their product. Each company under this plan is given a certain production allotment, from time to time. In order to make the system enforceable members are required to have deposits with the Syndicate Bank which would be forfeited if they violated the pooling agreement.

The pig iron is sold through the syndicate and not directly by the producers. It is also the function of the syndicate to buy the necessary supplies and to fix prices. This method has reduced costs of selling to a minimum and has eliminated competition. It is, however, artificial, for the prices are not natural as in England. The plan does not result in accumulations of pig iron as in England, but merely acts as a restriction on production.

In the pig iron industry in the United States, involving, as it does, so many concerns, it would be difficult to form a syndicate pool here. Also the fact that it would be contrary to the Sherman Anti-Trust Act would in itself be enough to prevent its adoption.

THE WARRANT SYSTEM IN ENGLAND

The warrant system is the predominating method of sale of pig iron in England. There the method has become an exact science. The pig iron, after being weighed, inspected and classified, is stored

in the yards of independent firms. A warrant is then issued on it. The warrant may be sold. The yards are near the furnaces, but the warrants are dealt in on the larger exchanges.

This method has several distinct advantages. (1) It permits hedging, thus making long-time contracts possible. (2) Consumers can arrange to buy in large quantities at the then quoted market price, but have deliveries made from time to time as the contract falls due. (3) It serves as a basis for borrowing money. The furnace man, if in need of money, may sell his warrants and later, as he desires, buy them back again. (4) It results in large accumulations of pig iron and makes for a relatively steady price. In dull times speculators will accumulate iron warrants. This tends to hold the price up even though actual consumers do not buy. As a result, there are no great depressions in the price of pig iron in England as in the United States.

THE SALE OF PIG IRON

In the United States pig iron was first sold by the producer direct to the consumer. Later, middlemen, known as wholesalers, were introduced because the producer found that during hard times he was not financially able to carry his customers. The wholesalers bought from the producers and stored the product in their yards. This method, necessitating, as it did, double handling, gradually gave way to commission men or agents; the pig iron being shipped direct to the consumer but sold through the commission men or agents. Some very powerful agencies were developed resulting in intense competition. So severe was the competition that another method came into use which largely supplanted the commission agencies. The dealer then became of major importance. Sales are either handled through the yards of the dealer or by direct shipment from the producer to the consumer. The special advantage which the dealer has over the agency lies in the fact that he sells for himself and need not consult a principal.

The present methods used in the sale of pig iron in the order of their importance are, to pig iron dealers, through commission agents and by direct sale.

THE SALE OF STEEL PRODUCTS

The products of rolling mills and steel works are not raw products, but manufactured goods which are sold by the manufacturing concerns to a large variety of buyers. The work is done mainly on orders, for it is largely a matter of direct sales, handled through the sales department of the manufacturer. The prices quoted by the

steel companies, particularly those having plants in the Pittsburgh district and elsewhere, come under what is commonly known as the "Pittsburgh Base Price System." Prices are quoted "f.o.b. Pittsburgh" whether the steel has been manufactured there or in Gary, Duluth or other districts.

Fabricators located near or in Gary and Duluth must pay prices which are made up of the price at Pittsburgh plus the freight charges from Pittsburgh to the fabricator's mill. Stated in other words, it is the fixing, by the United States Steel Corporation, of a price for the product of all of its mills, however widely scattered they may be, upon a common basis, using Pittsburgh as the base. Instead of collecting all the products of its mills at Pittsburgh, and fixing a price there, plus freight to destination, the United States Steel Corporation maintains that price and ships from the nearest mill.

The Pittsburgh section is now the point of the heaviest surplus production of steel in the United States. In the steel industry the point of heaviest production, under the operation of the law of supply and demand, must necessarily strongly influence the price in other markets with excess demands. While the United States Steel Corporation does not possess a monopolistic position in the iron and steel industry, the independents follow the policy adopted by the Steel Corporation. The independent steel manufacturers have accordingly adopted the same policy of quoting prices that the United States Steel Corporation has.

The plan has its justification in that it allows new plants to be built in various parts of the country, for they are able, under the plan, to compete with the mills in the Pittsburgh District.¹

15. ADVICE TO PURCHASING AGENTS ON THE PURCHASE OF COAL²

The sole object of the coal buyer is to secure the greatest number of heat units, at the lowest total cost, in the form best adapted to a certain power plant. The first step is, therefore, to determine which coal contains the greatest number of heat units per ton or per pound. By referring to Bulletin No. 123 of the Bureau of Mines, pages 17 to 131, or better yet to the "Coal Catalog," you will find a statement of the number of heat units in coal from every district. For your preliminary investigation, all other factors may be disregarded.

¹ See *infra*, pp. 590-91, where "Pittsburgh-Plus" prices are discussed.—EDDOR.

² Adapted from John C. Dinsmore, *Purchasing Principles and Practices* (1922), pp. 183-86. (Pren-tice-Hall Inc.) These pages were written with the cooperation of Charles A. Lind.

After you have selected those with the greatest heat value and set them down with their laboratory numbers, location, and B.T.U.¹ in parallel columns, the delivered price per ton should be added to the next column, and the delivered price per thousand B.T.U. set down in the next column. Any reliable dealer can quote the approximate delivered cost, and the cost per thousand B.T.U., can easily be figured. The next step is to eliminate the least desirable coals.

As you eliminate each sample from your calculations, the reason for this elimination may be set down in the last column to the right. This will afford a permanent record of the reasons for each elimination.

As the freight charges are a very large element in the total cost of coal, many of the most distant coals must first be eliminated. You can hardly afford to use either Pennsylvania or West Virginia coals for making steam in Illinois.

If ashes must all be moved by hand and hauled away by truck, you will next eliminate those samples which are unduly high in ash. If, on the other hand, the ashes are all handled automatically, and disposed of without cost, you may better afford to buy coal containing 20 per cent ash and 10,000 B.T.U. costing \$3 per ton delivered, than coal containing 10 per cent ash and 10,000 B.T.U. at \$3.50, because the B.T.U. is the number of B.T.U. in a pound of coal, and not the number of B.T.U. in a cubic foot or a cubic yard. If the heat units are in usable form, the extra volume of ash simply acts as a harmless filler.

If you are so situated that it is necessary to store coal for any length of time, you will next eliminate those samples which are high in moisture and high in sulphur. Coal containing a high percentage of moisture disintegrates rapidly and tends to spontaneous combustion, and a high sulphur coal also aids spontaneous combustion. If, however, you have a modern underwater storage system, this objection will not hold.

If your combustion chambers are constricted, or if you must avoid excessive smoke, it is well next to eliminate those coals which run high in volatile, because it is the volatile matter which is discharged from your stack in the form of smoke. If your plant is not equipped to burn all the volatile matter in the coal you select, all that is not burned is a loss. A smoking stack always means imperfect combustion, due to the wrong kind of fuel for that plant, or to wrong handling in the plant. The proper combustion of high volatile coals requires large combustion chambers and careful handling.

¹ British thermal unit.

The importance of adequate transportation facilities can hardly be overemphasized. If the mine upon which you depend is at one end of a short, direct route, and you are at the other end, you profit in many ways. The amount of coal in transit, and, therefore, the amount of money so tied up, is greatly lessened. Stop orders are effective more promptly and you begin to receive coal quicker after the resumption of shipments. This also greatly reduces the liability of accumulating demurrage charges.

You have now perhaps narrowed your choice of coal samples to three or four, and your final decision will depend very largely upon the net result of your test runs. Often coal from two mines in the same district will act differently under actual firing tests.

In many modern plants it is possible to determine with accuracy the total cost of producing one pound of steam with various kinds of coal, and under varying conditions. A careful test of a large number of samples, even then, is often unduly expensive. If you know that any particular coal contains more heat units than the one you have been using, and if your firing tests show that the furnaces will use this coal as efficiently as the other coal; if your ash handling cost is not increased, and if the delivered cost for 1,000 B.T.U. is less, you are usually safe in contracting for that particular kind of coal. Unfortunately, there are so many variables in the problem that it is extremely difficult to prove a saving of any certain number of dollars in the purchase of coal for most industrial power plants.

When coal is delivered to your plant from a distant team track, dishonest practices are apt to crop up. If the coal is handled through a coal yard, and all trucks are weighed at both ends of the route, about the only way the buyer can be defrauded is through collusion between truck driver and weighmaster. If there is collusion, only part of the load may be dumped, and the rest driven off and sold. This, however, would hardly pay for the trouble and the risk involved. But the weighmaster may sign for loads of coal which leave the coal yard, yet never reach your plant. An automatic timer and weight registering device on your scale will prevent this theft, and will also prevent the falsifications of the weight of each load.

When there is no such protecting device it is a fairly simple matter to "fudge" the weight of each load, and the weighmaster may sign for various loads which he does not receive. There is still the possibility that coal may be properly weighed, and then dumped in the next block, and the empty coal truck properly reweighed. The only safe check is occasionally to have the loads turned back for reweighing,

and to install an independent observer to make a check on the operation of your scales. In one case in Indiana this double check proved a shortage of more than one hundred tons of coal in three days.

In order to carry on thefts of this kind, the coöperation of at least one teamster is necessary, and the teamster soon becomes careless and the theft is detected. Where the power plant is located on a switch track the installation of a railroad scale makes it possible to check coal deliveries easily, and the total labor of weighing a given lot of coal is so much less that a higher type of employee may profitably be assigned to this duty.

16. THE DISTRIBUTION OF ANTHRACITE COAL¹

RAILROAD COAL COMPANIES

The production of the railroad coal companies is generally distributed by their own selling organizations. There is a notable absence of any large number of middlemen such as intervene between the producer and the consumer in many lines of trade. Under normal conditions the greater portion of coal produced by the railroad coal companies is sold to the retailers direct, a relatively small portion being marketed through jobbers.

The Philadelphia & Reading Coal & Iron Co., the Susquehanna Coal Co., the Lehigh Coal & Navigation Co., and the Lehigh & Wilkes-Barre Coal Co. maintain sales agencies of their own which sell principally to retailers direct. The Lehigh Valley Coal Co. and Coxe Bros. & Co. (Inc.) market their product through the affiliated Lehigh Valley Coal Sales Co., while the Delaware, Lackawanna & Western Railroad Co. sells its output to the Delaware, Lackawanna & Western Coal Co. These coal sales companies sell principally to retailers direct and are so closely identified, both in finance and management, with the producing companies that they may be regarded rather as selling departments of the latter than as separate wholesalers.

The Scranton Coal Co. markets its production through Dickson & Eddy, of New York, while the Pennsylvania Coal Co. and the Hill-side Coal & Iron Co. sell their output through Williams & Peters, also of New York. Dickson & Eddy and Williams & Peters maintain various branch offices and sell this coal on a commission basis, principally to retailers direct. The Hudson Coal Co., which purchases

¹ Adapted from Federal Trade Commission, *Report on Anthracite and Bituminous Coal* (1917), pp. 52-54.

and prepares at its breakers the mine production of the Delaware & Hudson Co., sells entirely at the mines. Its coal is bought principally by wholesalers located in different parts of the country, except for about 1,700,000 tons bought annually by certain other railroad coal-mining companies. A considerable quantity of the steam sizes is also sold direct to manufacturers and to other railroads.

The principal branch offices of the selling departments of the railroad coal companies are at New York, Boston, New Haven, Providence, Philadelphia, Baltimore, Albany, Utica, Syracuse, Rochester, Buffalo, Montreal, Cleveland, Detroit, Chicago, Milwaukee, and Minneapolis. From these points sales agents canvass their designated territories. The companies sell to the retailers direct through these agents, who generally are paid on a salary basis. Thus the retailers have the opportunity to purchase coal from the railroad coal companies at a price to which has been added the expense and profit of but one selling department.

WHOLESALE MIDDLEMEN

Several of the independent producing companies maintain sales agencies, which sell to the retailers direct and, at times when the market is dull, or in a feverish demand, to jobbers (because the jobber is in a position to obtain more for the coal than the independent producer). The greater number of independent producing companies, however, market their coal through jobbers on a commission basis. Generally the independent producing companies which contract with selling agencies and jobbers to market their entire production on a commission basis require that the coal be sold at the best market price while the selling agency or the jobber is to receive a stated sum per ton, usually 15 cents on prepared sizes and 10 cents on steam sizes. The independent producer is generally not concerned as to whether his sales agent sells to retailers direct or to jobbers. He asks that he receive a return commensurate with the best market prices.

A few independent producers do not contract with sales agencies or jobbers for the marketing of their coal, but sell outright to various jobbers and retailers. From week to week they sell to different firms, disposing of their product to the highest bidders. Generally these producers sell to jobbers for the reason that their own selling organizations are not extensive enough to reach the retailers.

Some of the independent producing companies sell their entire output to the railroad coal companies f.o.b. the mine. This coal is marketed by the latter in the same manner as the railroad coal.

The trade has applied the term "jobber" to any firm not a coal producer which sells coal by the carload or barge load. However, concerns such as Williams & Peters and Dickson & Eddy, which are sole selling agents of the railroad coal companies they represent, are not called jobbers. The selling agencies of the independent producers are commonly included in the term jobber. The jobber does not physically handle the coal he buys and sells. He simply finds a buyer and reconsigns to him the bill of lading for coal on the car or in the barge.

The sources of the jobber's supply of coal are (1) independent producing companies for which he is the sales agent; (2) railroad coal companies which have contracts with him for the sale of certain quantities, usually of broken or of the steam sizes, or which sell him other coal that he is supposed to resell to the retailers at not more than 10 cents above circular prices; (3) independent producing companies which have no selling agencies but sell him outright; and (4) other jobbers and sales agencies. There are a number of jobbers whose supply is drawn chiefly from other jobbers and sales agencies. A few principal jobbers maintain branch offices in different parts of the country. The greater number of jobbers, however, supply the local trade only.

The wholesale trestle and dock companies differ from the jobbers in that they physically receive, store, and reload the coal, selling it either in carload lots to outlying dealers or in wagon-load lots to local dealers. In Buffalo, Rochester, and Chicago, wholesale yards or docks are operated, at which the retail distributors purchase their coal, although there are some retailers in each of these cities who buy in carload lots shipped from the mines and maintain their own yards.

In Chicago many retailers with yards of their own purchase thus from local wholesale companies, while all the 4,000 to 5,000 "peddlers" or smaller dealers without yards, depend wholly upon the wholesale yards or docks for their supply. In each of these cities some of the storage trestles are operated by railroad coal companies themselves, while others are maintained by local companies. In several instances the wholesale concerns also operate retail distributing departments. This is the case in Minneapolis and St. Paul. The wholesale business of these two cities and of the large territory tributary to Duluth is in the hands of so-called dock companies, with docks at the head of the Lakes, which handle coal largely from railroad coal companies.

17. MARKETING CRUDE PETROLEUM¹

Part of the crude petroleum produced in California is sold for fuel-oil purposes without refining, while the remainder is consumed by petroleum refiners. The crude sold for fuel purposes is distributed throughout the same territory in which refined products are sold, while that used by refineries is refined within the state.

The crude petroleum, not produced by the large producers, viz., the Standard Oil Co. (California), the Union Oil Co. of California, the Associated Oil Co., the Shell Co. of California, and the General Petroleum Corporation, is largely purchased by them and is usually sold at the producers' tanks in the oil fields to the purchasing company.

When a producer first sells crude petroleum, or when new wells are brought in, the pipe-line company transporting the crude connects the producer's tanks with its gathering lines. In practice many small producers are limited to one purchaser because only one pipe-line system is available. When a producer has a tank full of crude petroleum ready to deliver to the pipe-line company he notifies the company's gauger, who, after gauging the contents of the tank, opens the valve that permits the crude to flow, or to be pumped, from the tank into the gathering line. Later, after the tank has been emptied down to a certain point, the valve is closed, thereby "cutting out" the tank from the gathering line; then the tank is gauged again and a ticket is issued showing the height of the crude in the tank at each of the gauges. This ticket serves also as a receipt for the producer. The quantity of crude petroleum taken is determined by reference to tank tables, carefully computed from actual measurements, which show the cubical contents of any tank for every difference in height in graduations of a quarter of an inch.

The crude run into gathering lines carries more or less sediment. Usually the purchasing company makes a deduction of 3 per cent from the total quantity to cover any water or sediment in the crude run from the producer's tanks. Particularly, for purchases of large quantities, and where the crude petroleum is known to contain a very large proportion of water and sediment, additional deductions are made based on centrifugal tests. As crude petroleum expands on being heated, adjustments are made to cover changes in quantity due to differences in temperature.

¹ Adapted from Federal Trade Commission, *Report on Pacific Coast Petroleum Industry*, Part II, *Prices and Competitive Conditions* (1921), pp. 19-21, 25-26.

Under the system of purchase and sale of crude petroleum in California, practically all crude is purchased on contract. The following stipulations, which are usually contained in a crude petroleum contract, deserve special mention: The life of the contract runs from one year and upward; the quantities to be delivered usually cover the total output produced in a specified area subject to a maximum limit; the deliveries are to be made from the tankage of the producer into the pipe line of the purchaser, which pipe line is connected with the producer's tanks. If no definite quantity of crude petroleum is stipulated for delivery, a special clause is usually inserted in the contract obligating the producer to operate his property in good faith and with reasonable diligence. The character of the crude is determined from samples which are taken from time to time. It is usually provided that the tests are to be made in the presence of the producer or his representative. As a rule, since 1914, the price has not been fixed in the contract, but is stipulated to be the market price which obtains at the time the crude petroleum is run into the pipe line. Very frequently it is specified that the price which the purchaser offers to other producers, that is, the market price, is to be applicable to the crude bought under the contract. This latter provision constitutes a regular feature of the crude petroleum purchase contracts that the Standard Oil Co. (California) enters into with the producers.

MARKETING ORGANIZATIONS

The bulk of the crude petroleum sold by producers to marketing companies during the period 1914-June 30, 1919, was purchased by the Associated Oil Co., the General Petroleum Corporation, the Shell Co. of California, the Standard Oil Co. (California), and the Union Oil Co. of California. In the case of the Associated Oil Co., the Shell Co., and the Union Oil Co., the purchase of crude petroleum is under jurisdiction of the executive departments; the producing department makes such purchases for the General Petroleum Corporation, while the pipe-line department of the Standard Oil Co. handles crude purchases. These five companies produced almost 53 per cent of the total production of the state in 1919, and when their purchases are taken into consideration they handled most of the crude petroleum produced in California.

The combined production and purchases of the five large companies increased from about 75 per cent of the state's total production in 1916 to 80 per cent in 1918. The Southern Pacific Co. and

Santa Fe Railway produced or purchased for their own consumption about 14 per cent of the total production in 1916 and 1917 and about 12 per cent in 1918. This left only a little more than 11 per cent for the small refiners and other purchasers in 1916 and about 8 per cent in 1918.

DISTRIBUTION OF FUEL OIL

Tank steamers, barges, tank cars, and tank trucks and wagons are used quite extensively in delivering fuel oil to the consumer. Fuel oil is shipped to consumers at interior points in tank cars, and to consumers on navigable waters in tank steamers or barges. Consumers at interior points in Oregon and Washington are served by shipment in tank steamers to Portland or Seattle, where the fuel oil is transferred into tank cars and forwarded to final destination. To consumers whose plants or storage tanks are not located near railroad tracks or wharves, deliveries are made by tank trucks or tank wagons.

PRINCIPAL USES

Fuel oil is used as fuel principally by railroads, steamships, public utilities, and industrial plants, such as manufacturing, mining and smelting, and for domestic heating purposes. Part of the fuel oil is supplied by heavy crude petroleum just as it comes from the well. The remainder, which at present probably amounts to about 60 per cent of the total, is supplied by the residuum from the refineries. Industrial plants were the largest consumers of fuel oil sold by the large marketing companies during the period 1914-June 30, 1919; they consumed about one-third of the total reported, and railroads were second with about one-fourth of the total.

TRANSPORTATION FACILITIES¹

The Standard Oil Co. (California) makes use of pipe lines, tank cars, and tank steamers to transport crude oil, while in the distribution of refined products, tank steamers, tank cars, and motor vehicles are employed. This company has very extensive investments in its transportation facilities and is the most important factor in this branch of the petroleum industry of California.

In addition to its large investment in pipe lines the Standard Oil Co. (California) used about 1,500 tank cars, with a capacity of from

¹ Adapted from Federal Trade Commission, *Report on Pacific Coast Petroleum Industry*, Part I (1921), pp. 90-91.

200 to 300 barrels per car. Tank steamers are also utilized for the transportation of both crude and refined products. Some of these steamers transport the crude in the coastwise trade, others are used for shipments to our insular possessions and to foreign countries. The company had 13 tank steamers with an aggregate capacity of 584,000 barrels. The investment in tank steamers, barges, launches, and other property used for transportation by water was \$7,077,940.83. December 31, 1919.

The marketing department of this company delivers a large part of its refined petroleum products directly to the consumer through service stations. During 1919, in the distribution of the refined products to the domestic trade, 2,091 motor and horse-drawn vehicles were used, while the producing, refining, and other departments required 293 motor vehicles.

18. THE RELATION OF CEMENT PRODUCTION TO MARKETS¹

There are 104 large cement plants in the United States and they produced in the calendar year 1921, 98,263,000 barrels of Portland cement. Probably no other one building material industry shows such tremendous growth as is here represented. Plants are usually located near the source of the raw material, and the production is so distributed that each section of the country is furnished with the product from large plants located near or adjacent to the demand. Cement producers are enabled to secure their raw material in nearly every state of the Union, and the distribution by rail and truck is constantly growing more localized, owing to the increase in building throughout every community and the continued substitution of cement for other building materials. There is probably no farm dwelling in this country constructed now which does not depend upon the use of cement to a greater or less degree. It can be justly called one of the country's "basic" commodities.

Although the greatest tonnage is produced in the area of greatest population directly east of the Mississippi and north of the Ohio rivers, every section of the country has plants usually capable of supplying the local demand. In 1900 the production of Portland cement amounted to 8,482,000 barrels. In 1921 it was 98,263,000, an increase of over eleven hundred per cent.

¹ Adapted from Joint Commission of Agricultural Inquiry, *Report, Part III, Transportation* (1921), pp. 200-201.

19. RAW MATERIAL PROBLEMS IN THE BEET SUGAR INDUSTRY¹

In some important aspects the beet sugar industry is peculiar. Its principal raw material (beets) must be produced mainly in the vicinity of the factory and in sufficient quantity to assure a reasonable period of annual operation. Beets deteriorate in quality if kept for any considerable length of time, and consequently the annual operating period² of a factory is at most short, rarely exceeding 100 days, and often considerably below this. Except in the case of some branches of the canning industry these peculiar circumstances place the beet sugar industry practically in a class by itself among industrial activities. A beet sugar factory and the farmers supplying it with beets depend on each other in an unusual degree. The factory cannot go to a remote district to secure its beets nor can the beet growers in one district find a profitable market for their product at any great distance from their farms. There are instances indeed where beets are shipped 100 to 200 miles, but such cases are rare and the quantity of beets shipped long distances forms an inconsiderable proportion of the total.

Sugar beets, as already stated, cannot be kept a very long time without deterioration. They will keep in a frozen state, but they must be worked before they thaw. The harvest begins in the late summer or early fall, and they must therefore be worked before the first warm days of spring. For this reason the operating period of a factory is comparatively short, and the plants usually lie idle for at least two-thirds of the year and often longer. During the idle period the investment in the plant is not earning anything. Probably few if any other industries with such a large investment in plant equipment have such a short period of operation. Furthermore, when the plant ceases to operate the organization of employees is broken up and most of the employees are discharged. As a consequence, a considerable proportion of the employees in most factories are new and sometimes wholly inexperienced at the commencement of each working season.

It is the experience of most factories that they cannot make sure of a supply of beets without considerable effort. Thus it is the custom

¹ Adapted from Federal Trade Commission, *Report on the Beet Sugar Industry in the United States* (1917), pp. 2-3, 6.

² The yearly transactions of a beet sugar factory are called a "campaign." It involves all matters in connection with the contracting for and manufacturing of a crop of beets. The campaign begins with the securing of contracts for a supply of beets and ends when the beets contracted in any one year have been converted into sugar.

for a representative of the factory to visit the farmers in the vicinity and induce them to enter into contracts to grow beets. These are formal written contracts stipulating the number of acres the farmer will plant and the prices the factory will pay. The factories usually agree to supply the seed at a fixed price. The contracts provide that the factory shall supervise the cultivation and the farmer agrees to cultivate in the manner prescribed by the factory. A condition that sometimes causes farmers to hesitate to enter into contracts is the difficulty encountered in securing labor. Since a very large proportion of the cost of growing beets is due to the expense of hand labor, farmers must have an assurance of such labor before they can safely plan for a crop. The factories, therefore, generally agree to supply this labor. When the factory engages to supply hand labor it is so stated in the contract and the price per acre is stipulated.

These efforts necessary to guarantee a supply of beets entail considerable expense. This expense varies from a cent or two per 100 pounds of sugar produced to sometimes more than 25 cents. A cost exceeding 5 cents per 100 pounds is quite common. These expenses per ton of beets vary from 5 cents or 6 cents to 50 cents or 60 cents. There are instances where the cost per ton of beets to the factory for these expenses has been as much as \$1, but this is not usual.

20. THE PURCHASE OF LUMBER: A PROBLEM THAT IS DIFFERENT¹

The purchasing agent who buys large quantities of lumber has a problem that is just a little different from that connected with the scientific purchase of any other commodity. Lumber is like coal in that it is not a manufactured article, and you never get two shipments exactly alike. The cheapest and best lumber for a given purpose in Chicago might not be at all economical for the same purpose in New York. Moreover, the factors which determine the right lumber to use for a given purpose change, not only with the locality, but change from season to season, and sometimes within the season.

There are so many different grades of lumber, the different grades shade off into one another so imperceptibly, and the grading rules vary so widely in different parts of the country, that the purchasing agent who is not a lumber expert has little chance to beat the game, if he goes it alone. The one and only way to be sure that you are

¹ Adapted from John C. Dinsmore, *Purchasing Principles and Practices* (1922), p. 111-12. (Prentice-Hall, Inc.)

getting the most value for the dollars you are spending, is to make the acquaintance of two or three old lumber salesmen, and rely upon their suggestions and advice. If you treat them fairly, they will treat you fairly, and by using the friendly services of several of them you can use the advice and information of one to check the advice and information of the other, and so you cannot go far wrong.

If you blindly follow the lumber specifications given you by your production department without giving the salesmen a chance to make suggestions, you will miss many opportunities for economies. For instance, it is a common practice among carpenter foremen to specify sixteen foot lengths. Many of these sixteen foot lengths are actually cut to eight foot and less when used. You can effect a considerable saving by ordering the same number of board feet in eight foot lengths. Many foremen specify lumber much wider than they really need. Often it is cheaper and better to buy lumber in shorter, narrower pieces than those originally specified.

It goes without saying that the inexperienced purchasing agent should be very sure that he knows what he is doing when he changes specifications. He should be very sure that the lumber he is specifying, and the lumber he receives is identical; and very sure that the men who have to use the lumber, and the men who are responsible for the quality of the finished product are in sympathy with the changes he makes.

The United States produces lumber from more than 500 varieties of trees. Moreover, the value of the lumber from a tree of a given species depends not only upon the supply and demand for that particular kind of lumber, but also upon the region in which that particular tree was grown, and the direction and strength of the winds in that locality, the thickness of the forest, and the amount of moisture in the soil from which it sprang.

21. THE LUMBER MARKET¹

THE LUMBER SUPPLY

Characteristics of the Lumber Industry

One of the distinctive characteristics of lumber manufacture is the nature of its relation to the supply of raw material, i.e., logs. The amount of standing timber, unlike other "natural resources" (which are also capable of exhaustion), is definitely ascertainable. It is a

¹ Adapted from Wilson Compton, *The Organization of the Lumber Industry* (1916), pp. 4, 41-50. (American Lumberman).

known quantity incapable of increase except by a growth which is itself measurable. The bulk of it in the United States has become relatively inaccessible to the centers of population. This has been a result of the depletion of original forests in the older, more densely populated regions. The great size and weight of lumber in proportion to its value has, for economy in transportation, caused the concentration of lumber manufacture in the forests themselves.

Sawmills therefore use as raw material a natural product, the total supply of which is known, inconvenient of transportation and originating in sources near by. Mills have been located with reference to cheap log supply rather than to convenience in marketing their product. The steadily increasing relative exhaustion of the raw material of lumber manufacture is attested by the fact that one-half of the original stand of merchantable virgin timber in continental United States has been consumed (1909), and that the present rate of total annual growth is about one-third of that of the annual cut.

Cost of Production

The "cost of production" of logs, as calculated by lumber manufacturers, has been merely a harvesting cost, i.e., the expense of logging and of delivery from the stump to the mill. Generally speaking, there has been no industry in the United States devoted to the growing of timber of merchantable quality. The total available physical supply of timber during any period has therefore been relatively constant. It cannot be increased in response to current increases in demand nor can it be diminished in the face of a decline in the demand. The effective supply on the other hand, i.e., that part which is at any time actually offered for sale, is capable of sensitive adjustment to current demand.

Competition between Species

Different species of lumber are often adapted to identical uses. In all such cases the scope of potential competition between them is unlimited. Physical properties are the chief determinant of available uses. For certain purposes many species are adaptable; for others only one. Thus for framing and for rough construction, fir, western pine, yellow pine, North Carolina pine, hemlock, spruce, and northern pine are physically qualified. Interior finish also permits of the use of a wide range of species. In general construction work and in sash, door, blind, and general millwork, both softwoods and hardwoods are employed, the former greatly predominating. Low grades of several

species, especially of northern pine, are used in the manufacture of boxes and crates.

Hardwoods predominate in the furniture industry. Yellow pine, fir and white oak enter most extensively into car construction. The miscellaneous wood-using industries use large aggregate quantities of lumber, chiefly of hardwood. Competition is often keen also between lumber of the same species from different sources. For example, Lake states hemlock has, in recent years, invaded the Buffalo and Erie Canal markets, practically driving out the Pennsylvania stock. In turn western hemlock, an allied species of similar physical properties, had by 1909 expelled the Lake states stock from many of the same yards.

At no time can it be said of any particular region of the United States (except of such as have produced no lumber at all) that it has been supplied wholly by lumber of a given source. Domestic production has been capable usually of supplying certain local demands, especially for inferior grades. But for the bulk of the medium grade and for practically all the high-grade lumber, the great consuming regions have now become dependent upon shipments from more and more distant sources. The exact changes in the degree of this dependence, in the chronology of the past fifty years, cannot be determined since, until recent years, no continuous records of shipments have been kept. That the centers of lumber production, however, have continuously receded from the centers of population, indicates that the degree of dependence upon foreign sources has been of constant growth.

Changing Sources of Supply

As the relative scarcity of timber has increased, the demand upon the surplus of other regions has extended itself to lower and lower grades. Many of the older sections on the other hand have continued to supply themselves with low-grade lumber. "Old-field pine" in Virginia, a second growth on plantations discarded during the Civil War, now furnishes a great deal of material for the manufacture of boxes and crates. In this industry Virginia surpasses all other states. In New England second-growth white pine has been found adequate in quality to meet the less exacting requirements for lumber for inferior uses. It has moreover proven itself reasonably remunerative to investment. Domestic production has likewise continued to supply a considerable proportion of the local demand in the northern tier of the Central states. The softwood lumber consumed in this terri-

tory has however come from foreign sources, chiefly from the Lake states and from the South.

Lumber manufacture in the Pacific Northwest has been greatly stimulated by the reductions, conceded in 1894 by the western railroads, in the transcontinental freight tariffs on lumber. By 1900 western white pine from the "Inland Empire" had found a ready market in the Middle West in place of northern pine. Between 1902 and 1905, cargoes of fir lumber of high grade and large dimensions entered the New York market. By 1906 fir timbers were there a confirmed substitute for southern pine. As early as 1899 cargoes of fir flooring had reached Boston, because of the high prices prevailing there of maple and of yellow pine stock. By the period of maximum prices in 1906 and 1907 high-grade fir was shipped in considerable quantities to the eastern markets. It had secured a reasonably secure footing, by 1909, in the Buffalo market. For many years previously fir had been a strong competitor in the Chicago market, with yellow pine as a material for car construction. Because of the relatively light transportation costs, however, the southern lumber had a strong advantage. Indeed when, after the panic of 1907, the price of yellow pine suffered a tremendous decline, the market for western lumber in territory east of the Mississippi River was practically wiped out for a time.

LUMBER SUPPLIES AND THE LOCATION OF WOOD-USING INDUSTRIES

Wood-using industries dependent upon lumber of a particular species or quality have created and fostered a market for the higher grades of wood despite the continued recession of its production from centers of manufacture. Such industries have tended to continue in operation in close proximity to their consuming territory. The furniture industry, long established in the Lower Peninsula of Michigan, now secures from other states nine-tenths of its oak lumber and five-eighths of its entire supply of all species. In general the location of factories using lumber for high-grade uses has been adjusted to the easy marketing of the product rather than to cheap access to raw materials.

The manufacture of low-grade lumber, in the wood-using industries, on the other hand, has been confined to material originating in near-by sources. For this purpose the location of the industry has tended to become adjusted to the need of cheap access to the raw material. The centers of the box and crate industry, utilizing one-tenth of the annual lumber cut are distributed in regions to which

the supply of low-grade materials—chiefly softwood—is readily available. Thus Michigan secures less than three-tenths of the box material currently used, from points outside of the state, Wisconsin one-fourth and California one-fifth. Virginia, in which the manufacture of boxes and crates is estimated to exceed that of any other state, despite cheap access to abundant low-grade lumber from North Carolina and Tennessee, uses more than three-fifths of lumber of domestic production. Box lumber secured from distant sources of supply has been usually high-grade stock designed for permanent use. The principle is illustrated in the statistics of wood-using industries of California, a state almost destitute of hardwoods. Its factories have imported hardwood lumber from the East in large quantities. Low-grade softwood, on the other hand, has been either produced within the state or accessible at low cost by cargo from Oregon and Puget Sound.

CLASSIFICATION OF FUNCTIONS IN THE INDUSTRY

In the classification of functions within the lumber industry the following have been distinguished:

First, the ownership of standing timber.

Second, logging.

Third, manufacture of lumber.

Fourth, wholesale distribution.

Fifth, retail distribution.

The ownership or control of stumpage has been generally but not necessarily a condition of lumber manufacture. Most manufacturers have owned their own stumpage. Others have bought logs delivered at the mill. The control of stumpage involves the potential control of lumber manufacture through the control of its raw material. It is generally recognized by the lumbermen as having been the great source of profit in the industry, rapidly absorbing any increase in the prices of lumber.

The felling of standing timber; its division into suitable lengths for the sawmills; its delivery by rail or by river drive to the mill, has been a distinct industry in many regions. The majority of manufacturers have their own woods "crew"; others let a contract to logging companies. Such companies have been prominent in the industry on the Pacific Coast. In the early period, when logs were delivered to the mill almost exclusively by water, timber owners frequently surrendered their logs at the river bank, to companies of river

"drivers," for delivery "in the water," i.e., at the mill. In the eastern forests of the United States, where delivery is usually necessarily by rail, this custom no longer prevails.

Selling Agencies

Central agencies for the selling of logs or lumber have, at times, been a conspicuous part of the distributive mechanism in many regions.

"The success which has attended the establishment of selling agencies, formed to distribute the product of manufacturers similarly located" has led to such associations among the manufacturers of southern cypress and later among those of sugar pine, redwood, fir of southwest Washington, hemlock and maple. In 1904 was organized the Washington Logging and Brokerage Company which then controlled 60 per cent of the fir log output of the state. There have been many organizations among the loggers of the Pacific Northwest.

Integration

The manufacturer of lumber has frequently exercised all the functions within the lumber industry. He has owned, cut, and manufactured his own timber. In addition he has often distributed his own product. As a manufacturer, however, his activities have been confined to the production of lumber from the raw material, logs. Only partially applicable to the lumber industry is the customary triple classification of distributive mechanism, i.e., into manufacturer, wholesaler, and retailer. For example, one-third of the product of yellow pine lumber is sold direct to large consumers such as the railroads and construction companies. The rest is sold to wholesalers, brokers, and retailers; most of it to the retail yards direct. This type of mercantile organization has prevailed also in the marketing territory tributary to the mills of the Pacific Northwest.

"Line-yards"

Many manufacturers have operated wholesale and retail yards. In the softwood lumber trade the wholesaler, as such, has become relatively unimportant; in the hardwood trade he is the chief distributive agency. Most of the producers who have discharged multiple functions are manufacturers of softwood. Some have owned as many as one hundred retail yards distributed throughout their marketing territory. Especially in the Middle West had the retail

trade, by 1907, fallen, to a large extent, into the hands of "line-yard" companies. These sold more than one-half of the lumber, chiefly of softwood, which was consumed within their spheres of influence. The economy found in such organizations as these is obvious in:

First, buying lumber in great quantities, almost invariably at a reduced price.

Second, auditing of accounts.

Third, affording more skillful average management.

Fourth, the influence of strong combined financial support and solidarity, tending to steady the retail market.

Historically the timber-owning manufacturer has ruled the industry. To this rule there have been many specific but no general exceptions. The recent relative scarcity and the resultant higher prices of stumpage have tended, however, to subordinate the manufacturer, as such, to the owner of timber, his raw material.

LUMBER MARKETS

Distributing markets have been evolved as a result of the dynamic changes in the geography of lumber production. (1) Bangor, Albany, Burlington, the Tonawandas, Chicago, and Minneapolis have been successive centers of white pine distribution. (2) In Memphis, Nashville, Cincinnati, and Chicago has become centered a large proportion of the wholesale hardwood trade. Chicago now receives lumber from the North, northern pine; from the South, southern yellow pine; and from the West, fir and western pine. (3) In the softwood lumber trade of the West and South, "basing points" in strategic locations have, to a large extent, taken the place of wholesale centers, New Orleans for cypress; Norfolk for North Carolina pine; Savannah, Jacksonville, Hattiesburg, Beaumont and Houston, for southern yellow pine, have been typical in their respective regions. Portland and Puget Sound cities for fir; Spokane for western pine; Minneapolis for northern pine; Wausau for Lake states hemlock, have become important "basing points."

As the source of lumber supply has changed the distributive mechanism has gradually adjusted itself to the demands of economy in the transportation of the product to consuming territory. Since lumber is very heavy in proportion to its value, differences in the cost of transportation to market are of great importance. The geographical distribution of wholesale centers has been determined chiefly by the demands of economy in transportation.

22. CHANNELS OF WHOLESALE DISTRIBUTION OF SOFTWOOD LUMBER¹

Diagram 6 illustrates the complexity of the wholesaling channels in the lumber trade. It should be borne in mind that each of these methods is subject to many modifications, since each seller develops

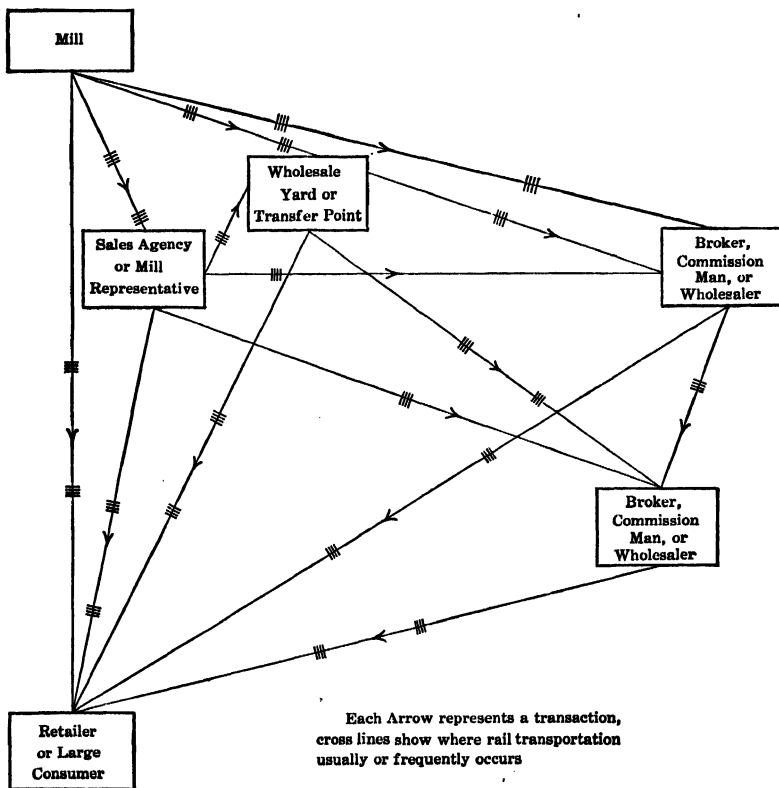


Diagram 6—Channels of Distribution of Softwood Lumber

his business along the lines suggested by local circumstances. Consequently the same organization commonly uses several different methods. This diagram brings out the two distinct factors of (1) sale transactions and (2) transportation in the wholesale distribution of lumber. The number of times a carload of lumber may be sold in its passage from the sawmill to a retail lumber yard is striking. Instances of lumber shipments passing through the hands of several different

¹ Adapted from Ovid M. Butler, *The Distribution of Softwood Lumber in the Middle West: Wholesale Distribution* (1917), pp. 19–25. (U. S. Department of Agriculture, Report No. 115, *Studies of the Lumber Industry*, Part VIII.)

middlemen were disclosed in the course of this study; but a relatively small part of the total volume of lumber moving passes through the hands of more than one intermediary—sales agency or wholesaler—and an increasing proportion of the output is wholesaled directly by the mill. Nevertheless, as long as the machinery for duplication in selling is present, a varying percentage of sales will be so handled.

The same is true of the number of times freight is paid upon a car of lumber. Competitive pressure is tending steadily to restrict rehandling and reshipping; and an increasing part of the lumber cut is transported direct from manufacturer to retailer or large consumer, whatever agencies may participate in its sale. Nevertheless, with the duplicating machinery of distribution striving to maintain itself, a small percentage of the lumber consumed is reshipped several times.

WHOLESALE BUYERS

Wholesale consumers of lumber may be roughly classified as railroads, large construction companies, and wood-using factories which remanufacture for further sale. Wood-using factories, while not consumers in the usual meaning of the term, are so designated in this report for convenience.

The great diversity and complexity in selling methods applies equally to buying methods. Wholesale lumber buyers are of many kinds—long-term and short-term buyers, emergency or current buyers, quality buyers, price buyers, and speculative buyers.

Contract Buying

Long-term buyers are found among both large and small purchasers. The usual method is to contract for the requirements during the coming 12 months or longer, delivery being made as specified during the period covered by the contract. Such buying is of course economical from a cost standpoint and has a distinct advantage in enabling both producer and consumer to figure on a definite volume at fixed prices. Another advantage of the long-term contract is that it gives the mill ample time to deliver the stock; and this usually means well manufactured, dry lumber, an important item to the remanufacturer and likewise to the mill in the matter of freight charges. Again, in favor of the mill is that during periods when prices drop to a low level or orders are slack, it can turn to the manufacture of material under contract at fair prices instead of continuing the production of low-priced current stock or reducing its capacity from lack of orders. On the other hand, if prices rise generally this advantage is reversed.

Contract buying is thus more or less speculative for both buyer and seller, due to fluctuations in the price of lumber. This is its disadvantage, for when current prices rise well above the contract rate the buyer is frequently required to push the mill for the manufacture of his stock. Where the parties to a long-term contract are unreliable, market fluctuations often result in breaking the contract, which in many cases is followed by lawsuit. Long-term contracts involving the immediate delivery of a large part or all of the material needed during a year involve the tying up of large amounts of money. This practice is restricted largely to the factory trade. Under reasonably uniform market prices, however, there is no doubt that contract buying would be the most economical method of merchandising to classes of trade which can forecast their future requirements. Short-term contracts are usually for 90 to 120 days, and to a lesser degree are subject to the same advantages and disadvantages.

Buying for Current Needs

The more common practice in the wholesale trade is to buy at current market prices, specifying either immediate or future delivery. This buying is heaviest, not during periods of low market prices, but during a rising market. Periods of low lumber prices have been times of general business depression, when building operations are restricted and the demand for lumber is at low ebb. As general business conditions improve, the consumption of lumber increases, accompanied by an upward trend in price and active buying by both consumers and dealers. Uncertainty as to future demands and requirements and fluctuations in the price of lumber are the primary reasons why current buying is considered more satisfactory by the majority of buyers.

Buying and holding lumber in the wholesale market purely as a speculative measure is not commonly practiced.

BUYING POLICIES

Two main buying policies are followed by lumber purchasers, and these are so closely related as to be difficult to distinguish clearly. These two policies are (1) quality buying and (2) price buying. Price buyers are more common among those who buy for remanufacturing purposes, but who make a large number of products, among those who buy to resell, and among wholesale consumers whose requirements are not strict as to quality. The remanufacturer who makes many products is a price buyer as a rule because he is not concerned with the waste problem to any great degree, his business being so adjusted

that he can rework his stock closely to obtain the quality of lumber adapted to various purposes. Middlemen catering to trade which is not strict as to grades also usually buy on price.

Quality buying is more common among factories which manufacture but a few products. Sash, door, and blind factories, for example, are usually quality buyers because clear lumber is necessary in the manufacture of their products and buying material on a quality rather than a price basis is considered economical when freight rates, labor, handling, and standards of products are taken into account. One of the principal problems which sash, door, and blind manufacturers have to deal with is the elimination of waste. Manufacturers who do not make veneered doors, for example, are unable to use anything but practically clear stock. In order to reduce their waste to a minimum they must buy material which will give them the largest number of clear cuttings of girth size. Manufacturers who are able to utilize their waste in cores of veneered doors do not find it necessary to be so rigid in their specifications and can consequently afford to buy more on a price basis.

On the other hand, some sash, door, and blind factories buy for price as a matter of business policy, figuring that it is more economical to buy a lower quality of material at a lower price and, by reworking it, obtain the clear cuttings required in their business. It is simply a question of whether the increased cost of freight, rehandling, and reworking of the low-quality material, combined with the loss from waste, are offset by its lower price.

Railroads in buying much of their car material and construction companies in the use of structural timbers are necessarily quality buyers, as are middlemen who supply a trade of specific requirements.

In all buying it should be borne in mind that price and quality cannot be clearly separated, since it is a matter of getting the quality of material desired at the best price obtainable. During the last few years the large buyer as a rule has had the advantage over the seller and has undoubtedly had a depressing influence upon wholesale lumber prices. Lumber buyers whose purchases were reviewed invariably believed that they were buying lumber at lower prices than their competitors; but a comparison of buying prices brought out the fact that during the period studied there was little difference in the price at which lumber has been obtained by large buyers who have been in a position to follow the market closely and to whipsaw one seller against another.

TENDENCY TO DIRECT PURCHASE

The information furnished by railroads, factories using wood as a chief raw material, retailers—the three largest classes of wholesale lumber consumers—indicates quite clearly an increasing tendency during the past few years to deal more directly with the mill. The reasons most generally given are advantages in point of grades, price, delivery, and service. Many replies, however, are conflicting in this regard, indicating that the individual concern dealt with is a large factor. Any application of the data cited to the wholesale trade in regions other than that from which it was obtained is not warranted. It should be borne in mind, further, that the large consumers and retail dealers from whom the data were obtained are mainly users of softwoods. These results cannot, therefore, be applied to all classes of trade.

CHAPTER VII

MARKETING MANUFACTURED PRODUCTS

1. THE GROWTH OF THE "SERVICE IDEA" IN SELLING¹

Within recent years there has been developing a noticeable tendency to define selling as a process of rendering service. Thus a manufacturer of automobiles does not sell automobiles; he sells transportation. And he uses as his strongest selling point the argument that the buyer of his car will have uninterrupted transportation. Similarly a manufacturer of tires does not sell tires; he sells mileage. And if one casing does not give satisfactory mileage he will furnish another. The prevalence of the idea is denoted by such slogans as that of the Mazda lamp: "Not the name of a thing but the mark of a service."

Though this tendency has made itself felt and has been remarked upon frequently of late, still it has never been measured and stated in quantitative terms. The writer undertook to measure it, adopting as the unit of measurement the appearance of the word service, as the method to count the number of advertisements in standard magazines—*Literary Digest*, *Collier's Weekly*, and *Country Life in America*—in which the word has appeared.

Admittedly the mere word does not convey all of the idea; nor does every occurrence of the word denote the exclusive and identical idea under measurement. Nevertheless the word is the best sign there is of the idea. Again, magazine advertising does not comprise all the forms of selling. Still it is probably the best repository extant of selling practices and policies; and it reflects the prevailing trends with considerable accuracy.

A preliminary survey of the advertisements in these periodicals beginning with the year 1900 showed that the word occurred in from one to five advertisements in a hundred, until in 1908 when it began to appear more frequently. Accordingly this year was taken as the initial year for the survey, and issues were examined at intervals of two years. In the case of the monthly, *Country Life*, each issue in the year was examined; in the case of the weekly magazines,

¹ Adapted from Harry D. Kitson, "The Growth of the 'Service Idea' in Selling," in *The Journal of Political Economy*, Vol. XXX, 1922, pp. 417-19. (The University of Chicago Press.)

one issue was chosen at random from those of each month. All the advertisements were counted and read except those on cover pages and in classified columns; and the percentage of those containing the word "service" was computed.¹

1. Since 1908 there has been a growing tendency to use the word service in magazine advertising. In all three of the magazines examined the trend is similar in direction and amount.

2. The frequency has increased on the average from 5 per cent to 24 per cent—almost fivefold.

3. The rate of increase has been fairly regular, the greatest amount occurring in the biennium 1911-12.

We should probably not be justified in regarding this change as a matter of conscious evolution. During the first part of the period under investigation it was probably unrecognized by any considerable body of sellers. Within more recent years, however, it has probably been more acutely conscious and purposeful. A strong influence in making it so may have been the rise of the Rotary clubs and the adoption in 1912 of "Service" as their motto.

Again we are not justified in assuming that this redefinition of selling is completed. The new conception does not yet permeate the entire selling consciousness, as is shown by the fact that even now only 24 per cent of advertisements contain the word. This does not necessarily mean that twenty-four of every hundred advertisers are converted, for some of the advertisements are duplications from year to year of the advertisements of the same firms. On the other hand, the figures do not mean that only 24 per cent of sellers have the new conception. Many may conceivably hold it with greater or less clearness without expressing it in their advertising.

In connection with the evolution of the term should be noted one curious qualitative change that has occurred. As first used, the word service denoted something gratuitous which was given in addition to the commodity, such as restroom and telephone accommodations in a department store. Service was regarded as a sort of economic second-mile which the seller furnished out of the goodness of his heart. Within recent years, however, and by the advanced sellers, service has come to be regarded not as an accessory but as a real part of the commodity, indeed, as the commodity itself. As both seller and buyer have begun to philosophize about the matter they have come to see that after all the latter pays for the service. He therefore has the right to specify what form it shall take.

¹ The tabulation of the results is omitted.—EDITOR.

2. THE RELATION OF CONSUMERS' BUYING HABITS TO MARKETING METHODS¹

From the standpoint of consumers' buying habits, merchandise sold in retail stores can be divided roughly into three classes: (1) convenience goods; (2) shopping goods; (3) specialty goods. Using this classification, one of the initial steps in laying out a sales or advertising plan is to determine whether the article to be sold will be purchased by consumers ordinarily with shopping or without shopping, at points of immediate convenience or in central trading districts, with insistence on an individual brand, with merely brand preference, or with indifference to brand.

This preliminary analysis facilitates the determination of the kind of store through which the market for the specific product should be sought, the density of distribution required, the methods of wholesale distribution to be preferred, the relations to be established with dealers, and, in general, the sales burden which the advertising must carry.

CONVENIENCE GOODS

Convenience goods are those customarily purchased at easily accessible stores; examples are canned soup, tobacco products, electric light bulbs, safety razor blades, shoe polish, laundry soap, crackers, popular magazines, confectionery, and tooth paste. The consumer is familiar with these articles; and as soon as he recognizes the want, the demand usually becomes clearly defined in his mind. Furthermore, he usually desires the prompt satisfaction of the want. The unit price for most articles in this class is too small to justify the consumer's going far out of his way or incurring the expense of a street-car fare in order to procure a special brand. It is for such reasons as these that a product subject to this type of demand gains a large sales advantage when it is purveyed in numerous stores located at points easily accessible to consumers.

The consumer is in the habit of purchasing convenience goods at stores located conveniently near his residence, near his place of employment, at a point that can be visited easily on the road to and from his place of employment, or on a route traveled regularly for purposes other than buying trips. In sparsely settled districts, to be sure, the distance a consumer must travel to reach a store carrying convenience goods necessarily is greater than in densely populated

¹Adapted from Melvin T. Copeland, "Relation of Consumers' Buying Habits to Marketing Methods," in *Harvard Business Review*, Vol. 1, No. 3 (April, 1923), pp. 282-89.

districts, but fundamentally the buying habits are the same in all districts. Convenience goods, moreover, are purchased at frequent intervals by the average consumer, and these "repeat" purchases enable the stores handling such wares to secure adequate patronage with reasonably small investments in stocks of merchandise.

Typical retail establishments carrying convenience goods are grocery stores, drug stores, and hardware stores. A majority of these stores are unit stores, but it is in the trade in convenience goods that chain store systems have shown the greatest development.

Because of the desire of consumers to purchase this type of merchandise at easily accessible stores, the manufacturer of a convenience article must aim to secure distribution of his product through a large number of stores in each territory. Many of the retail outlets commonly utilized for this purpose at the present time are small unit stores; consequently, to obtain this widespread distribution it is customary for most convenience goods to be sold through wholesalers. Whenever a manufacturer of a product in this category elects to sell directly to unit stores, he must develop a large sales organization and arrange for his salesmen to visit the retailers at frequent intervals.

SHOPPING GOODS

Shopping goods are those for which the consumer desires to compare prices, quality, and style at the time of purchase. Usually the consumer wishes to make this comparison in several stores. Typical shopping goods are gingham cloth, women's gloves, chinaware and novelty articles. The typical shopping institution is the department store. Shopping goods are purchased largely by women. Ordinarily a special trip is made to the shopping center for the purpose of buying such merchandise. As a rule, however, the specific store in which the purchase is to be made is not determined until after the offerings of at least two or three institutions have been inspected. The exact nature of the merchandise wanted may not be clearly defined in advance in the mind of the shopper; this is in contrast to the usual attitude in purchasing convenience goods. The purchase of shopping goods, furthermore, usually can be delayed for a time after the existence of the need has been recognized; the immediate satisfaction of the want is not so essential as in the case of most convenience goods. Because of the variety of merchandise which must be carried to satisfy the shopper and the relative infrequency of purchases of shopping articles by the average consumer, the store catering to the shopping trade must have a central location which attracts shoppers from a

wide territory. In order to justify the expenses of operation in such a location, the volume of sales must be large. Conversely, it follows that the type of store which handles convenience goods ordinarily cannot carry a large enough variety and range of products to offer an attractive opportunity for shopping.

A store location suitable for trade in shopping goods usually is not adapted to the convenience goods trade; for the rental is high and the delivery interval inconvenient to consumers. It is seldom that a department store, for example, has found it possible to operate a grocery department at a profit. The factors of location, organization, and consumers' buying habits, which enable a department store to cater effectively to the shopping trade, handicap it in developing a business in convenience goods. When a manufacturer is laying out his marketing plans, therefore, he ordinarily finds it inconsistent to attempt to distribute his product through both department stores and scattered unit stores or through both department stores and chain stores. The type of store selected depends upon whether it is a shopping line, a convenience line, or a specialty line.

The number of stores selling shopping goods, furthermore, is much smaller than the number of convenience stores. The average size of the shopping store is large and its credit generally strong. This facilitates the marketing of shopping goods directly from manufacturer to retailer.

SPECIALTY GOODS

Specialty goods are those which have some particular attraction for the consumer, other than price, which induces him to put forth special effort to visit the store in which they are sold and to make the purchase without shopping. In purchasing specialty goods, the consumer determines in advance the nature of the goods to be bought and the store in which the purchase is to be made, provided a satisfactory selection of merchandise can be effected in that store. Whereas convenience goods are purchased at stores that are easily accessible, it ordinarily is necessary for the consumer to put forth special effort to reach the store selling specialty goods. As in the case of shopping goods, the actual purchase of a specialty article may be postponed for a time after the specific need has been felt by the consumer. Examples of specialty goods are men's clothing, men's shoes, high-grade furniture, vacuum cleaners, and phonographs. Specialty goods are purchased by both men and women, but men's purchases of specialty lines are a larger proportion of the total sales of such merchandise than in the case of shopping goods.

For specialty goods the manufacturer's brand, the retailer's brand, or the general reputation of the retail store for quality and service stands out prominently in the mind of the consumer. It is because of distinctive characteristics associated with the brand or the store that the consumer is prepared to rely upon the service, quality, and prices of merchandise offered by that store as generally being fair and to accept the merchandise without shopping. In numerous lines of specialty goods, such as men's shoes and clothing, the consumer prefers to deal with a store offering an attractive variety of styles and sizes from which to select. Purchases are made by each individual customer at infrequent intervals. Consequently, a specialty store generally is located at a point to which customers can be drawn from a wide area.

From the manufacturer's standpoint, a specialty line calls for selected distribution, in contrast to the general distribution essential for convenience goods. The dealers who are to handle the specialty line must be carefully selected on the basis of their ability to attract the class of customers to whom the product will appeal. Retailers must be chosen who can be relied upon to use aggressive selling methods in attracting customers to their stores. Frequently, exclusive agencies are granted to retailers for the distribution of specialty goods. An exclusive agency is seldom, if ever, justified for any line which is not a specialty line. It is only in the marketing of specialty goods, furthermore, that manufacturers have found it practical to operate retail branches.

Because of the part which each individual retail store handling the merchandise plays in the sale of the specialty goods, the care with which these stores must be selected, and the methods of co-operation which are essential between the manufacturer and the dealer, specialty goods are especially suited to distribution by direct sale from manufacturer to retailers. The manufacturer of specialty goods who works out his plan of distribution systematically on this basis also often finds it advisable, through his national or local advertising, to assume part of the burden of focusing the demand on individual stores.

In case of several commodities, the articles tend to fall into more than one of these three categories. Staple groceries, for example, are clearly convenience goods; fancy groceries, on the other hand, are specialty goods. In each city there usually are from one to three stores which have a high reputation for specialties in groceries. Although these stores also sell staple groceries, their patronage is

secured primarily on the basis of the specialties that they carry. Because of the limited market for such specialties and the volume of business necessary to justify carrying such a stock, ordinarily only one or perhaps two or three stores in a city can obtain enough business on these goods to warrant taking on a line of fancy groceries; in the same city, anywhere from one hundred to several hundred grocery stores are carrying convenience goods.

In the shoe trade, medium- and high-priced shoes for both men and women are specialty goods. Women's shoes which feature style novelties border on the shopping classification. The common grades of work shoes, on the other hand, border on the classification of convenience goods.

The manufacturer of women's novelty shoes, for example, cannot advisedly leave the shopping institutions out of consideration in planning his sales program. The manufacturer of cheap work shoes, however, ordinarily must place his product in a larger number of stores than would be required were he selling medium-grade dress shoes for men.

Although women's ready-to-wear suits generally are shopping goods, a few manufacturers recently have been developing standard trade-marked lines, which tend to fall into the class of specialties. Several retail stores also have developed specialty reputations for women's ready-to-wear. In view of the conditions in the women's ready-to-wear field and also in several other fields, the average department store now seems to be faced definitely with the question of whether its merchandising should be primarily on a shopping basis or whether at least some of its departments should be developed on a specialty basis. The piece goods departments are likely to remain shopping departments. Shoes, men's clothing, women's ready-to-wear, furniture, silverware, and numerous other departments are being developed in several department stores as specialty departments, but generally without a conscious, well-coördinated policy for a store as a whole. In these specialty departments the emphasis is shifted from comparative prices and comparative styles to the special qualities and characteristics of the merchandise carried. In other department stores the merchandising is still almost entirely on a shopping basis, with the featuring of prices and bargains that are supposed to appeal to the shopper. In so far as department stores develop specialty departments, they will afford attractive outlets for manufacturers whose distribution otherwise would be through specialty stores.

RELATION OF BRANDS TO BUYING HABITS

Convenience, shopping, and specialty goods are sold both branded and unbranded. Because of the differences in the buying habits of consumers in purchasing these classes of goods, brands do not play the same part in the merchandising plans for all three classes, and the advertising problems of manufacturers are quite dissimilar for shopping, convenience, and specialty merchandise.

A brand is a means of identifying the product of an individual manufacturer or the merchandise purveyed by an individual wholesaler or retailer. The real demand for any commodity is the quantity which consumers will buy at a specific price. If a product is unbranded, the volume of the demand ordinarily depends upon the quantity that consumers elect to buy, either entirely upon their own initiative or as a result of the sales efforts of the retailers by whom it is sold. When sugar was sold in bulk, for example, the demand depended upon the amount consumers wished to purchase or were induced to purchase by retailers who featured the article; sales were not directly stimulated by the sugar refiner. For an unbranded product, the individual manufacturer seldom can afford to assume the burden of stimulating demand which can not be specifically directed to the product of his own factory. For such an unbranded product the manufacturer must rely chiefly upon his ability to produce cheaply, in order to be able to offer low prices, and he must pursue merely passive selling methods, or, at most, direct his sales efforts chiefly toward wholesale and retail merchants. If the product is branded, on the other hand, the manufacturer can undertake not only to direct the active demand to his particular product, but also to arouse latent demand by stimulating a larger number of consumers to want his product or by making previous consumers desire to use more of his product at a specific price. When the American Sugar Refining Company, in 1912, for example, began to put out sugar in packages bearing the company's trade-mark, the company not only was in a position where it could inform the consumer regarding the merits of that particular brand, but it also could practically undertake to induce consumers to use more sugar, as, for instance, in canning fruit.

With the development of the package trade, the tendency during recent years has been for an increasing proportion of convenience goods to be branded. The increase in the sale of crackers in packages, for example, in contrast to the former bulk sales, has given greater significance to brands of crackers and has facilitated the use of aggres-

sive sales methods by cracker manufacturers. Among shopping goods there has been some increase in the number of brands, but large quantities of merchandise in this class still are sold unbranded. Specialty goods are all branded, except in a few cases where retail stores have reputations which practically render it unnecessary for them to have brands placed on the merchandise which they sell.

When a manufacturer undertakes to focus the potential demand upon his product with brand identification, he must consider the attitude in which the consumer ordinarily approaches the purchase of such an article. The attitude of the consumer may be that of: (1) recognition, (2) preference, or (3) insistence.

CONSUMER RECOGNITION

When a brand has any significance at all, it serves primarily as a cause for recognition. If the consumer's previous acquaintance with the brand has been favorable, or if the manufacturer's or dealer's advertising has made a favorable impression, other things being equal, the recognized brand will be selected from among other unrecognized brands or from among unbranded merchandise. For some products—such as silk goods, gingham, and women's suits—pattern, style, and price are considered by the consumer, before brand. When the selection narrows down to a choice between articles of this sort approximately equal in pattern, style, and price, the recognition of a known brand sways the choice. The manufacturer of such goods, however, cannot hope ordinarily to secure many sales merely because of brand, if his product is higher in price or less popular in pattern and style than directly competing goods shown in other stores.

Consumer recognition—an acquaintance with the general standing of the brand—probably is the only attitude toward that brand which the manufacturer of a typical shopping line ordinarily can establish in the mind of the average purchaser by means of advertising and sales efforts. If the product has some special feature, as, for example, cotton fabrics dyed in fast colors or fast-colored silk goods loaded with a minimum of tetra-chloride of tin, it occasionally is possible to arouse the interest of the consumer to a point of preference.

A family brand, by which is meant a brand or trade-mark that is applied commonly to a group of different products turned out by a single manufacturer, serves primarily to establish consumer recognition for all products in the group as soon as the consumer becomes acquainted with one article bearing the common brand. The experience of retail dealers indicates that for shopping and convenience

goods the common brand aids in promoting consumer recognition. If it is a specialty line, the experience of the consumer with one article bearing the brand is likely to establish in the minds of consumers at least an attitude of preference for other articles bearing the same brand. It is unsafe, however, for the manufacturer to count upon the family brand to develop more than consumer recognition without the presentation of sales arguments for each article bearing the brand.

CONSUMER PREFERENCE

Consumer recognition soon shades into consumer preference. When several brands of merchandise, which are similar in general qualities and in external appearance, are offered to the consumer by a retail salesman, the one for which previous experience, advertising, or perhaps the retailer's recommendation has created a preference, is chosen. The strength of the brand depends upon the degree of preference in the mind of the consumer. In purchasing convenience goods, for example, the consumer often approaches the retailer with the question, "Have you the X brand?" If the retailer does not have that brand in stock, another brand ordinarily is accepted by the consumer, or, if the retailer specifically urges another brand in the place of the one called for, a substitute may be taken by the consumer. This practice of asking for brands is common for many consumers in the purchase of convenience articles. The brand comes first in the consumer's mind and signifies to him the quality, style, or pattern of article, or the type of container that he wishes to obtain. In such cases the consumer has a preference for the brand asked for, but ordinarily it is not strong enough in this class of merchandise to make him insist on that brand to the point of visiting a less convenient store to make the purchase. It is because the consumer generally has merely the attitude of brand preference in purchasing convenience goods that it is essential for the manufacturer of such a product to place his wares on sale in a large number of stores in each territory.

CONSUMER INSISTENCE

The third stage in which the demand for branded articles manifests itself is consumer insistence. When the consumer approaches the purchase of an article in this attitude of mind, he accepts no substitute unless it is an emergency. This attitude of consumer insistence holds commonly in the purchase of specialty goods. To warrant undertaking to develop this attitude, the product must be so

individualized in quality, in its special features, or in the service rendered by the manufacturer or retailer as to differentiate it distinctly from competing articles and to induce consumers to put forth special effort to secure that brand. The manufacturer of an electrical washing machine, for example, undertakes to present his sales arguments in such a way as to lead the consumer to insist upon the purchase of his particular make. Through advertising, the manufacturer of such a machine seeks to convince the consumer that his is the machine which should be purchased and that a store carrying this brand should be sought out.

The difference between no standing at all in the mind of the consumer, consumer recognition, consumer preference, and consumer insistence is one of the degrees to which the selling process has been carried with the consumer before he visits a retail store to make his purchase. If the consumer has no familiarity whatsoever with the brand of product to be purchased, the entire sales burden rests on the salesman in the store visited. If the consumer recognizes the brand, the manufacturer of that brand has taken the initial step in consummating the sale to the consumer. If the manufacturer has established consumer preference, the sale has proceeded one step further. If the consumer has the attitude of insistence, it remains merely for the retail salesman to close the sale.

3. THE FLOUR TRADE

WHEAT FLOUR MILLS IN THE UNITED STATES¹

According to census figures there were in 1914 about 7,000 merchant mills grinding wheat flour. Figures obtained from the United States Food Administration and other sources indicate that 100 mills probably produce 40 per cent of the total output of wheat flour, 200 mills 60 per cent, and 1,000 mills 80 per cent, while the remaining 6,000 or more merchant mills only produce about 20 per cent of the total. A classification of 1,171 of the largest mills,² according to capacity, showed the following:

Daily Capacity	Number of Mills	Daily Capacity	Number of Mills
5,000 to 10,000 barrels.	21	250 to 500 barrels.	260
1,000 to 5,000 barrels. .	121	100 to 250 barrels.	613
500 to 1,000 barrels. . . .	156		
		Total.	1,171

¹ Adapted from Federal Trade Commission, *Report on Flour Milling and Jobbing* (1918), pp. 10-11.

² Made by United States Food Administration.

The manufacture of flour is a comparatively simple operation and even in the largest mills the equipment is neither complicated nor expensive compared with the value of the product. The labor required in flour milling is also much less than in most other industries. This has made possible the construction and operation of small mills, which, except in New England and a few Southern states, still supply a considerable part of the local demand.

The total capacity of all merchant flour mills in the country is far in excess of what is needed to handle the wheat available for grinding, and except during the crop-moving season few mills are able to run at capacity. Notwithstanding this fact, new mills continue to be built each year. This excess of capacity has been facilitated by the small investment required and is partly due to great local variations in grain production.

While merchant flour mills are found in almost every state in the United States, there has been a natural development of the industry and of large scale production in centers favorably located with respect to the principal wheat-producing regions. Minneapolis in the Northwest, Kansas City in the Southwest, and Buffalo on the Great Lakes, are the largest of such milling centers. While the number of mills producing less than 100,000 barrels annually has declined noticeably since 1899, the number of mills producing more than this quantity has increased from 135 to 218, or more than 60 per cent.

There has been some concentration of the ownership of flour mills, but for the most part, the industry is still characterized by a large number of relatively small concerns, each operating a single mill.

CHANNELS OF DISTRIBUTION¹

A considerable proportion of the flour milled in the United States is consumed at or near the place of production, but at least a half of the total output is sold in more distant domestic markets or exported. More than 75 per cent of the flour entering the competitive markets is produced by mills located in or near the three largest milling centers: Minneapolis, Kansas City, and Buffalo.

Many of the large flour mills maintain branch houses in the important distributing centers of the country for the marketing of their output to the grocery and bakery trade, but a considerable proportion of the domestic output of flour not sold at or near the place of production is distributed through the agency of middlemen, of which

¹ Adapted from Federal Trade Commission, *Report on Commercial Wheat Flour Milling* (1920), p. 51.

there are several classes, such as mill agents, brokers, and jobbers. The broker and mill agent usually sell flour in car lots on a commission basis, while the jobber buys flour for resale and in most cases maintains a warehouse from which he delivers flour to his customers in small lots. There are a few large jobbers, however, who sell in car lots and do not maintain warehouses. The principal customers of the former type of jobber are the small bakers who buy on credit. The car-lot jobbers sell to larger domestic or export buyers, usually for cash.

Aside from the mills and their branch houses, the flour trade includes many wholesale grocers, most retail grocers, brokers, and car-lot and less-than-car-lot flour jobbers. As the milling of flour has concentrated in the hands of the larger concerns the quantity of flour sold by mill agents and mill branches has increased, and the flour business of other distributors has decreased. An increase in the number of bakers able to buy in carload lots directly from the mill has also cut down the sales of other distributors. Many small bakers continue to buy of their local jobbers because they obtain credit from them that the mills are not willing to grant.

The flour trade performs the usual functions; that is, it takes care of the transportation, storage, and deliveries of flour, and grants credit to purchasers. Storage in the flour trade tends to decrease; direct deliveries from cars to small traders and consumers to increase. Cartage, the largest single item of expense, and other delivery charges are advancing. Very little credit is granted in the car-lot business, but losses on account of bad debts have in the past been a considerable item in the accounts of jobbers who sold to small local bakers.

The margin between purchase and sales prices for different distributors and at different times has little consistency. Big jobbers whose business operations do not extend to storage and cartage, usually have small expenses, and at times their margin is small—much smaller than that of equally large operators who, in addition to customary trade services, blend the flour of different mills to produce the qualities demanded by their trade. Occasionally, the profit of the first class of jobbers referred to above will contain a large amount of speculative gain, resulting in a margin much greater than that of concerns whose expenses cover the semi-industrial operations involved in blending, testing, warehousing, handling, and lightering.

Practically all the flour consumed in individual households is sold by retail grocers. The retail grocers themselves buy much of this flour from wholesale grocers but, also, a considerable part of it directly from the millers.

THE SALE OF FLOUR¹

The sale of flour on the market has to be pushed either by salesmen or by advertising, or by both. Practically every mill of any considerable size sends out salesmen who have to work as hard to sell flour as do salesmen to dispose of any other line of merchandise. Some sales are made directly without the service of salesmen, but by far the greater amount of flour is sold by the direct appeal of the salesmen. The miller seeks a market wherever he can find it. In 1906 and earlier the mills making flour from Kansas hard winter wheat had considerable export trade which enabled them to work off surplus stock in the markets of the world at any time, but nearly all of this export trade has since been lost, which loss has intensified the competition in the domestic markets. The records of mills and their customers show very clearly how the mills are continually crowding each other out of the market. Sales are made to flour jobbers, grocers, and bakers. Some mills seek to build up a trade in one of these lines, some another, and others get trade wherever they can. The selling price of flour is by no means uniform as between customers. The larger the contract or the more the trade of a particular customer is desired, the lower the price quoted will be. The expense of selling is also an item considered in fixing the price. As a flour jobber is expected to find a market for flour not reached by the mill itself, he is generally protected, or, in other words, given a lower price than is made to the trade generally. This limit of protection is usually from 10 to 15 cents a barrel.

In earlier years flour was often sold in large quantities for future shipments, over a period of weeks or even months. But mills have found that such future contracts often are not desirable and are subject to repudiation by the purchaser. They state that if the price declines before the order is filled there is often a disposition on the part of the purchaser to withdraw from his contract or to find fault with the flour. The tendency on the part of millers is to make contracts for prompt shipment to avoid repudiation of contract or disputes about the flour that may arise should the market price of flour decline, and also to avoid loss to the mill should the market price advance.

All sales of flour are not made on the same terms. Some of it is sold on time and some of it on arrival draft or sight draft. If sold on time there is a discount for prompt payment. This discount often is 5 cents per barrel for payment in 10 days.

¹ Adapted from J. Chester Bowen, *Wheat and Flour Prices from Farmer to Consumer* (1913), pp. 36-37. (U. S. Department of Labor, Bureau of Labor Statistics, Bul. 130.)

4. SOME PROBLEMS IN THE DISTRIBUTION OF MEAT PRODUCTS¹

LOCAL AND NATIONAL PACKERS

Getting meat from the surplus-producing sections of the West to the heavy-consumption centers in the East is a distribution problem which has been solved by the nation's meat-packing industry.

A large number of meat packers are engaged primarily in local distribution. The average small packer sells his product in the territory immediately surrounding his plant, and, in so far as is possible, he draws his raw material supply from the same territory.

It is only when his territory fails to supply his needs that he is compelled to go to distant markets to purchase raw materials. Thus, it happens that when the small packer functions as a national distributor—that is, one who helps to move the surplus of one section to another section which is deficient—he more commonly moves live animals. This is less economical than moving the finished product, but as long as the small packer buys only for his immediate territory, he is able to overcome the lack of economy in moving live animals by the lower costs incident to local distribution.

Primarily the small packer is not engaged in moving the surplus of one section to meet the deficiencies in a distant section. On the other hand, the large packers who do business on a national scale have this section-to-section distribution as their chief function. This requires the big packers to have extensive equipment in the way of large-capacity coolers, refrigerator cars, extensive selling organizations, etc. The result is a heavier overhead expense proportionately than is borne by the smaller packers. To offset this difference in overhead and to compete successfully in the territories served by the local packers, the national packers must develop great volumes of business.

It is perhaps of importance to point out the factors that maintain the balance between the packers who largely ship dressed meats and those who largely ship live animals. There is no question but that the meats of the packers who ship carcasses cost more, delivered with the freight charges on top, especially when the steady overhead of branch houses and selling forces is added, but there are two advantages that accrue to this class of packer which in times past have tended

¹ Adapted from F. Edson White, *The Distribution of Meat Products* (1923), pp. 321-24, 328-38, 344-46. (Lecture VIII of a series of lectures on *The Packing Industry*, given under the joint auspices of the School of Commerce and Administration of the University of Chicago and the Institute of American Meat Packers. Copyright by the University of Chicago.)

to offset the handicap of freight and selling costs. The first of these came from the credits on by-products, which could not only be saved in large quantities, owing to the volume of business the packer shipping meats all over the country was able to develop, but could be utilized more completely. The second advantage came in the choice of place of sale, since once the meat was ready for shipment at a central point it could be billed to the particular market where the highest prices for that type of meat were prevailing, whereas the packer slaughtering at a consuming center was forced to sell his meat at the point of slaughter or else place a double transportation charge for live-animal shipment and for meat shipment on his finished product.

The service of the two classes of packers from the consumer's standpoint perhaps differs only slightly in its fundamental aspects, but, from the standpoint of the producer, the national packer is of prime importance, since he alone can provide at one point the varied outlet for all the kinds, grades, and classes of livestock that are the natural product of varied-breeding herds. No local packer could get the necessary assortment of meat at the time the northwest-range cattle run in the fall or the heavy-hogs run in the spring without excessive costs on mixed or less-than-carload shipments. The national packer, on the other hand, because of his volume, can buy in large quantities and make up his assortments for the trade at any point.

THE CONSUMPTIVE DEMAND FOR MEAT

Consumptive demand varies greatly among the populations of different sections of the country. The kind of beef or pork most desirable for the New England markets does not find a ready sale in the southern states, for example. The beef slaughtered along the Pacific Coast could be marketed only with difficulty along the North Atlantic. Adequate distribution demands that provision be made to supply the actual wants of a section, and it many times happens that these wants can be supplied only by going beyond the packing center most conveniently situated to supply them.

Perhaps a detailed discussion of some of these fluctuations in demand will present the idea more concretely. For example, the beef trade is largely based upon New York and New England. New York, Jersey City, and the adjacent regions take all grades and classes of beef. The down-town houses in New York City handle a varied assortment, mostly weighty, for the large shops and the hotel- and restaurant-supply trade. These houses handle almost everything except yearling beef. On the other hand, the Hudson River territory, to

the north of New York, demands a greater proportion of medium to choice carcasses with lighter weights, while the Long Island and the Harlem sections of the city constantly demand the best light carcasses, predominantly yearlings, available. Philadelphia takes a general assortment like New York, demanding all grades from plain to choice, but their price levels are likely to run lower except on the good to choice carcasses.

In New York we come in contact with another factor affecting distribution. There are more orthodox Jews in New York City than in any other great consuming center in the country, and the orthodox Jews require kosher beef. Kosher beef, under ordinary conditions, must be in the hands of the consumer within seventy-two hours after slaughter. Consequently, western-killed beef will not serve to satisfy the needs of New York's Jewish population, because it ordinarily takes a beef train four days to move from Chicago to New York. This fact accounts for numerous slaughtering establishments adjacent to New York which would otherwise not be there.

An interesting vagary of demand is illustrated in the Twin Cities, Minneapolis and St. Paul. Minneapolis seeks more fed cattle than St. Paul and maintains a more active market, but Minneapolis cattle preferably weigh from 300 to 600 pounds in the carcass, while St. Paul cattle weigh from 500 to 700 pounds. Further examples might be drawn from other sections, but the foregoing illustrates the general problem to be considered in beef distribution.

SEASONAL PRODUCTION AND CONSUMPTION

Thus far, distribution has been considered only in relation to moving the product from one place to another and to securing the highest price for the product. A second factor of distribution is that of time or season. In other words, there must be distribution over the different times of year as well as over the country. If consumption had to be coincident with production, there would be seasons when meat would be exceedingly scarce and beyond the reach of the ordinary pocketbook, while at other seasons there would be so much meat available that the price would drop far below the cost of production, thus failing to warrant the production. In other words, production would not continue at its present level, but would drop far below it.

The boiled ham that features the Fourth of July picnic, as likely as not, came to market in the live hog some time during the preceding winter. By far the heaviest marketing of livestock comes in the colder months of the year, due largely to the fact that the animals cannot

be marketed until they have consumed the grain, hay, and roughage crops of the growing season. On the other hand, the heaviest consumption of meat products is likely to come in the hot months when labor is most fully employed and energy-demands in the diet are the greatest.

The table which is printed below shows the general nature of the problem of fitting consumption and production, as expressed by the rate at which livestock has been marketed in bi-monthly periods for the three years 1919, 1920, and 1921, and the rate at which its product has been marketed, as represented by the sales of one of the national packing companies during the same period. This company's sales probably do not represent exactly the rate of consumption throughout the country, but I feel that they come near enough to being exact to make clear the nature of the problem.

TABLE 6. AVERAGE PERCENTAGE RELATIONSHIPS OF
PRODUCTION TO CONSUMPTION

	Nov.- Dec.	Jan.- Feb.	Mar.- Apr.	May- June	July- Aug.	Sept.- Oct.
Beef and Veal:						
Production	20.32	15.15	13.38	13.34	15.85	21.96
Consumption	16.02	18.34	16.07	14.95	16.60	18.02
Pork and Lard:						
Production	20.14	22.21	16.35	17.93	12.52	10.85
Consumption	15.08	18.13	15.30	14.84	17.33	19.32
Lamb and Mutton:						
Production	17.20	13.48	11.97	11.93	19.49	25.93
Consumption	14.70	16.67	17.21	15.60	16.22	19.60

In general, these figures show that there is a surplus production of beef and veal from September to December, as related to consumption, and a deficiency during the remainder of the year. Lamb and mutton are surplus from July through December and short during the remaining months. Pork and lard show a similar surplus from November through June, but a very great shortage during the remainder of the year.

THE ADJUSTMENT OF FRESH MEATS TO RATE OF CONSUMPTION

Refrigeration is the chief means for effecting the distribution of uncured meats over the seasons. Curing and refrigeration combined operate in the case of the majority of pork products. Normally, about 10 per cent of the beef carcass and two-thirds of the hog carcass are put into a semi-permanent form by curing, freezing, etc. The rest is

handled at low temperatures by the normal chill of refrigeration. Approximately 4 per cent of beef is canned, 3 per cent cured, and 3 per cent frozen. There are two principal outlets for frozen beef, one for trimmings in sausage and the other for good cuts in the hotel and restaurant trade. Contrary to popular belief, beef carcasses cannot be put into cold storage and held for any considerable length of time unless frozen. Fresh beef is so highly perishable that it must be kept moving continuously toward consumption, and its carry-over into the months of deficient supply is brought about more by the rate of turnover than by definite storage against this time. For example, in the months when receipts are light the turnover may be as rapid as ten days to two weeks from time of slaughter to time of payment for the carcass, while during the season of heavy runs the turnover may be slowed up to as much as twenty-one to twenty-eight days. By providing suitable cooler capacity and operating the beef in strict rotation, it is possible to equalize the income and outgo somewhat along the lines of the table to which I have already referred.

Storage of Cured Meats

In the case of pork, at least two months is required before cured products can be put on the market, and it is therefore the custom to use the period of heavy runs, much as the housewife uses the berry season, as the time for putting down supplies. Heavy runs of fresh pork products can be handled by putting the surplus into the freezers and holding until the market can absorb them, but in any event the products of the cold storage or the freezer must enter trade channels as soon as they can readily be absorbed. The cost of carrying, coupled with the perishability of the article, makes it highly unprofitable to attempt to use cold storage or freezers as a means of affecting or manipulating market prices.

The manner in which the cold-storage houses and the freezers are used today to prevent disastrous market gluts stands out in contrast to the distributive machinery of one or two generations past. There was then no refrigeration, and meat had to be eaten immediately after the slaughter of the live animals or else the product had to be pickled or otherwise cured.

DEMAND FOR DIFFERENT CUTS VARIES

The third problem of distribution is the fact that certain portions of the animal find a greater demand and quicker sale than other portions.

The readiest demand in our cured pork products develops for our best grade of bacon and hams. This grade of bacon can be made from only one class of hogs that possess a certain type and degree of quality. Their sides constitute only 8 to 9 per cent of their live weight, and the number of hogs of this quality is sufficiently small to reduce the figure much lower in comparison to the total kill of fresh pork for the year. In fact, if both bacon and hams of the best grade are lumped together, they constitute only about $8\frac{1}{2}$ per cent by weight of the total hog kill.

The condition is similar in other classes of animals. Loins and ribs are in greatest demand from cattle, yet they average only 14.3 per cent of the live weight. Similarly, the saddle and legs of sheep and lambs bring the top price, but average only slightly over 31 per cent of their live weight. This makes the problem of distribution a matter of moving the less popular portions of the animal or, in relation to the live weight, 88 per cent of the hog, 85.7 per cent of the cattle, and 68.8 per cent of the sheep. The ordinary method of equalizing this situation is to price the less popular cuts so low that they will go into consumption in the proper proportions to balance up with the more popular cuts, but there are times when no market exists at all, and the problem becomes almost unsolvable. Fortunately, such a time as this, which reached its crux in 1919, occurs only once in a packer's lifetime, and he then must wait until the general economic situation of the country gives him relief, not as long a time as many of us would have predicted early in 1920.

5. MARKETING OF BUTTER BY WISCONSIN CREAMERIES¹

The creameries of Wisconsin have no regular defined outlet for their product. A large number of creameries follow the line of least resistance by selling to commission men and butter receivers, while the output of the state as a whole, is sold to many different types of middlemen at a variety of prices for approximately the same grade of butter at the same time. These practices show that successful marketing of butter depends not a little on the bargaining power of the seller.

Out of 272 reports dealing with the marketing of butter, 267 creameries showed that in 132 cases butter is put up in both tubs and prints, preparatory to the journey from creamery to market, in 36 cases prints alone are made and in 99 instances tubs alone are used.

¹B. H. Hibbard and Asher Hobson, *The Marketing of Wisconsin Butter* (1916), pp. 22-26. (Agriculture Experiment Station of the University of Wisconsin in coöperation with Office of Markets, U. S. Department of Agriculture, Bul. 270.)

The amount of butter packed in tubs and the proportion made into prints is not definitely known, but it is safe to say that, since prints are as a rule made for local trade only, a large proportion of creamery butter leaves the plant packed in tubs.

AGENCIES OF BUTTER MARKETING

Creameries market their butter through a considerable number of agencies. Those found to be acting in the case of primary shipment are jobbers, wholesalers, commission firms, packing houses, and grocers. Apparently, commission firms which are in a sense receivers in that they purchase outright much of the butter they handle are more easily brought into relationship with creameries than any other one of the agencies of marketing. Out of 192 creameries, 76 deal with this type of firm.

Only 109 creameries out of 192 sell their butter to one type of agency. Almost half of these sell to commission firms alone. Of the remaining 59 creameries, 22 deal exclusively with jobbers, 21 exclusively with wholesalers, and 16 with grocers only. These data show that it is quite common for creameries to sell to more than one agency during the same year. In fact, 83 out of a total of 192 creameries followed this practice.

Creamery butter is sold to three classes of buyers—first, creamery patrons; second, local purchasers; and third, buyers at such a distance that shipment by rail is necessary.

Of the 200,000 pounds of butter manufactured by the Wisconsin creamery of usual size more than four-fifths is shipped. One twenty-fifth is purchased by creamery patrons and about one-seventh is sold to local concerns.

PRIMARY MARKETS FOR WISCONSIN BUTTER

One hundred and ninety creameries designated their markets for 34,388,893 pounds of butter. These are located in Wisconsin, nine other states, and the District of Columbia, in order of importance as follows: Illinois, Pennsylvania, New York, Michigan, Massachusetts, Missouri, the District of Columbia, Maryland, Minnesota, and Ohio. Within these states are eighteen definite points which receive the bulk of the butter shipped into the territory. By far the most important markets are Chicago, Philadelphia, New York, and Boston. In fact these four markets take about two-thirds of the annual output of Wisconsin creameries, and of these markets Chicago is by far the greatest, taking about one-half of the butter output of the state.

Illinois receives over half, Wisconsin points less than one-sixth, Pennsylvania one-twelfth, New York one-thirteenth and the other five states and the District of Columbia combined only about one-sixth of Wisconsin butter not locally sold.

6. CENTRAL MARKET DISTRIBUTION OF CREAMERY BUTTER¹

The following method of wholesale market distribution of creamery butter was found to be prevalent:

Upon the arrival of a freight shipment of butter at a terminal market, a notice was sent by the railroad to the consignee. The butter was trucked to the receiver's salesroom, where it was weighed, inspected, and held for sale or disposal.

As a means of identifying the shipments from each consignor, the receiver usually furnished the creamery with a rubber stamp or stencil which was used on the top of each tub. This stamp gave the name and address of the consignee, and the serial number of the creamery. These stencil numbers were frequently removed by the receiver before the butter was sold.

7. THE EFFECTS OF SMALL-SCALE PRODUCTION ON DISTRIBUTION IN THE CANNING INDUSTRY²

The canning industry is an industry of small establishments, which are for the most part in places of small population. The industry is scattered in many sections, so that few of the important kinds of canned foods are packed exclusively in any one state. Furthermore, in most cases the expansion of the size of the business unit and the extension of the kinds of products manufactured have not led to important economies. In fact, the large "general-line packers" have shown abnormally high costs, and, while charging high prices, have not made unusually high profits.

The small size of the usual canning establishment and the little capital needed for an undertaking, together with the lack of localization in the industry, have placed great difficulties in the way of centralization of control, and up to this time few very effective combinations have existed. The desire of the producer to place some check upon competition and to control prices, however, has led to

¹ Adapted from Roy C. Potts, *Marketing Practices of Wisconsin and Minnesota Creameries* (1918), p. 11. (U. S. Department of Agriculture, Bureau of Agricultural Economics, Bul. No. 690.)

² Adapted from Federal Trade Commission, *Report on Canned Foods: General Report and Canned Vegetables and Fruits* (1918), pp. 1-2.

associational activity, which, in certain cases, has been almost as effective as more complete combination, for the purpose of affecting prices.

A most important effect of the prevalence of small scattered establishments on the method of distribution has been the resort to the broker of canned goods. The small size of the ordinary cannery has made the establishment of an expensive selling force impracticable, and the distance of the canners from the jobbers, who are located in large cities, has necessitated recourse to a brokerage or selling agency in the vicinity of the jobber.

8. THE DISTRIBUTION OF SUGAR¹

The product of the beet-sugar factories is all granulated sugar ready for table use. Practically all of it is sold through jobbers, a small quantity being sold directly to the beet growers for their own use. One or two companies also dispose of their product to near-by cane refineries.

Small companies can usually dispose of their product either locally or in near-by states, but the largest companies must of necessity find markets in various states. The companies in Utah, Idaho, and Colorado are forced to invade the eastern markets, since their production far exceeds the home demand and because California produces large quantities of both beet and cane sugar and largely supplies the Pacific Coast markets. The Great Western Sugar Co. in 1913, for example, sold sugar in 33 different states. Of course the bulk of their product was sold in the Central Western states, but small quantities were sold even as far east as Vermont, New York, New Jersey, and Virginia. Only small quantities are sold in the Southern states for the reason that the Louisiana cane refineries have the advantage of lower freight rates.

The freight on sugar, which is the largest item of selling expense, is usually prepaid by the company. Freight is also paid on the containers, the weight of a bag being considered as one pound and that of a barrel as 16 pounds. Naturally, the average freight per 100 pounds of sugar is higher for large companies, since the larger proportion of their product is sold in more distant markets and consequently on higher freight rates. Also, companies in the East enjoy some advantage over companies whose factories are located in the West, due to their nearness to the great consuming centers. In 1913-14 the highest average freight charge for any eastern company was \$0.1842

¹ Adapted from Federal Trade Commission, *Report on the Beet Sugar Industry in the United States* (1917), pp. 92, 94, 100-101.

per bag. The average for the four largest western companies was \$0.3672 per bag.

The average brokerage paid is about 3 cents per 100 pounds. The usual charge paid brokers is 3 cents per bag, 5 cents per bale, or 10 cents per barrel. Some companies paid an additional 5 per cent since the broker in these cases assumed the responsibility to the customer and in some instances advanced money to the company before the sugar was sold. One company disposed of its product locally and paid no brokerage, and another company paid no brokerage, all its sugar being taken by one concern.

In 1909 and 1910 the regular cash discount was 1 per cent. Since then the usual discount has been 2 per cent for cash in seven days. Two companies sold their sugar net in 1909 and 1910. Practically all sugar is sold on a cash basis, and the losses from bad debts are practically nothing.

Storage and insurance are charges on unsold sugar which has been shipped to distributing points. A dealer, for example, at some central point may buy less than a carload. The company ships a car to him in order to save freight charges and some time may elapse before the remainder of the car is sold. The dealer buying the remainder of the car pays the freight from the distributing point. Insurance on sugar in their own warehouses, however, is included with the insurance of factory buildings, etc., and therefore included in factory costs.

GUARANTEE AGAINST PRICE DECLINE

The price to the wholesaler is sometimes guaranteed. That is to say, when the manufacturer makes a sale he guarantees the wholesaler or jobber against a decline in price. When sugar was sold it was billed at the market price on the day of sale, but the manufacturer guaranteed the wholesaler or jobber that in final settlement the price should not exceed the market at the time of delivery. Thus, if a quantity of sugar was sold on a day when the price was, say, \$5 per 100 pounds, but when delivered, say, 10 or 20 days hence, the market was then \$4.80 per 100 pounds, the wholesaler was allowed the difference. On the other hand, if the market advanced to, say, \$5.10 per 100 pounds, the wholesaler still got his sugar at \$5. In other words, the manufacturer guaranteed the wholesaler or jobber against loss on a declining market, but did not receive the reciprocal advantage of an advanced price upon a rising market.

While it was formerly the custom among cane-sugar refiners to guarantee the price against decline, this has not been the case for

some years. A large refiner states that the cane-sugar refiners abandoned this custom because the margin between the price of raw and refined sugars has been so reduced that there was nothing left as an insurance against the risk taken in guaranteeing against decline.

9. METHODS OF DISTRIBUTING SHOES¹

In a schedule sent to all the shoe manufacturers of the country they were asked to indicate the channels through which they distributed their shoes. From these schedules there were found 730 which contained answers that definitely defined the channels of distribution. These 730 factories, in 1917, produced more than 293,000,000 pairs of shoes. Almost exactly half of the shoes reported by these companies were sold direct to the retailer. A little more than 42 per cent were sold through wholesalers and jobbers. Approximately 2 per cent was sold to the consumer direct, and a little more than 5 per cent was sold through stores owned and operated by the manufacturer. It is probable that complete figures from all the manufacturers would show only a slight variation from the above percentages. One or two comparatively important manufacturers that operate their own stores did not make satisfactory reports, and this might vary the figures slightly. The largest manufacturers sell the bulk of their product direct to the retailer. Many of these sales are made upon orders, that is to say, the retailer orders his shoes six months or more ahead of the season and frequently specifies the kind of shoes desired. The regular wholesaler also frequently orders shoes made to specifications. The jobber proper usually handles lots of shoes ordered by merchants but not taken from the manufacturers and any overproduction that may have resulted from a failure to sell the entire output to wholesalers or retailers.

10. INFLUENCE OF STYLE ON THE PRICE OF SHOES²

While the development of style in shoes is in response to a legitimate public demand, and has undoubtedly contributed much to the excellence of the American shoe today by making shoe manufacture an art as well as an industry, there are features incidental to the sale of style shoes which impose burdens upon buyer and seller alike.

¹ Adapted from Federal Trade Commission, *Report on Leather and Shoe Industries* (1919), pp. 167-68.

² Adapted from Federal Trade Commission, *Report on Shoe and Leather Costs and Prices* (1921), pp. 137-44.

STYLE ELEMENTS

Although style is an intangible thing, difficult to define, its variations in the shoe industry are simply variations in (1) the color or finish of the leather or other material used in making the shoe, (2) the shape or design or dimensions of the cuttings and lasts, and (3) the materials which are used in the shoe. The origin of any particular style is in most cases traceable to a number of different influences. Probably few, if any, styles are ever really "legislated" into vogue by manufacturers or distributors; the trade's decisions as to what styles should be manufactured are predicated upon a conviction that public taste is developing or reacting toward such styles. There are in the trade well-recognized cycles of style which return discarded fashions to favor after a certain period of time. Generally it may be said that the demand that there be new styles comes from the public, while the determinations as to what these styles shall be come from the shoe manufacturer and are subjected to the indorsement or veto of the public. There are instances, however, in which attempts have been made either to augment the number of new styles as a means of stimulating trade or to introduce a particular style for which there is no basis in popular taste but which would increase the business of manufacturers of certain kinds of shoes or shoe materials. Evidences of propaganda of this sort are discussed later.

STYLE AND THE COST OF SHOES

Styles in shoes add a burden of additional cost beginning with the manufacturer and accumulating with each process until the consumer is reached. From the manufacturer's point of view there is an added cost for materials, labor, and overhead in the making of a "style" shoe. When a certain leather comes into vogue, a big demand for this leather is created and invariably an increased price results. In the cutting of the leather for style shoes there is another additional expense, as this must be done by hand instead of by dies (as in the case of staple shoes) and there is always a waste of leather. It is estimated by some authorities that 10 per cent more leather is required to cut a style shoe than a staple shoe. Also because the work is done by hand the labor cost is almost doubled by the demands of style. Nearly all the other items entering into the manufacture of a shoe—laces, trimmings, factory overhead, and manufacturers' selling cost—are increased by the style demand.

When the style shoe reaches the retailer there are further increases in cost. Because of the uncertainty as to the length of time the style may continue or as to its popularity while in vogue, the retailer must add to his selling price enough to protect him against losses resulting from stocks left on hand when the style changes or if the style proves unpopular. And in addition to charging more for the style shoe, in order to cover this risk, he will often add something to his price for staple shoes in order to balance against loss on his style shoes, thus taxing the purchaser of ordinary shoes for the benefit of the style shoe purchaser. In addition, because of the multiplicity of styles, the manufacturer or retailer who handles style shoes must make or stock a great many more pairs of shoes than if he handled staple lines. This means a greater working capital must be put into the business. Of course, the retailer of fancy shoes benefits from multiplicity of styles and changes of styles in that his fashionable customers purchase more shoes at a time and make purchases more frequently. The fashion buyer is made to feel that a different pair of shoes is necessary for each gown she wears and that her whole shoe equipment must be renewed with each change of style.

While styles in fancy shoes may change two or three times a year, the changes in styles of staple shoes occur very rarely. It might be urged that since fancy shoes are purchased by people who can afford to buy and are willing to be extravagant, there is no hardship upon those who do not buy fancy shoes. But the well-to-do are not the only purchasers of fancy shoes. Moreover, as has already been pointed out, the margin on the staple shoe is increased to cover the risk of losses on fancy shoes, with the result that the general public is taxed to the benefit of fashion buyers.

In spite of the foregoing, there is opinion that styles are beneficial in that they are a tonic to the shoe trade and that they interest the public and bring customers to the store. It is urged, also, that they are the expression of a genuine demand, as genuine as that for creations in hats and gowns; that they afford the purchaser an opportunity for expression of individuality and taste. Further, it is said that the competition among shoe manufacturers to produce effects which will take best with the public results in a constantly improving product and has made the American shoe the best in the world today.

There are special conditions involved in each of the elements of style which deserve consideration. [Not included here.]¹

¹ There follows (Federal Trade Commission, *op. cit.*, pp. 138-40) an interesting discussion of each of the elements of style.

STYLE PROPAGANDA

Styles as expressed in variations of color, material, or lasts for which they call, may directly affect the interests of individuals or groups within the trade or even the interests of the whole trade. As a consequence it is natural to find occasional efforts from within the trade in behalf of certain specific styles or modifications of style. Some of these efforts are on their face detrimental to the public interest, while others are either of no consequence or are actually of benefit to the buying public. Several instances of "style campaigns" have come to the notice of the Commission in the course of the present inquiry. A brief résumé of these will suffice to show how important a factor style may be in the manufacture, sale, and consumption of shoes.

1. A campaign in favor of a return to vogue of button shoes was launched early in 1919 by a large button manufacturing company. The campaign was conducted principally through the medium of paid advertisements in a prominent trade magazine whose principal clientele is among shoe retailers. The name of the button company did not appear in the advertisements, which purported to be announcements that button shoes were returning to vogue. These announcements were identifiable as advertisements only by the word "ad" at the bottom of each page. The campaign was not a success and the advertising was finally rejected on the ground (it is alleged by the editors) that the magazine did not desire to lend itself to the interests of any one group in the industry. Button shoes did not return to vogue to any large extent, and in the fall of 1919 the campaign was taken up by a manufacturer of button machinery affiliated with the United Shoe Machinery Co. and its subsidiary last manufacturing and shoe manufacturing companies. This time publicity was sought, not so much in favor of button shoes as against the prevalent style of very high shoes for women. As already pointed out, buttons are not practicable on high shoes because of the difficulty of making ankle fits; therefore, the relation of a campaign against high shoes to one in favor of button shoes is apparent.

2. At the same time a campaign to maintain the style of high shoes for women was being carried on by a prominent company manufacturing kid leather, which is the only leather that can be satisfactorily used in the uppers of very high shoes. This company, in addition to extensively advertising in trade and fashion papers, addressed letters on the subject to a great many shoe manufacturers. The

trade journal mentioned above, in the same issue in which it carried four pages of the company's advertising, published an interview with the president of the company, headed "High skirts mean high shoes." Such a campaign, if successful, would have continued to force prices of kid leather higher to the neglect of other leathers, and was distinctly inimical to the public interest.

3. Coincident with the effort to continue high shoes in vogue the same company, with the coöperation of other companies, was conducting a propaganda in favor of multiplicity of colors in women's styles. The companies waging this campaign were all engaged in the manufacture of leathers in colors. The object was to make it an essential of style that colors in shoes, hosiery, skirts, gloves, and hats should harmonize not only for ultra stylish dressers but for the general public. To this end the company advertised extensively throughout 1918, 1919, and 1920. A typical advertisement in one periodical asserted, "Of course, Madam wants the boots to match the costume. Shoes of . . . kid are made in the widest variety of harmonizing colors." The advertisement included drawings which showed skirts and gowns of various colors with shoes in corresponding colors. In addition to advertisements in trade papers, national magazines for women, theater programs, etc., there were numerous displays in daily newspapers throughout the country.

The foregoing are examples of propaganda in favor of special interests in the trade. In addition, campaigns have been conducted by or on behalf of the whole shoe industry in regard to certain styles or style policies. There was general opposition on the part of the trade to the introduction of the short French vamp shoe for women, for which there was a certain public demand. The shoe trade papers and the allied council alike were opposed to this innovation, principally, it would seem, because the demand for it came at a time of high prices and large sales, and there was a conviction that in the midst of so prosperous a trade it was wise to let well enough alone and make as few changes as possible in style. In the spring and summer of 1920, however, when the rapid decline in prices of hides and leather occurred and the public had been induced to purchase extensive stocks of shoes through the medium of "clearance sales," an opposite policy was deemed necessary by at least some elements in the industry. A campaign was inaugurated by a trade journal in favor of a multiplicity of styles and style changes in order to force renewed purchasing by the public. In an editorial on June 26, 1920, in reference to recent clearance sales by retailers, this journal declared:

The development of a change in style offers the only possible solution of how to create a vigorous season of shoe selling, for it is obvious that by September 1 the American public will be filled up with low footwear. A strong indication developed this week in the acceptance by certain big shoe buyers in the large cities of 10-inch boots, selected in a range of five colors, with some of them in combination.

Good merchandising practice dictates a change in style when there is a surfeit of any one type of shoe. Take a tip from the apparel trader. If shirt waists one season are short-sleeved, the next they will be made long, but it would not be good style judgment from a dollar viewpoint to reverse the process, because scissors and thread would do the trick. The change is made next to a regular waist line and from that to an apron effect with the same style decision preventing the use of scissors and thread in the making of a new style. . . .

The thought in style building is to "hit 'em where they aint," and boots will do the trick as the first aid to better merchandising next fall. There is always a place for low cuts the year around, so there will always be activity in some of your present stock held for fall sale. In variety of style is the opportunity for more pairs this fall—so make the change operative in early September.

On July 17, 1920, the same journal appeared with pictures of well-known motion play actresses wearing various new style boots. The article including these pictures contained the following statement:

Good business principles make imperative a revision of footwear styles. The women of the country must be shown something new to interest them this fall. The oldest principle of intelligent merchandising is to change style when there is an abundance of any one type of footwear in the possession of the public.

In its issue of September 23, 1920, another important paper in the trade declared editorially:

. . . Attractive shoe samples are being shown on the road, women are wearing skirts shorter than ever, and nothing can stop shoes from continuing to be a style consideration of the first importance. Psychology has a great deal to do with buying and selling. People declare they will never buy such an article or pay such a price and straightway proceed to stultify themselves. . . .

These editorial expressions were in keeping with a change in policy of the joint style committee of the allied council, which met in June, 1920, to forecast styles for the spring of 1921. The report of the committee states:

The original conception of this style committee was to aid conservation and effect the utmost simplicity and economy in the manufacture and distribution of shoes. The shortage of material, which necessitated this, is now ended and we should plan to extend our styles and material to embrace such a variety as will act as a stimulant to demand and cover the widest field of raw materials.

All elements in the industry seem to have agreed that in multiplicity of new styles or in change of style lay the only possible hope of bringing the public back into the market. In July the same kid manufacturing company which had launched a propaganda in 1919 and the spring of 1920 in favor of high shoes and multiplicity of colors, began a new advertising campaign to emphasize again the color harmony idea in dress. In addition to full-page displays in every edition of two leading trade journals, advertising was given to fashion publications and national magazines on a large scale. On July 22, 1920, one of these advertisements declared:

We want every style store in the United States to know that our concern is squarely back of the color harmony idea and that we will coöperate to the limit to help any store put the idea across in a big way. Shoe manufacturers are with us. Style publications will get in line. Costume makers insist on it. Color harmony is the dominant selling idea for 1921.

At the same time another large kid manufacturing company began an extensive campaign of advertising, much of which was devoted to development of the idea that oxfords and woolen hosiery would not be worn in the winter of 1919-20 but that the style was swinging to the other extreme and would call for boots with a very high top. In one trade journal's issue of September 18, 1920, this company's page advertisement was devoted to quotations from various magazines and newspapers to the effect that the new style boots would be 10 inches high. In an issue of another trade journal on September 23, 1920, the company advertised a statement of "a prominent manufacturer" as follows:

It is his belief that new styles and colors will have to be introduced in order to stimulate buying, thereby counteracting the effects of the numerous sales held in cities throughout the country, during which it is assumed that the customer, anticipating future needs, purchased extra pairs. The conclusion is that the introduction of high boots, for example, in colored kid, will tend toward making the bargain buyer feel that the merchandise bought at these sales is not the latest style, and will necessitate the purchase of the new thing.

The foregoing illustrations indicate the widespread determination of the shoe trade in the summer of 1920 to restore vitality to sales by emphasis on style. Some features of this effort promised a benefit to the public interest, but the principal motive behind the whole movement had an opposite tendency. The allied council's pronouncement in favor of a diversity of materials was undoubtedly an effort to bring a wider range of materials into use and relieve the demand

for certain materials (such as kid and calf leather), prices of which had been forced up. This was an end beneficial both to the trade and the public. But the propaganda of the trade papers in favor of a change in style as a means of forcing the public to buy; the campaign waged by certain tanners in favor of high shoes for women in order that kid leather might remain in vogue; and the campaign waged by the same tanners to establish the idea of color harmony in dress, in order that the fashionable public might be forced to buy more shoes, were all directly at variance with the public interest. In effect, the trade proposed that the shoes which it had forced on the public by clearance sales and bargains should be declared "out of date" in order that fall shoes at much higher prices should be purchased before others were worn out.

There are so many and such delicate economic balances involved in the question of style that to regulate it in any way without the probability of misstep would be impossible. From what has been said, however, it would seem that since there must always be a style element in the shoe business, it should be expressed more in diversity and variations of materials used than in multiplicity of patterns, lasts, or colors, and that such styles as create excessive demand for any one material should be discouraged. This is a policy which in the last analysis can only be brought about by the trade itself through its several organizations. It is a policy, however, which would undoubtedly help the retailer and the manufacturer of shoes as well as the purchaser.

11. THE STYLE PROBLEM IN THE SILK GOODS TRADE¹

For some years past, profound changes have been taking place in the methods of distributing the production of our textile mills, and still the transition process continues. These changes which have taken place have been anything but beneficial for the mills, and the silk trade has been one of the greatest sufferers.

Time was when the jobbers ordered largely in advance and paid a fair price for their goods, but the great growth in size of the retailers, all over the country, made them such large consumers that the mills, compelled to do so by severe competition, concluded that only by passing by the jobbers, and offering goods to the retailers direct, could they find a living profit.

The jobbers were sometimes protected by being given prices

¹ Adapted from James Chittick, *Silk Manufacturing and Its Problems* (1913), pp. 284-89.

enough below those quoted to the retailers to enable them also to market the goods on the same basis, but it was seldom that the margin of profit in the goods would allow of this, so that in large part they were unprotected.

PRESENT POSITION OF THE JOBBER

Being thus left out, the number of jobbers dwindled away, those remaining becoming, in large measure, distributors of job lots of goods, very big lots, at times, but still jobs.

Sometimes they have special grades made for them, which are not offered for sale elsewhere, and on these lines they can do business.

They also reach the smaller retailers that it does not pay the mills to go after, and by also selling cut lengths they find channels for distributing substantial quantities of goods.

SELLING TO RETAILERS AND ATTENDANT DIFFICULTIES

At first, this selling direct to retailers seemed easy and profitable, but very soon the keen competition among sellers lowered prices in this channel also, to a level that left no more profit in them than jobbers' prices had formerly allowed, and with this very serious drawback, that the times when the mills needed orders for their looms were not the times when it suited the retailers to place them.

When the mills protected the jobbers, and had both jobbing and retailing customers, the jobbers placed orders in April for July-August delivery, and, as they had to have the goods on their counters at the latter dates, the orders had to be placed in time to allow of their being made, and as goods for the retailers would be running off the looms about April the jobbing orders came in just when needed.

For the autumn trade, goods are not needed on the counters before September-October, and, even if made on order, can be contracted for in July-August, so there is little necessity for the buyers to place orders before then, with the result that, every summer, the dress-silk mills face an interregnum of some three months, when they must either shut down most of their looms or run wholly or in great part for stock.

It is at this juncture that the few large jobbers in the field get their innings, as many mills, to bridge over the slack period and avoid either of the alternatives mentioned, will take their orders at prices not only without profit but frequently at a material loss, considering this less of an evil than to shut down their machinery and permit their organizations to be broken up and their help scattered.

DISINCLINATION OF JOBBERS TO CARRY STOCK

Recently, another phase of jobbing distribution has arisen, which is shown in a disinclination to carry any reasonable stock and in trying to throw that burden on the manufacturers. A big silk jobbing house may send over several times in one day, to a commission agent, for one piece each time of black of a staple line that they are carrying. The advance orders from them have dwindled to miserable proportions and many orders are not for much more than a few sample pieces, coupled with requests or demands for scores or hundreds of sample cards, free of charge. On these samples and cards they do their business, and send in orders months later for such goods as they have sold, and which orders, coming so late, are of little value to the mills. Thus does the jobber play the game of "heads I win, tails you lose," taking no chances himself and letting the mills sweat.

This practice is not confined to silk departments, but is general in other textiles, and houses that formerly bought hundreds, or thousands, of pieces of a style are now, in many instances, buying just a few yards to make sample cards with. To such an extent has this proceeded that a number of the largest and most important mill agents, in dress goods, cottons, etc., are seriously considering the discontinuance of any protection to the jobber, and of putting him on exactly the same price level as the retailer.

There is little doubt that a continuance or extension of such policies on the part of jobbing interests will be prejudicial to their well-being, for if they cease to be either useful, convenient, or profitable channels for mills to distribute goods through, just so surely will they be done without.

THE CUTTER-UP AND HIS METHODS

The cutter-up is another party who has long operated on the manufacturer's capital, and who takes few chances himself. He does not need goods to cut up for his spring trade until January, and for his autumn business in July, and in October and March he buys his sample pieces, that is, he orders only samples at a time when he should be placing his real business, and these sample pieces are for delivery as soon as possible.

Of course, he picks a few styles from this house, and a few from that, and in each case he is likely to make a point of speaking enthusiastically of their goods, and of the quantity that he expects to use. Naturally, it is a fair inference that he thinks well of the styles, or

he would not have ordered them, but his principal aim is to encourage the manufacturer to make up advance stock at his own risk, so that he, the cutter, can have ample stock to draw from if he should sell the styles, and, if not, it is the maker who will stand the loss on the unsalable stock.

After the sample pieces are ordered, the mills, having no business of any amount booked, must either stop or run on stock. Being all pretty "easy marks," they play the cutter's game by banking up goods at their own cost and risk, to use as a stock for him to select from—or to reject. They are guided as to the styles and quantities to make by the number and kind of sample pieces that have been placed, and soon the looms are turning off goods in quantity, and at prices leaving next to no profit, even if sold.

Meantime, nothing has been heard from the cutters, who have made their sample garments and have sent out their men on the road. About the beginning of January, or July, in come the cutters and want so many pieces of this, that, and the other thing for immediate delivery, and if the manufacturer has not the stock on hand they profess great indignation. They will refer to what they told him as to their probable requirements, to the fact that they bought sample pieces of the goods, and will ask what kind of a way that is to handle their trade, and in general will behave like very ill-used men, when really what they deserve is two swift kicks properly placed.

LOSSES ATTENDANT UPON BUSINESS WITH CUTTERS

On the other hand, when the manufacturer presses upon their attention any styles that he has made in anticipation of their wants, but which they do not happen to have done business on, they will not take them at any price, for their ill-success with them on the road has demonstrated to them that they will not sell.

Thus, in addition to stocking up goods for these gentry, with all the cost and drawbacks entailed thereby, the manufacturers suffer most cruel losses, in the final marketing of their unsalable lines, owing to their rejection by the special trade for which they were made, and their unsuitability in other directions.

In consequence, this is a most treacherous trade, and, owing to the unresisting characteristics of the selling agents, it does business largely on the mills' capital and shifts the risk of mistaken judgment onto their shoulders. If the attendant losses had to be paid by the selling agents and salesmen, it is no guesswork to say that this business would be conducted on very different principles.

RESTRICTIONS PLACED UPON RETAIL BUYERS

The retail buyers are held strictly down to certain limits of capital by their principals, and even with a growth in business they find it hard to get permission to use more money. Meantime, however, the increasing diversity of the stock that has to be carried becomes a grave problem. Fashion papers reach every corner of the land, and requests for new fabrics, styles, and colors are made at local counters of remote towns, almost before the goods have been shown in New York.

Makers of advertised and branded goods also push their wares far afield, and create a widespread demand for their specialties.

The result is, that the retail buyer must carry many more styles and colors, and as his working capital remains the same he must spread his stock thinner, first limiting himself to a piece of a color, and then to half a piece of a color, with perhaps full pieces of black and white. Before long, perhaps we may see only dress patterns put in stock.

The stocking of goods in such diminutive quantities makes it imperative that, somewhere in the market, there must exist stocks which can be drawn on instantaneously. If the purchasing were entirely from jobbers this might be all right, but as they go direct to the mills for their supplies it follows that not only are they not in a position to give advance orders, but they expect the mills to carry stock for them also.

RISKS AND EXPENSES UNLOADED UPON THE MILLS

We now perceive that we have arrived at a point where the mills receive no advance orders worth mentioning from either jobbers, cutters, or retailers, but are expected to carry stock for all of them, stock paid for by money borrowed from commission houses at full rates of interest, and financed also by unduly long raw-silk credits.

The carrying of stock not only locks up capital, eats up interest, and other carrying expenses, but styles and colors quickly become *dassé*, and, if carried long, weighted silks may diminish in strength.

Then who is to say what should be made amongst the multiplicity of styles, fabrics, and colors? Let a mill make four lines of goods that are wanted to one that is not, and the loss on the latter will usually exceed the profit on all the former, a fact that would stand out more boldly if every house made a semiannual clean up, either by auction or private sale, thus knowing exactly where it stood.

Most sales managers refer to plain weaves, made for stock, as "staple goods," or "bread-and-butter stuff," but the fact is that just as heavy losses can be made, and often are made, on the so-called staple goods as are made in the closing out of most fancies.

12. THE RELATION OF MILL PROBLEMS TO SALES PROBLEMS: WOOLENS¹

The problems connected with the design of the cloth have to do partly with forming public demand, and partly with meeting it after it is formed. While the problems of cloth structure are primarily concerned with the processes of manufacturing, the problems of design are concerned quite as much with sale as with production. Between these two groups there is a continuous process of interaction and adjustment. A change in the character or direction of public taste is met by a corresponding alteration in the character of production. This in turn may involve a shift in the emphasis on various factors in production. Such a shift may, and frequently does result, in an important modification of the mill's administration and policy.

CHANGES IN CHARACTER OF PRODUCT

The change in the character of the product to meet shifts in public demand is the most obvious of the steps in this series of adjustments. One manufacturer, writing to the Tariff Board, gives a concrete example of this when he discusses the increased use of broad looms and explains some of the reasons for the increased width of fabrics. He says:²

There has been quite a change from narrow looms to wide ones. We have thrown out a good many narrow looms simply because wider goods were wanted.

Over 50 per cent of the dresses, probably from 60 to 70 per cent, of the dresses worn by ladies are bought made up.

The cutters who make these ready-to-wear garments or made-to-order suits use 50, 54 and 56 inch goods which have to be made on the broad looms. So that is why this modern method of making suits has had something to do with the use of the broad looms, because the country requires wide goods. Twenty years ago we had a thousand looms on Jacquard that would weave goods 32 inches wide. The demand has absolutely gone. The cloth that is wanted now for dress goods must be from 40 to 56 inches wide, and the cutter rarely takes anything less than 50 inches.

¹ Adapted from Paul T. Cherington, *The Wool Industry* (1916), pp. 97-102, 164-75, 178-82, 186-87. (A. W. Shaw Company.)

² *Tariff Board Report on Wool and Manufactures of Wool*, p. 1044.

This change to wider fabrics is partly due to the fact that the cutting of patterns by machinery can be done better from these wider fabrics. It is also attributed to the increased public demand for "all wool" fabrics which for some reason not clear are made wide, chiefly in what are known as "6/4" widths.

Another change in the character of product due to changes in public taste is to be found in the lighter weight of fabrics now made, compared with those which were common a few years ago. Heated cars and trains, steam-heated apartments, and revised ideas of hygiene all have had their part in reducing the average weight of cloths produced. Men's suitings, which a few years ago were mainly between 12 and 16 ounces to the yard, are now mainly from 8 to 12. Men's overcoatings, which formerly ran from 16 to 20 ounces, now seldom run over 16 and more often run as low as 12 ounces. It is generally agreed that a similar change has been wrought in women's fabrics.

In these two illustrations—the change in importance of wide fabrics and the decrease in average weights—we find two examples of change in the structure of fabrics (quite aside from the changes in design) which indicate some of the ways in which mill problems and selling problems are bound together.

The Effect on Volume Production

The way in which changes in the character of a product can change the emphasis in the mill problem becomes clear when we recognize the fact that in staples the commercial emphasis is on volume, while in fancy products the emphasis is on the other elements such as speed of sale, and the covering of style risk. There is, perhaps, no better illustration of how "volume" becomes the important element in the sale of a staple than is to be found in the case of a certain American Woolen Company product known generally as "Fulton 3192," from its long-standing number in their list of designs. This fabric is a standard serge weighing 11 ounces to the yard, made always of one type of yarn (2-40s) spun from half-blood wool. It is a fabric of known and fixed content. Its production has run over a long series of seasons and the demand for it always is large. It has come to be regarded as a standard of reference in the trade. Its price, as announced by the American Woolen Company when it opens its season's lines, is widely accepted as virtually this Company's estimate of what the sum of the cost of wool, manufacturing cost, and a minimum mill profit is to be for the season. Competition in this line is so

keen, and production methods have been so standardized, that "volume" becomes the only basis for profit in its production. The emphasis in selling is all placed on securing large orders and these necessarily must be taken at prices which mean careful purchase of wool, efficient production of cloth, and a minimum of profit. For such a fabric there would be every advantage in a plant which would have the typical American characteristics—automatic machinery, high division of labor, and every facility for attaining a large volume of output at a minimum of production cost. It involves also selling facilities capable of handling large quantities at high speed and without waste.

In sharp contrast with this, is the necessary practice in handling novelty fabrics. When these lines are "opened," their price is in no sense regarded as having a direct relation to costs. The great problem in selling is speed, for the goods must be sold while they are popular. The mill problem involves ability to meet sudden and erratic demands, while avoiding the two great dangers, that of not being able to deliver goods when ordered, and that of being caught with goods on hand when the demand fails. In this type of mill problem, the emphasis is seen to be entirely different from that in the production of staple products. The wide use of automatic machinery is not feasible, volume is a secondary consideration, and production costs are not under excessive downward pressure. The selling problem is concerned with getting and keeping a reputation for skill in design and freshness of patterns rather than in paring down costs.

THE COURSE OF FABRIC STYLES

The *couturiers*, or designers of costumes, in Paris are sometimes spoken of as arbitrary dictators of what the women of Christendom shall wear. As a matter of fact, they are but one step in the complicated process of style-setting. While it is impossible in this book to describe in detail the course of development of a style from the time it is designed to its general acceptance, some understanding of the difficulties facing the style designer and the fabric maker may be gained by a consideration of the problems involved in (1) creating new styles, (2) securing the stamp of the market's approval upon them, and (3) transplanting them into the American market.

The Creation of New Styles

It should be made clear, first of all, that "setting" styles is not as definite an act as that term would indicate. The *couturier* owes his leadership more to the establishment of his reputation as a creative

artist than to his ability to secure widespread approval of his creations. In fact, the general acceptance of a creative idea ends its usefulness for his purposes. Such an adoption, however, strengthens his reputation as a style prophet, or dictator. In theory, at least, his interest is mainly in the creation of new styles. In practice his aim is to use his creative ability and his skill in publicity to establish a reputation. Few forms of publicity are as valuable to a *couturier* as that of getting credit for having started some widely accepted vogue.

The style calendar varies somewhat from year to year. The date of Easter, the condition of the weather, and other influences change it. Under ordinary circumstances, however, the garment style year opens with the showings of new designs by the Paris *couturiers* in early February. The designs shown then are seldom accepted in the form in which they are first brought out. But, modified by subsequent changes by Parisian dressmakers, and by new style influences they furnish the leading motifs for the spring and summer season clothes of fashionable folk at the Riviera. Later, at Swiss resorts and at various fashionable bath centers, the survivors among these motifs appear in still further modified form. By June the new ideas have become pretty well-defined and there is a secondary spring and summer showing for the benefit of early American tourists. This usually represents a blending of the February style motifs with the various other influences introduced later. In late July or about the first of August, during the racing season, the second main style showing for the year occurs. This marks the beginning of the fall and winter goods year, for the styles shown at this time are the basis for fall and winter fashions. There is also a secondary display of modified forms about December first. But the real openings are in February and August.

The *couturiers*, as a rule, aim to find some event of general interest upon which to base their designs. This event may be some anniversary, it may be a war, or a successful new play, or merely a new dance. Nothing, great or small, light or serious, is incapable of becoming the basis of an attempted new fashion. The *couturiers*, however, usually relate a design to some real event. There are excellent reasons why they seldom create styles from nothing. Their problem really is a very much more serious one, and their power is less absolute than is generally supposed. The female population of the temperate zone, which constitutes the ultimate market for their suggestions, is obliged, by climate, to change the weight of its clothing at least twice

a year. This division of the year into two parts, representing a heavy-weight season and a light-weight season, is the basis for the work of the *couturiers*. There must be a more or less complete renewal of clothing every six months, and much of this, in the natural course of things, will be in the form of entirely new purchases. As it requires nearly a year to make and distribute the fabrics for the renewal, it is apparent that any forecast of what is to be of interest in the next season must partake of the nature of a prophecy made at least twelve months in advance. Among the many styles worked out in Paris in February, there may be one or two which will determine what will be popular for spring and for summer wear. Similarly, the late summer changes in Paris form the basis for the world's clothing for the following summer.

This is the serious side of the *couturier's* work, and it affects the cloth-maker directly. Cloth-makers as well as clothing-makers recognize the fact that, all other things being equal, that style which proves to be most intimately associated with a live interest at the season's height (six or eight months after the style is designed) is apt to secure the favor of the public, while other fabrics or garments, equally good inherently, may fail.

The more serious side of the costume designer's work is appreciated when it is recognized that what he is doing is making an effort to foresee what half of Christendom will be most interested in months hence. Following his lead, the fabric manufacturer must be ready for the half-yearly renewal of the supply of clothing with fabrics which must be finished and in the hands of the retailers at the time when the renewal is to be made. Furthermore, this must be accomplished in spite of the fact that it takes from four to six months to make and distribute the cloth. It is easy, therefore, to understand that, quite aside from the influence which he exercises among the wearers of clothes, the designer or styler who can establish a reputation for forecasting successfully what the market will be interested in, is watched closely by those to whom style is the center of a commercial problem. As a matter of fact, he secures a certain amount of power actually to influence demand by virtue of the establishment of his reputation for being able to forecast it. The creators of style are not, however, mere arbitrary dictators. The successful ones need to draw upon most of the arts and sciences. They are trained experts in a very large sense. As a group, these designers probably wield a greater influence economically than any group of corresponding size in the world.

The Adoption of New Styles

The second step in the life history of a style is its adoption. Having once created a design, or developed a style, the problem of the *couturier* is to make it enhance his reputation as an originator. This is done by securing artistic as well as commercial approval of the design as inaugurating a "vogue." Each season every costume designer in Paris puts out a large number of new designs in the hope that among them there may be at least one which will have in it the elements of life, and which may have distinct influence in all parts of the women's clothing market. If one out of twenty lives, he is repaid.

The easiest, quickest, and least talked about of the methods for securing the adoption of a style is to be so fortunate as to sell some newly created costume to a royal or titled person to whom it is particularly becoming. The appearance at a noteworthy function of some Princess or other royal personage, with a reputation for sartorial imagination, dressed in a new creation which looks supremely well, may make the future of that style for the season. The gown is never copied exactly, but the idea upon which it is built is made to serve as a style motif.

A second method is to secure the stamp of approval upon a certain type of design by a popular actress, either in connection with her stage work or in connection with her appearance at one of the more fashionable resorts on the Riviera or elsewhere.

A third method for securing approval of a style is more discussed, and is probably more often resorted to than either of these. This is to place a new creation, or a number of them, upon models, or "mannequins," and to send these persons to public places in Paris, such as the races, or the boulevards. When exhibited in this way the clothes quickly attract attention and immediately are talked about, and cabled about, all over the world.

Not only are style reporters on the watch for this method of exploiting new creations, but "mill stylists" carefully keep track of all such appearances. Within recent years, also, cloak and suit makers and buyers for large department stores from many countries (and particularly from the United States) have made a business of being on hand at functions where new creations might be displayed.

Sometimes, the fabric style may be an integral part of the garment style. In other cases, it may have been previously created by the European fabric maker and adapted to the garment by the *couturier*.

Again, it may be that the fabric in the model garment can be used only as a suggestion for new developments and modifications by the cloth-maker. In any case, when the mannequins appear at the Paris races, the fabric is as much an object of study as is the cut of the garment. The materials which are displayed in this way represent a selection from a wide variety of fabrics which have been created on an experimental basis. Out of one thousand designs worked out each year in one house, perhaps fifty will live, and this is not considered discouraging. The information about cloth designs secured upon the appearance of the mannequins with the new styles is forwarded at once by cable to the fabric makers on this side of the Atlantic, and is used to "check up" the earlier style information which they have secured from other sources. It is thus that fabric styles are worked out for the American trade.

Introduction of New Styles into the United States

The third step in the establishment of an American style is its transfer to this country from Paris. A discussion of the processes by which this is done involves the separation at the outset between those designs which are brought over for use without modification, and those which are introduced to serve as style motifs for the factory production of ready-to-wear clothing.

A limited number of the original creations of the Paris designers is bought every year by Americans who go to Paris for the purpose of buying these garments for wear. The market for these direct purchases is not large, but apparently it is growing, and in recent years some of the designers have made an effort to exploit their wares to the American consumer direct. It has become quite common for representatives of the great Paris designers, or even the designers themselves, to tour the United States soon after their season's opening. Some of them give exhibitions, some give lectures, but all are liberal with interviews.

One of the apparent purposes of this method of direct exhibition of Paris models to American consumers was to encourage direct purchase by Americans in Paris, but the indirect object was to strengthen the reputation of the exhibiting house as a dictator of fashions.

Parisian styles as a whole, however, are not thus easily and directly transferred to America. Commercially speaking, the direct exploiting of Paris fashions to the American public is far less important than the adaptation of the underlying style motifs in the creation of acceptable designs for ready-to-wear clothing. It is neither

feasible nor desirable in the case of mass production to copy the Paris models closely, but it is necessary to anticipate the reaction of the purchasing public toward the characteristic features of these creations.¹ Seldom or never is a style, either in cut or in fabric, brought to this country for general use in its original form. Its lines, its characteristic features, become merely a point of departure for innumerable variations.

In the matter of fabrics, for example, the United States market is seldom willing to accept innovations in the radical form in which they first appear across the water. A few years ago, checks were launched in Paris, and as worn by the Parisian mannequins they were huge, coarse checks in black and white. American styles in the ensuing season showed a marked leaning toward checks, but the American ones were tiny and modest compared with their French originals. Season by season, however, witnessed a gradual increase in the size of the American checks until by the third season after their original launching in Paris, big checks in rough fabrics were "being worn" quite fearlessly in the United States.

This step of "adaptation" marks the last stage of the American fabric maker's participation in the problem. Through style agencies he has watched the development of the new creations and their adoption in Europe. He has also carefully noted the American comment on and the attitude toward these new creations. Although he cannot be positive what the American demand is to be, nevertheless with this style knowledge in hand, he is prepared to hazard an opinion and to work out a forecast of what he thinks will be the essential features of the American fabric designs for the season.

Paris is regarded as the undisputed source for women's dress fashions, both for garments and for fabrics. To be sure, German, Italian, American, and other designers occasionally come forward with some acceptable new idea. But in the main, the dominance of Paris in styles and fashions is as complete as it was in the days of Louis XIV.

STYLES AND THE MANUFACTURE OF CLOTH

Even before the *couturier's* openings in Paris, the American manufacturer of woolen and worsted dress goods works out a forecast of the season's main tendencies, based on last season's successes combined with the visible new influences. This he does through "mill

¹"Styles are modified by taking a collar from one garment, a sleeve from another, and the whole reassembled into a new creation embodying the best features of the rather extreme models from which the ideas are taken."—STATEMENT BY A STYLE EXPERT.

stylers" who, after securing "swatches" of as many fabrics as possible, and studying them carefully in the light of past experience, finally make recommendations as to what they think will be the essential features of the fabric designs for the season. These various suggestions are carefully sifted by the mill owner, or by the commission house in case his designing is done for him. Eventually he decides which out of several hundred suggested designs he will try. He is obliged to decide also how much he shall modify them or tone them down to meet American taste. Moreover, he is compelled to calculate the speed with which the garment styles to which they are adapted will spread, and just how much also the garment styles will be modified before they become generally adopted in this country. To be a little ahead of the adoption of a new style is as bad as to be a little behind it. But, as we have seen, the manufacturer's decision as to his fabric styles for the season must be reached from nine to twelve months in advance of the season for which they are designed.¹

American manufacturers "open" their lines every six months, about February first for heavy-weight goods, and August first, for light goods. These openings occur incredibly soon after their style forecast has been confirmed or refuted by the Parisian *couturier's* showing, as reported by cable. The season's prices on staple and fancy products are then announced, and either through salesmen or at salesrooms, or more often both, the mill displays its samples of fifty or one hundred, or, in the case of large concerns, as high as several hundred patterns for novelties. Many of these patterns they know will be failures, but some of them they hope will be "good sellers."

In the case of men's fabrics, style suggestions come mainly from London. . . .

Just what determines the selling properties of a design remains a mystery to the wisest dress-goods designer. Two designs may be identical except for some trifling difference in structure. One may be a good seller while the other fails to move at all. A design which has started being a good seller may give way in mid-season to a pattern which had shown no life at all in the early part of the season. This risk of failure to sell in the case of fancy fabrics can not be reduced to anything like a safe or economical minimum. The successful fabrics, therefore, are obliged to carry the cost of the failures.

¹ Heavy-weight men's wear fabrics are usually styled in October to December and opened for the following winter in January and February. The showing of dress goods by the large manufacturers of staples and semi-staples would be only a month or so later than the openings of men's wear fabrics. It is true that quite a number of the small manufacturers of fancy goods may open their lines no earlier than jobbers, which would be two to three months later than the manufacturers' openings. The openings of dress goods for the light-weight season would be during July or August.

—EDITOR OF A TEXTILE TRADE PAPER.

THE GARMENT MAKER'S PROBLEMS

While the fabric maker is trying to forecast the season, the cutter is struggling with both fabric and garment style problems. His forecast does not have to be finally decided upon quite so far in advance of actual sale as that of the fabric maker, but it is still so much ahead of the season that his risks are heavy.

Dress-goods importers, representing foreign mills, are opening their lines side by side with those of the domestic mills, about August first for the light-weight or spring season, and about February first for the heavy-weight or winter goods season. They have, perhaps, some disadvantages in the fact that their goods must be produced even earlier than the American fabrics, but this is partly compensated for by the high prices they receive, and the more exclusive character of the greater part of their trade.

The consuming public, meanwhile, has had put before it stories of radical changes in fashions. Both by cable news and by the syndicated fashion articles they have been led to believe that one new idea or another is to prevail. "They are wearing," in Paris, "this or that,"—is accepted with no more skepticism than a crop report. The fashion magazines and the makers of paper patterns for home use further prepare the public for the new changes. As a result, when a style is adopted, it is adopted practically everywhere at once. Formerly there were dumping markets in the remote sections of the country which would absorb the fabric manufacturer's bad ventures. But now a dead style is as dead in Nevada as it is on Fifth Avenue. The dumping outlet is gone.

A few months after the fabric lines are opened come the early showings of the cutters, followed one to three months later by the openings in the department stores for ready-to-wear garments, and incidentally for fabrics. Direct importations from Paris, garments made by cutters on the store's own designs, or secured from the cutter as his creations, are put on view in the more progressive department stores in all parts of the country. These exhibitions usually appear in New York, other eastern cities, and Chicago, about February first for the light-weight and about the middle or last of July for the heavy-weight season. These showings, interpreted by the comments and the actual sales which follow, become the basis for the department stores' initial orders to the cutters for ready-to-wear garments, and to the mills for over-the-counter fabrics.

The opening of fabric styles is a comparatively simple matter.

There is a good deal of design piracy, to be sure, but with ordinary care a fabric manufacturer may at least secure credit for originating a design and take the cream off of the high price market before his competitors have time to steal his idea.

In the case of garment styles, however, design piracy is more serious. A garment design may be copied in a few hours. This has been a serious obstacle in the way of introducing open competitive methods into the women's ready-to-wear clothing lines. If designs were protected, manufacturers could display them earlier, they could conduct their selling operations more deliberately, and they could publicly open their styles to buyers with great mutual profit. As it is, garment makers usually have their own private showings and scrupulously exclude all except bona fide buyers whom they can trust.

INDIRECT EFFECTS OF STYLE CHANGES ON DISTRIBUTION

Besides these direct results of style changes, affecting the character and the volume of production, there are certain indirect effects upon the distributing mechanism. The chief indirect effects are those which have grown out of the exaggeration of the real style influences. This has introduced into cloth distribution elements of uncertainty, panic and fear. The large-scale buyers, including the cutters and the department stores, are in many cases, by virtue of their mere size alone, able to drive a skillful bargain with the mill or selling house. An increasing portion of the piece-goods trade is thus deprived of the equalizing influence of the wholesaler. But these large-scale direct buyers are also completely at the mercy of style influences. With the increase of contract and direct buying and the greater uncertainty of the buyers as to what to buy, the time allotted for the processes of manufacture is being continually shortened and the peak load in production is being intensified. Even within the last five years there has been a material lengthening of the time between the manufacturer's openings and the heavy purchases from the cloth-maker by the cutter. The large retailer also postpones till the last moment his direct purchases both from the cutter and from the cloth-maker. "Hand-to-mouth" buying has become a marked trade evil. The result is that during the early part of the season the fabric makers do scarcely any business at all, having their mill staff in the fancy goods department partly or wholly idle, and being afraid to let them go for fear the rush may come any day. During the later part of the season, on the other hand, the mills are choked with orders. Neither condition is economical.

The cutters are in somewhat the same dilemma. The forced delay in their purchases, has, of late years, become a burden which materially increases the cost and decreases the efficiency of factory operations. The gravity of the situation is augmented whenever the style risk is complicated by anticipated financial depression.

13. THE ORGANIZATION FOR THE SALE OF COTTON TEXTILES¹

Four methods of selling cotton cloth are followed: (1) selling direct, (2) by a selling house, (3) through a broker, and (4) to a converter.

SELLING DIRECT

When a cotton manufacturing company sells direct, the goods are marketed either by an officer of the company or by a salesman employed solely for that purpose. The business is generally transacted by the treasurer, who accepts the orders and arranges the terms of sale. Several large companies, however, have established private selling offices under the control of the treasurers, in which the trade is attended to by salesmen. But as yet few manufacturers operate on a scale sufficiently large to permit the maintenance of a separate selling department. In the majority of instances where the products are sold direct, the work is personally superintended by the treasurer.

Selling direct is particularly characteristic of the New England mills which manufacture staples. Those mills are located chiefly in southern New England, in the vicinity of New Bedford and Fall River. They produce plain goods of standard styles, the selling of which is easier than the marketing of fancy goods with seasonal designs. Moreover, the standard goods are sold for cash or on short-term notes, whereas longer credit must be granted on the other class. Still, not all New England mills producing staples sell direct, for reasons to be explained later. In the South many of the yarn mills, but few of the cloth mills, sell direct.

The standard goods disposed of in this way are sold in the gray, that is unfinished. The mill normally has orders about three months ahead, especially on the finer grades, but if the market prospects are good, the mill is kept running even if no orders are immediately at hand, and the cloth is warehoused till there is a demand for it. To express it in trade terms, when the manufacturer has not sold ahead,

¹ Adapted from Melvin Thomas Copeland, *The Cotton Manufacturing Industry of the United States* (1912), pp. 207-19. (Published by Harvard University Press, copyright by Harvard University.)

he manufactures for stock, since there are many spot sales of this class of goods.

The gray goods manufactured in Fall River are usually sold f.o.b. Fall River, the manufacturer ending his responsibility, except for faults in the fabric, when the cloth is delivered to the transportation company. The cloth is finished wherever the purchaser desires, and at his own responsibility.

The advantage of selling direct is that the mill is more independent. There is no conflict between the treasurer and the selling house, and no suspicion that the selling agent is not trying to serve the best interests of the mill. The treasurer may not always be as capable as the specialists of the selling house in judging the market, but the amount that would have been paid to the selling house as commission is saved.

THE SELLING HOUSE

The selling house, sometimes called selling agent or commission house, is a separate firm and is in most cases the sole agent for the mill whose goods it handles. A few mills have two selling houses, each for a different kind of product. For example, a mill may have one selling agent for yarns, if it makes yarn for sale, and another for cloth. A small number of mills which employ a selling house also sell goods direct. But in the main one concern markets all the goods produced by the mill, and the mill is not at liberty to sell through any other agency. A selling house, however, is agent for several mills, and frequently markets woolen as well as cotton goods.

The selling houses have gradually expanded their business with the increase in the size of the plants of the companies for which they are agents and with the acquisition of the business of new mills. The larger houses have offices in New York, Boston, and numerous other cities. The more prominent ones have from ten to twenty mills for which they act as selling agents. In all instances they accept the orders and control the marketing of the goods, the treasurers merely collecting the bills. The selling agent has two distinct functions—the distribution of the goods and the provision of financial assistance. The two services are not of equal importance in New England at the present time, but in the South both are utilized by numerous mills.

For southern mills the difficulties of marketing the cloth give an opportunity for selling agents. The distance from the markets and the lack of intimate acquaintance with market conditions are obstacles to direct selling by southern manufacturers. Moreover the holding of stock in southern corporations by selling houses, while less common

than in New England, is by no means unknown. But the dearth of capital has had fully as great influence as any other factor in causing the southern mills to rely upon selling houses. Inasmuch as their quick capital has seldom been adequate, the southern mills have borrowed money either by receiving advances on the goods or by an indorsement of their notes. Spinning mills occasionally obtain funds directly from the southern banks in exchange for a lien on their stock of cotton. But for advances on the product and the indorsement of notes or guaranteeing of accounts northern selling houses have been employed and have frequently loaned from 75 to 90 per cent on the value of the cloth. In return they have received not only interest on money advanced and a higher commission for indorsement of notes or guarantee of account, but also the exclusive agency for the sale of the product.

The commission charged for the sale of southern goods is higher, because of greater risk. A southern manufacturer pays his selling agent $3\frac{1}{2}$ or 4 per cent, a northern manufacturer $1\frac{1}{2}$ or 2 per cent. The commission on southern goods includes 2 per cent for selling and 2 per cent for guaranteeing the payment of the purchasers' accounts. The majority of New England mills are so strong financially and their credit is so firmly established that the additional indorsement of their commercial paper by a selling house is seldom little more than a matter of form; hence they are relieved of the extra charge. In the case of the southern mills, which are generally smaller, less strong financially, and too remote to be easily watched, there is greater risk. Southern goods are more apt to have flaws and do not, as a rule, enjoy the reputation of northern fabrics.

The selling house has maintained a strong foothold in New England also, although not in New Bedford and Fall River. In some instances large holdings of stock in a mill by a selling house or some of its members have continued the connection between the two when otherwise it would have been broken. Secondly, gray cloth manufacturers situated in the more remote parts of New England would perhaps find it difficult to keep closely enough in touch with the market to sell direct. Others are so weak financially that the credit of the selling house is almost indispensable. They have not sufficient ready capital to provide for current expenses—the payment of wages, purchase of raw material, and settlement of other charges incurred during the process of manufacture and until the goods are paid for by the purchaser. Nevertheless for a majority of the New England manufacturers, advance of money or indorsement of notes is not

essential. The chief credit has come to be primarily with the mill. Consequently financial aid is no longer as influential in securing exclusive agencies for New England cotton mills by the selling houses. On the other hand, the selling houses have found an increased scope for activity in the marketing of other than staple fabrics.

Fancy Goods

The mills which manufacture fancy goods of seasonal design, such as fancy prints or gingham, ordinarily employ a selling house. They are mills which do not sell in the gray. The selling house either selects the designs itself, or is at least asked to give its opinion on the designs before the patterns are set up. Later, samples of cloth bearing the various designs are sent to the selling house by the mill, by means of which orders are solicited from regular customers and from the trade in general. The selling of these fancy goods requires especial skill in judging the designs, in securing orders, and in estimating the probable demand. The selling of staples is much simpler; if the goods are not in immediate demand at satisfactory prices they may be stored away in the warehouse. But the fancies must be sold to meet the prevailing fashions during the season for which they are produced. Otherwise they can be disposed of only at a loss, owing to the dislike for last season's designs. It is essential that the marketing of the fancy goods should be in the hands of skilled salesmen.

Complexity of designs and necessity of securing orders before the goods are manufactured have made it necessary to send out the designs long before the season in which the goods are to be placed upon the retail market. Each mill usually has two seasons. For example, a mill may have a flannel season and a wash goods season. For the latter, designs are sent out in the autumn, the goods are made during the winter and put upon the market in the spring. For the former, the designs are issued in January, and the goods made ready to be shipped in the autumn. Likewise in gingham and fancy prints there are spring and autumn designs. While the special seasons are well defined, designs are also sent out by the mills during the intervening periods. The designs are submitted to the trade much earlier than formerly, now usually six months ahead, whereas fifteen years ago cards were made up in January for spring delivery. The marketing of fancy goods, therefore, has become specialized along with the specialization of the industry.

The selling department must understand the market thoroughly and this can be accomplished better by a selling house than by the

treasurer or his subordinates. A selling house has so many agents scattered over the country that it can feel every pulse beat of the market. It can foretell more or less accurately the probable strength of the demand for the individual lines and understands the local tastes. Certain styles are better received in some localities than in others, and in general there are distinct sectional characteristics. For example, the people in the Southwest prefer light gay colors and those residing in the Northwest darker gray goods. These local preferences and the fluctuations of a wide market offer opportunity for specialization in selling fancy cotton fabrics.

The seasonal goods are made to fill orders which the selling house has secured before the manufacture of the cloth is begun. Of course, if the selling house thinks that the market will absorb more of the goods than it has orders for, it accordingly requests the mill to manufacture a larger quantity. As a rule no order is accepted for less than 2,000 yards by some mills, and by other mills for not less than 6,000 or 10,000 yards of a single design. In every case the order must be large enough to pay for setting up the design and adjusting the machinery, without necessitating the charging of exorbitant prices.

A practice of which the mills complain is lenience in allowing customers to cancel orders after they have been accepted by the selling house, given to the mill, and the cloth made. In the recent depression following the panic of 1907 many orders were canceled, thus causing loss to the mills. The competition between the mills and the desire to retain customers led to the extension of a practice which the mills would be glad to get rid of. The merchants, however, justify their action in canceling the contracts on the grounds that the mills were tardy in filling the orders which had been accepted.

THE BROKER

Unlike goods that are finished at the mill where woven, usually sold by a selling agent to the wholesaler or large retailer, cloth sold in the gray ordinarily passes through the hands of a broker to a converter. The broker is a middleman who brings together the buyer and the seller. In New York, Boston, Fall River, and some other cities, there are a number of these cloth brokers who buy no cloth themselves and accept no responsibility but merely act as intermediaries. In Fall River the greater part of the cloth, probably ninety per cent, is sold through brokers, and in other places where standard goods are manufactured, brokers usually aid the treasurer of the selling house in securing orders for cloth in the gray. The New York cotton goods brokers

are by far the most important, however, and the number has increased from eighteen in 1907 to thirty-nine in 1911. If a man wishes to purchase a certain quantity of a specified style of cloth, the broker finds a manufacturer or a manufacturer's agent who can fill the order. Thus by keeping in touch with the buyers and with the sellers, the broker is able to bring together the right parties, and with the expansion of the industry and the growing volume and diversification of products such a middleman secures an increasingly large place in the market organization. The purchaser is able to find more readily the goods which he wants, and the manufacturer economizes in time spent in seeking customers.

For his services the broker usually receives one-half of one per cent on the value of the goods which he is instrumental in selling. As the greater part of the southern goods are sold in the gray by the selling house through a broker, whereas many New England mills manufacturing this kind of goods employ only the broker, it is evident that the commission paid to the selling house is saved to the northern mills.

THE CONVERTER

The purchaser of the gray goods is either a printer or a merchant-converter, another middleman. The term converter is used in several senses, but here is applied to the class of men who buy cloth in the gray, have it converted, and then sell it to the wholesaler or large retailer. The converter secures the order for a certain style of finished goods, or thinks that he can dispose of such goods, and then buys the cloth from a manufacturer. He gauges his purchases by market conditions, "going in" lightly or heavily according to trade prospects and the price at which he can obtain the cloth. He sends the cloth to the converting establishment which offers the best terms or has a specialty in the kind of finish which he desires. The cloth is bleached, dyed, or printed, as the case may be. For printing the converter may have his own designs; a few converters who specialize in prints and offer fancy patterns even send agents to Paris for the latest ideas.

The converter has become particularly prominent within the last ten years. The increase in the scale of production, the specialization of the industry by the separation of cloth manufacturing and cloth finishing, and particularly the demand for greater diversification of styles and finish have caused a great increase in the converter's business. By having the cloth converted on his own responsibility, the converter relieves the manufacturer and the finisher of a certain

amount of risk. This encourages an increase in the scale of production and enables the manufacturer and the finisher to give more attention to the refinement of their respective branches. The converter also brings in capital and credit, buying the goods on short terms of payment, carrying them till they are converted, and, if need be, providing credit to the purchaser. The development of the converter, therefore, signifies a diversification and specialization of the distributing functions and renders the market more plastic. An increased volume of trade can be more nicely adjusted to the varying demands.

A few converters, it may be stated, carry on a wholesale business. On the other hand, the cutters-up, or ready-made garment manufacturers and shirt, collar, and cuff makers, occasionally invade the converter's field and buy goods in the gray to be converted on their account. One of these firms, Cluett, Peabody & Company, has recently purchased a bleaching plant to be operated in connection with its collar factory. Yet, notwithstanding these variations in practice, experience in this country and abroad indicates that the merchant-converter will probably be increasingly important in the future.

The cloth may go through many hands, therefore, after it is woven. If the manufacturer employs selling agents, the cloth is handled by them, at least on their books. Then a broker may aid in selling it to a converter who has it finished before passing it on to the cutter-up, the wholesaler, or the retailer. So that from the time it leaves the mill till it is placed upon the counter in the retail store, it has been the subject for possibly five or six different transactions. Not all cloth goes through so many hands. It may be sold directly by the mill to a large retailer. For example the large department stores are seeking to deal directly with the manufacturers and converters and to buy from the jobbers only when the latter are "caught long" and are willing to make concessions on prices. But a large quantity of cloth is handled by all the various agents and middlemen that have been described.

KNIT GOODS

Knit goods are sold either direct or by a selling house. A broker may take part in the selling of the goods, but his place is not large, and the converter has no place at all since the goods are usually finished at the mills where they are made. Some lines are sold ahead, but the bulk of the goods are staples so that they can be carried in stock if the mill has not enough orders on hand to take all that it

produces. Though some of the mills produce specialties, the greater part of the trade is in standard products which are sold as cotton cloth is sold and frequently through the same channels.

The chief market center for all kinds of cotton goods is New York, where in Worth Street and its neighborhood the offices of selling houses, brokers, and converters, and the establishments of numerous jobbers are located. Although the volume of business transacted in Boston is still large and the western markets are constantly increasing in importance, the trade gravitates toward New York. That city is the center of the import and export trade, and its position at the head of our financial and commercial system helps to make it the leading American dry goods market.

To summarize the present tendencies in the development of the organization of the American cloth market, merchandising is becoming more diversified and more specialized. The selling house is apparently less important than formerly except in a few special branches. It might lose its hold there, even, since the mills manufacturing fancy seasonal goods are large and might open their own selling offices, were it not that these are the mills in which the old selling houses have the largest holdings of stock. For the sale of gray cloth the selling houses seems to be losing ground. On the other hand, the broker is gaining a stronger foothold. But it is the merchant-converter who is coming most rapidly to the front.

14. THE ENGLISH COTTON TEXTILE MARKET¹

A pound of cotton arriving in Liverpool may pass through many hands. It may happen that the importer sells it himself to a manufacturer who operates spinning, weaving, and finishing mills, and who sells the cloth to retailers in England or other countries. But more frequently the pound of cotton will pay tribute to two Liverpool brokers, to a yarn agent and merchant, to a cloth agent, converter, and merchant, and finally to a wholesaler and retailer. During its course it may also have been the property of a spinner, a doubler, a weaver, and a printer.

The advantage accruing from this multiplicity of middlemen is not inexpensiveness but flexibility. The tentacles of the Manchester trade reach out to all corners of the world, and whatever form of manufactured cotton is sought, whatever accommodation is desired, someone can be found in Manchester ready to accept the commission.

¹ Adapted from Melvin Thomas Copeland, *The Cotton Manufacturing Industry of the United States* (1912), pp. 371-72. (Published by Harvard University Press, copyright by Harvard University.)

Of all the assets which make it possible for the cotton industry to attain its largest dimensions in a country which does not produce the raw material, and which consumes only 10 or 20 per cent of the yarn and cloth manufactured in its mills, none is more significant than the adaptability of the commercial organization.

If America is to become a large exporter of cotton fabrics, we may expect a similar diversification and specialization of the merchandising functions. Methods which serve admirably for the domestic market do not suffice to meet the varying exigencies of a trade with countries where local conditions and local customs are very diverse. It is idle to call upon American manufacturers to study foreign markets. Their part is to stand ready to execute orders presented by merchants who understand the requirements of the customers, provide credit, and assume the risks inevitably involved in foreign trade.

15. SOME FEATURES OF THE MERCHANDISING OF AUTOMOBILES¹

When the supply of automobiles caught up with the demand a complete revolution in selling methods took place.

In the early day:

1. The manufacturer made a car that would run.
2. He got a retail organization.
3. The retail organization pushed his product out to the consumer.

At the present time:

1. The manufacturer makes what the consumer wants.
2. Through national advertising he convinces the consumer that his car is what the consumer wants.
3. As a result of the strength of his national proposition, he gets a retail organization.

That is, a retail organization today is the result rather than the cause of sales demand. But that which is the result becomes, in turn, an effective influence. A strong retail organization contributes powerfully to upbuilding the strength of the national proposition. Hence we have a cycle of result and influence, making constantly stronger the strong companies and eliminating inevitably the weaker ones.

Thus it has come about that strong dealers and strong companies, for purposes of mutual self-advantage, have tended to gravitate together. Perhaps in some territory an exception to this rule may still

¹ Adapted from C. C. Parlin, *The Merchandising of Automobiles* (1915), pp. 9-30. (Curtis Publishing Company.)

be found, and some dealer, because of his powerful standing in his community, may still be successfully selling an unknown car; but if such a dealer exists, he is smart enough to know that he could make even more money if he had the agency for a popular car. He wants a better agency.

Every manufacturer wants the best dealer, and hence whatever exceptions today exist to the rule that the strong dealers and the strong companies have come together are likely soon to be removed.

But some manufacturer with small production may say: "In my experience, on the contrary, I find that the local agent is the key to the situation. Where I have strong dealers I have good sales; where I have weak dealers there are few sales. My only problem is to get more strong dealers."

This manufacturer only states the weakness of his position. He is depending on the merchandising methods of the past, which can no longer endure. Unless he develops a definite consumer demand for his cars his strong dealers will slip away from him and no other strong ones can be found to take their places. The manufacturer will find himself stranded without a demand from the consumer and therefore without retail outlet.

If one inquires on Automobile Row how many of the dealers are making money, the prevailing answer is: "ten per cent"; and when one inquires for the names of the "ten per cent," the names given are of those dealers who are handling the nationally popular cars. If one inquires on Newspaper Row what dealers are allowed credit for local advertising, the names again are of those dealers who are handling the nationally popular cars.

This means that if a man is planning to go into the automobile retail business today there is just one important problem before him. It is not methods of selling cars, it is not methods of cost accounting. His one problem is—what agency can he get? If he draws the right agency, he will make money. If he draws the wrong agency, he will lose money.

If in traveling the country over one found in one city that a certain car was strongly represented, and that in another city a different car had the leadership, taking the United States as a whole, it would be practicable to find representation for an indefinite number of makes of automobiles.

When one finds that in practically every community the same companies have the strong dealers it is obvious that only a limited number of automobile companies can find adequate representation.

In an average city of 25,000 people there are apt to be about four garages, with about ten makes of cars represented. In a city of 50,000 perhaps there are six garages, with fifteen cars represented; and only in a major city do we find many companies equipped with service stations.

Hence, viewed from a retail standpoint, there seems to be opportunity for not more than thirty or forty automobile companies to secure adequate retail representation.

NO MONOPOLY IN STYLE LINES

It is interesting to note that when one approaches the problem from the manufacturing end the same conclusion is reached. The pleasure-car market cannot be monopolized, because the automobile is two things: it is a machine and it is a style carriage. If it were only a machine it might be monopolized, but since it involves the style element, monopoly is impossible.

Manufactures may be divided into two classes: utilities and style goods. Utilities comprise all those machines and articles which are bought solely for their efficiency or intrinsic qualities; for example, wagons, plows, sheeting, sugar. Style goods comprise all those articles that outwardly express a man to his neighbors; such as clothes, carpets, draperies, and motor cars.

The manufacture of a utility may be monopolized; for if any manufacturer produces a utility that gives greater value or service for the price than any other, theoretically everyone will buy it. But, practically, however efficiently one manufacturer can produce, some other manufacturer can produce near enough to his standard to be a competitor; and practically there is a value in a name and there are differences in consumers' opinions. Hence, as a practical proposition, the theoretical monopoly is seldom attained, unless the manufacturer controls a raw material or is protected by patents or other exclusive concessions. But the manufacture of a utility does tend to concentrate until a small number of concerns, four, or six, or eight, controls the great bulk of the output. Plows, for example, were once made by a multitude of village factories. Today a few large companies make nearly the entire product.

But in the creation of style goods monopoly is impossible; for, since style represents the owner's personality, there must be a variety of styles to represent various personalities.

The operation of the style factor may be illustrated from the clothing field. A certain motive dominates for a time, but under that

motive there are many variations of detail and patterns. The individual must first show obedience to social requirement by accepting the motive and then must assert his individuality by selecting a variety that is not too common. To refuse to accept the motive brands him as non-social. To accept identity, brands him as devoid of individuality.

STYLE CHARACTERISTICS

In women's styles changes are kaleidoscopic, and the individual variations are marked. In men's clothing changes are less frequent, and individuality is denoted by pattern and minor detail.

But in every style line there are two inherent characteristics:

1. The domination of a type for a limited time.
2. Variety within that type.

The pleasure car involves the style element; for the pleasure car is the traveling representative of a man's taste or refinement. Few people see the kind of carpets or draperies we have in our home, but everyone notices the kind of a car we drive, and a dilapidated pleasure car, like a decrepit horse, advertises that the driver is lacking in funds or lacking in pride.

Applied to pleasure cars the style element dictates—

1. That changes must be made from time to time in those features that determine the appearance and "talking points" of a car.

Style in the automobile means more than paint, upholstery, and body lines; it includes all those elements which are the subject of arbitrary preference. If, for an example, the number of cylinders in a car is selected on the basis of efficiency or cost, the number of cylinders loses the style element and becomes merely a part of the mechanism. But whenever a man selects his number of cylinders merely as a question of preference, to keep up with his neighbor, to have something to talk about, to please a fancy, with him the number of cylinders presents the phenomenon of style purchase.

2. That within any given class a manufacturer cannot get and permanently hold much more than fifty per cent of his market; for a style reaction automatically sets in against anyone who controls a majority of a style market.

PECULIARITIES OF THE AUTOMOBILE MARKET

The sale of automobiles has three striking peculiarities:

First, motor cars are bought largely for pleasure, and the man who buys an automobile for \$1,000 or \$2,000 is usually paying a higher

price than he has ever before paid for a pleasure. Perhaps once in a family history he may have taken the family to Europe or to California and spent a similar sum. But the man who spends \$2,000 for furniture is a good furniture buyer, and the man who spends \$2,000 in a jewelry store is a customer to whom the proprietor lifts his hat. The man who spends \$2,000 for an automobile is, from the standpoint of the manufacturer or the retailer, an ordinary customer. Not so, however, from the standpoint of the purchaser. He is spending a sum of money such as he is accustomed to use only for an investment.

A second peculiarity in the sale of automobiles is that the manufacturer must each year sell an entirely new market. A manufacturer of ready-made clothing who puts out garments that are right in quality, style and price can depend upon it that the next year he will have reorders and the following year still more reorders, and finally can depend upon selling a considerable portion of his product each season to regular customers. If the average purchaser bought an automobile every year the same would be true in the automobile industry, but the average buyer keeps a car two or three years, and by the time he is ready to buy a new one material changes have been made. He is willing to listen, perhaps, more favorably to the manufacturer of his own car, but he is also willing to listen to the story of a rival manufacturer. Hence it is necessary for the manufacturer each year to sell a new market.

Third, automobile selling involves a style clean-up. Production reaches its crest in February and March and then falls rapidly off as the sales rise to a crest in May and June. Sales again fall off to allow for a style clean-up in midsummer. Meanwhile production rises to a minor crest on the new models, and again falls off just as the sales of new models rise and in turn fall as winter approaches. That is, in the automobile field we have two clean-ups—a style clean-up in midsummer and a stock clean-up in the winter.

From the standpoint of the manufacturer and the retailer, it would probably be desirable to eliminate this style change, but in the heart of the man who buys an automobile this year there is a desire that the car have some distinguishing earmarks by which his friends will know that he has a new model. Hence style changes are inevitable, and if motor cars ever reach such a mechanical perfection that further change in the mechanism is not desired the manufacturer will nevertheless find it necessary to make changes in the appearance, just as a tailor moves a button up or down on the vest or changes the lapel of the coat.

The industry inherently involves style and must accommodate itself to the peculiarities of style merchandising.

NATIONAL ADVERTISING

The automobile industry will continue to be one of the largest users of national advertising, for several reasons.

First: The automobile industry, being a new industry, adopted modern methods of merchandising and founded its sales system upon national advertising, so that today in the automobile world advertising and merchandising are nearly synonymous terms.

Second: Since the pleasure car involves the style element, the number of manufacturers is likely to be thirty or forty, and these thirty or forty, finding it necessary each year to sell a high-priced article to which a prospective purchaser and his entire family are giving much attention and study, are bound to vie with each other in large space advertising.

Third: Because of the style element, preëminence in a class cannot so easily be maintained. Any defect in product or weakening of advertising effort on the part of the leader will enable some other firm to rise to leadership, and more or less change in relative positions of companies from year to year seems to be likely. Any company that secures a leadership can retain its preëminence only by keeping in the van of the style procession and backing its product by strong national advertising.

Fourth: Because the consumer gives active attention and is keenly awake to new ideas in automobile purchases, a new manufacturer with a mechanical or style feature that strikes a popular note can develop, by advertising, sufficient consumer demand to break into the crystallized sales organization and become a factor. The field of competitors can never be declared closed against new entries.

16. THE MARKETING OF FARM MACHINERY¹

While the capital invested, the number of wage earners, and the value of the product have increased rapidly, the number of establishments making farm machinery has decreased from 1,333 in 1849, with an average output of about \$5,133, to 601 in 1914, with an average output of about \$273,023. This marked development toward a concentration of the industry into fewer and larger plants is the

¹ Adapted from Federal Trade Commission, *Report on Causes of High Prices of Farm Implements* (1920), pp. 43, 44, 66, 50-52, 55-61, 65.

natural outcome of the increasing capital investment required to do business, owing to the costliness of the machinery manufactured and the expensive credit and service systems maintained. Another reason for this concentration has been the intense competition which resulted in stronger concerns driving weaker ones out of business. Numerous combinations of competing companies have also contributed to reduce the number of manufacturers.

CHANNELS OF DISTRIBUTION

The ordinary "chain of distribution" is simple and direct—from factory to branch house, to retail dealer, to farmer. The great bulk of farm equipment is marketed in this manner. Where the sales territory is so large that the branch houses do not cover all of it, or where the manufacturer is too small to be able to maintain branches, sales are made to jobbers who sell to the retailer. An exception to the ordinary system is the mail-order house, buying direct from the manufacturer or making the implements itself and selling direct to the farmer on mail order. Manufacturers making only one line generally sell to jobbers.

Branch houses and jobbers are located throughout the country at important distribution centers, while every town in the farming sections has its local retail implement dealers, usually two or three in each town.

The manufacturer makes and ships the implements to his branch houses, or sells them to jobbers. The branch house employs salesmen to visit the retailer within the branch territory, solicit business from him, and give information regarding his financial soundness. It also employs experts to aid the retail dealer in setting up, demonstrating, adjusting, and repairing machinery, and in some cases it employs canvassers, who assist the dealer in getting orders from the farmer or introducing and selling new or intricate types of machinery. Sales by the branch house to the dealer are made under a contract agreement. Shipments are usually made to the dealer from the branch warehouse or transfer stock.

The retailer receives and stores the implements in his warehouse or store, displays them for the farmer's inspection, explains the method of operation, and when he makes a sale often sets up and delivers the machine. He is in some cases assisted by the canvassers and experts of the branch house in performing these functions. He makes minor repairs and keeps a stock of repair parts readily available, so that the farmer may lose no time if his machine breaks down

in the midst of the plowing, seeding, cultivating, or harvesting season. In a number of localities the retail dealer may be found in competition with or supplanted by farmers' coöperative stores, chain stores, or farmer agents representing the manufacturer.

THE WHOLESALE SYSTEM

The wholesale system of implement distribution consists of branch houses maintained by manufacturers and of independent jobbers who buy from the manufacturer and sell to the retailer.

The Branch House

The first link in the normal chain of distribution is the manufacturer's branch house. Branch houses are established at convenient trade centers, from which farm equipment is distributed to dealers within an allotted territory. Branch houses of companies which do not have full lines sometimes supplement their lines by jobbing non-competing implements of one or more other manufacturers.

The following table shows the number of branch houses, jobbers, and transfer points of twenty-seven of the manufacturers reporting on their sales organizations:

TABLE 7.—SALES ORGANIZATION OF TWENTY-SEVEN FARM-IMPLEMENT MANUFACTURERS IN 1918

	Branch Houses *	Jobbers	Transfer Stocks
United States.....	282	140	444
Canada.....	21	16	2
Other foreign.....	†44	‡202	.....
Total.....	347	358	446

*Includes sales offices at factories. †Five inoperative during war. ‡Sixteen inoperative during war.

The above table shows that farm implements are sold generally through branch houses in the United States and mostly through jobbers in foreign countries; except in Canada, where the branch houses outnumber the jobbers.

Each branch house is responsible for an allotted sales territory which may embrace several states, one state, or a group of counties in one or more states, the size of the territory depending upon the number of branches and the degree of agricultural development within the region served. The number of sales branches maintained by

any one company varies from one sales office at the factory to 143 branch houses located at convenient points throughout the world. Some manufacturers with only a few branches sell through jobbers also, or through branches of other manufacturers. Many own their branch-house buildings, while others hold them on lease. In some cases the branch house is separately incorporated, with the entire capital stock owned by the main company. In export trade most manufacturers sell through jobbers, but a number of the large companies have branches in Canada and some in Europe, while at least one has them throughout the world.

Branch House Organization

The following list of employees of a branch house maintained by one of the larger manufacturers may be taken as typical:

1 manager
1 assistant manager
2 bookkeepers
1 cashier
1 shipper
5 clerks
5 stenographers
16 salesmen
5 experts
Total. 37 employees

The functions of the branch manager, salesmen and experts show the importance of the branch house as a factor in distribution.

The manager is responsible for the conduct of marketing operations in his territory. He directs the traveling men, supervises the administration of the office, approves contracts made with dealers, decides upon the extension of credit to dealers or farmers, and, where there is no collection manager, supervises collections.

The largest percentage of branch-house employees are salesmen. Ordinarily these supervise and solicit trade with retail dealers in the division of the branch territory assigned them. In addition to soliciting orders they make contracts and collections and keep the branch office advised of the needs, financial condition, etc., of dealers and the extent to which competing goods are handled. Some companies have another class of salesmen, generally called "canvassers," who assist the retailer in his trade with the farmer.

Most of the large companies maintain at their branch houses a force of experts to coöperate with the dealer in assembling, setting

up, and demonstrating machines, adjusting operating difficulties for the farmer, making repairs, and, when not otherwise engaged, canvassing for new business.

International Harvester Company's System

The International Harvester Company maintains at each of its branch houses a force of salesmen, canvassers, and experts. The salesmen are called "blockmen," because each of them operates over one section or block of the branch territory. Each block consists of one or more counties.

The blockmen supervise and solicit trade with the dealer, the canvassers solicit trade with the farmer and assist the dealer and blockmen, while the experts aid in the installation, adjustment, and repair of machines.

CREDIT

Hitherto a large part of the manufacturer's business with the retailer has been done on a credit basis. Farming is a seasonal occupation, most of the expense occurring in one part of the year, while most of the income accrues in another part. Therefore, the farmer must buy from the local dealer on credit and the latter requires similar accommodations from the manufacturer. This is especially true in the case of intricate, high-priced machinery, such as harvesters and tractors.

In more recent years it has been the dealer who has extended credit to the farmer, but the incidence of credit giving has not been shifted from the manufacturer, since he has been obliged to perform a similar service to the dealer. Long credit terms by manufacturers require a large working capital and result in a very slow turnover of investment. That there is a growing tendency toward curtailment of credit by manufacturers to dealers is indicated in the schedules returned to the Commission from retail dealers, 75.6 per cent of whom reported that credit accommodations accorded them by manufacturers had decreased in the five-year period ending in 1918, while practically none reported manufacturers granting longer terms of credit. This tendency on the manufacturers' part is forcing dealers to demand from their farmer customers either cash or notes which may be discounted at a bank.

The credit system necessitates additional expense and organization on the manufacturers' part for the collection of notes and accounts. One large company has a separate collection force, with branch

collection offices established at various points in much the same manner as selling branches, except that the number of collection offices is smaller. Other companies, especially those of medium or small size, make collections through the sales force of their regular selling branches.

Various forms of advertising constitute a large item in the selling expense of some companies. . . .

TRANSFER POINTS

In order to save freight by car-lot shipments and to have implements and repairs readily available to retailers or farmers, some manufacturers have transfer points which are no more than distributing stations located at various centers where no branch house is maintained. The operation of these transfer points is usually very simple. Arrangements are made with a transfer agent, generally a transfer or warehouse company or a local dealer to receive, store, and ship the implements on order from the branch house. Transfer points are, of course, much less of an expense than branch houses. A number of the mail-order houses maintain transfer or distributing points.

Not all manufacturers who have branch houses find it practicable to maintain them in sections remote from their central office or in which sales are comparatively few as in the Rocky Mountain and Pacific states, and in the Southern and New England states. Also, there are many manufacturers who are too small to maintain any branch houses at all. In both these instances the jobbing house is substituted for the branch office. Many branch offices whose companies do not manufacture a "full line" of implements, job supplementary noncompeting lines for other manufacturers in order to be able to offer a complete line to retailers. The latter system is especially in vogue in the Mississippi Valley.

THE RETAIL SYSTEM

There are four principal agencies retailing farm equipment: (1) the retail dealer, who keeps the implements in his store to which the farmer must come in order to buy; (2) the canvasser, who visits the farmer at his home and shows him samples or describes the implement; (3) the mail-order house, which approaches the farmer through the mails by advertisement and catalogue, and fills his order by freight, mail, or express; and (4) the coöperative store, which buys implements and other supplies for its farmer members.

The great bulk of farm equipment retail sales are made through the retail dealer.

The use of canvassers in the implement trade developed first in the sale of harvesting and threshing machinery. Because of the novelty and intricacy of these machines and the degree of competition encountered in the sale of them, and because their bulk and costliness made it impracticable for the dealer to keep them in stock, machines of this type were sold by canvassers who could visit the prospective buyer. Canvassers were empowered to bargain with the farmer on the price and to sell on credit through the local dealer who acted merely as a commission agent.

Today as a general rule canvassers are employed by manufacturers to supplement the selling efforts of retailers only for more heavy types of machinery which are of so technical or so complicated a nature that they must be carefully explained to the farmer before he will buy; or wherever limited demand or severe competition exists. The canvasser is the manufacturer's direct approach to the prospective buyer in person with a sample or oral description. The canvasser's peculiar task is to create the demand and then to gratify it. In selling tractors he must convince the farmer first that a tractor would be of great value to him on his farm, and, having done this, he must further prove that his particular brand of tractor is a better bargain than any other.

The mail-order method of selling involves bringing the article to the eye of the prospective buyer by means of advertisements in periodicals and by descriptive catalogues. Orders are filled by mail, express, or freight direct from the mail-order house to the consumer.

In many sections of the country farmers have attempted to buy farm implements through coöperative stores owned and controlled by themselves. In some cases this has been done in connection with farmers' grain elevators or other organizations primarily for the marketing of farm products. In other cases, particularly in the eastern section of the country, attempts have been made to establish coöperative stores for the purpose of buying farm implements.

Coöperative stores handling implements have been attacked by retail implement dealers wherever attempts have been made to establish such stores. The objection to these stores on the part of the retail dealers is that farmers may purchase implements through them at wholesale prices. Associations of retail dealers have brought such pressure to bear on manufacturers of farm implements that such manufacturers ordinarily will not sell to coöperative stores that sell

at or near cost except at the retail price, for fear of a refusal on the part of the dealers belonging to the various retail associations to buy from them. So-called coöperative stores that sell at the full retail prices meet with less objection from retail dealers and are regarded more favorably by manufacturers.

17. MARKETING COTTON-SPINNING MACHINERY: PAYMENT WITH SECURITIES¹

Boston is the center of the cotton-spinning machinery trade. All the plants manufacturing this line are easily accessible to Boston or have offices there. Every importing firm in the trade has representatives in Boston. In a measure this is due to the fact that the cotton-manufacturing industry in this country was started in New England and is now one of the most important industries of that section.

Contrary to the custom of the cotton mills, which generally dispose of their goods through agents, the cotton textile machinery manufacturers do their own selling, and they have been very progressive in their selling methods. They keep in touch with all orders and the prospects at all times. No chance to sell escapes their constant vigilance. They keep in touch with the officers of all the more important cotton mills and sell many of the larger orders in person.

Salesmen are kept continually on the road, and are on a salary basis. Ordinarily no commissions are paid to the permanent sales force. These men make regular visits to the mills whether orders are expected or not, thus keeping the machinery plants posted on not only possible orders but all changes and improvements contemplated by the mills.

All machines when completed are first assembled and erected, then tested, at the shop, after which they are taken down, shipped, and again erected at the cotton mill. Machines sold to New England spinners are erected and put in running order at the mills free of charge. Outside of New England, machines are sold f.o.b. machine shop, and the cotton mill pays all freight and mill-erection charges. As all orders are on a competitive basis, it makes little or no difference whether machinery is sold f.o.b. shop or erection and freight charges paid. Necessarily all such differences are considered in quoting prices.

Southern offices are maintained by all the large firms for convenience in selling to the southern cotton mills. Supplies of card

¹ Adapted from *The Cotton-Spinning Machinery Industry* (1916), pp. 53-55. (U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce, Misc. Series No. 37.)

clothing and other common repair parts are kept at these offices. Repair and erecting men are stationed here so that they may be quickly available for rush orders.

FINANCING METHODS

The machinery manufacturers have frequently helped to finance the organization and the expansion of the cotton mills, by extending large and long-time credits, and have at times accepted mill stocks and bonds as part payments and in some instances payment in full for the machinery. Such stocks and bonds must often be carried by the machinery manufacturers for many years. If the mill is profitable they may perhaps be sold at a profit, but if not they must be retained or sold at a loss. As a general thing, such securities are accepted at less than their face value or else the sales price of the machinery is advanced by a corresponding amount.

Of the three firms studied, one still retains practically all the securities accepted, one has retained a major part and has distributed most of the remainder as dividends to its stockholders. The third firm has sold virtually all securities accepted during recent years, such stocks and bonds having been sold to or through a securities company organized by themselves for this purpose. The security company and the machinery manufacturing company with which it does business are firmly connected by interlocking directorates.

The majority of cotton-mill securities accepted by the machinery firms seldom get very far from their control. An official of one firm stated that though in some cases the acceptance of securities had been unprofitable, on the whole he considered that this practice had been very advantageous to his firm. It had enabled them to put their machinery in many mills at the time of their organization, and later these mills when increasing their equipment had in nearly all cases purchased again from them.

A member of one large American firm, in discussing this subject, said:

It has been stated that the American textile machinery shops were presumably in a trust, and by large stock ownership in the various mills had a monopoly of the business.

These statements are absolutely erroneous, as the shops have had the fiercest competition, and the ownership of stock has partly been brought about by helping struggling mills to develop, and more largely by compulsion in reorganization necessitated by too little mill capital, such as occurred in the cases of a number of mills, where the machine shops had the choice of losing all the amounts owing to them for ma-

chinery or accepting stock in payment. In this way it is true that the shops have directly and indirectly been the means of furnishing a large amount of capital to cotton mills, which has benefited the South especially, and the shops should be praised and not condemned for this. Although the ownership of the stocks taken to help the mills start has given the shops some business in dull times, the investment has proved expensive, as it has been impossible to convert some of these stocks into cash in any large amount except at heavy discount, and there has been no market at all for many such stocks.

One bad side to this custom of accepting securities in payment of machinery for new mill construction is that it artificially stimulates the building of cotton mills. This has a tendency to make the demand for machinery very brisk for a few years, and then to bring on a period of very dull times, lasting until the consumption of cotton goods can catch up with cotton-mill capacity. A chart showing the sales of one large plant from 1840 to 1912 shows very clearly the ups and downs of the volume of sales over that period. Sales start at a low point and gradually rise, reaching the high point at about the end of each seven-year period; then they fall sharply and again rise gradually to a high point about seven years later.

18. THE DISTRIBUTION OF GLASS WARE¹

Most glass manufacturers prefer to sell their ware to jobbers, to consuming manufacturers in other industries who use glass products, and to large wholesale distributors.

A large amount of merchandise is sold to jobbers who usually have an exclusive territory. In the case of bottles and jars, a large quantity is sold direct to the manufacturers or bottlers of wines, beers, ketchups, grape juice, etc., to large drug concerns, operating a chain of stores, and to small druggists. Only a small amount of glassware is sold to the retailer direct, the nature of the product limiting such sales to cut glass, tableware, some lighting goods, and a few specialties. Only a very limited quantity is sold to mail-order houses, as these houses, owing to their method of distribution, can handle only a few products, such as cut glass, lamp shades, and tableware. Some goods for export trade are sold direct to the consumer, usually through a resident agent or a commission broker.

A number of window-glass manufacturers sell their entire product through a sole selling agent or broker. This agent sends out

¹ Adapted from *The Glass Industry* (1917), pp. 233-34. (U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce, Miscellaneous Series No. 60).

his salesmen and on receiving orders, distributes them among the various plants according to the quantities and grades produced, the nearness of a factory to the point where the glass is to be delivered, etc. At least one other branch of the glass industry is contemplating a somewhat similar selling arrangement. Due to the method of distributing its goods, there are comparatively few salesmen employed in the glass industry. The compensation of salesmen, when they are employed, is in the form of a commission or a salary and traveling expenses. Where the salesman works on a commission basis, it is customary for the manufacturer to allow a drawing account, that is, to allow the salesman to draw a regular amount every week for his current expenses, which is periodically deducted from the actual commission earned.

The sale of a large quantity of goods to jobbers and wholesale distributors is due to necessity rather than to choice. The capital turnover in the glass industry is exceptionally small, which is due to the fact that most of the capital is invested in land, buildings, plant, and equipment. Labor, which has to be paid for at least every two weeks, constitutes the chief item of expense in every branch of the industry except where the processes of manufacture are entirely mechanical. Practically all the capital being tied up in plant and equipment, it is necessary for an establishment, in order to have the cash to meet its heavy pay roll and other current expenses, to sell to jobbers and wholesale distributors, who usually buy on very short terms, and who, if necessary, will pay cash. Another important reason for wishing to sell to them is that they purchase in large quantities, which not only insures a large periodic cash income, but also tends to make production and prices more stable and reduces the overhead expense.

CHAPTER VIII

WHOLESALE MIDDLEMEN OF THE MANUFACTURERS' MARKET: THE JOBBER

1. A TEXTILE MANUFACTURER EXPLAINS HIS ATTITUDE TOWARD THE JOBBER¹

With the exception of a few of the largest department stores our goods are sold entirely through the jobbing trade. In order that there may be the fullest understanding between us and those who purchase "*Imperi*" products, we wish to state in brief some of our reasons for selling our goods in this way.

First.—By marketing our goods through the jobber, we keep our selling expenses at a minimum. Were we to sell our goods generally to the retail trade, naturally we could not expect the same coöperation from the jobber, and this would necessitate a large selling force covering every town, village and hamlet in the western states. Our readers will readily understand that the selling expenses of a man covering this territory with the limited number of lines we have to offer, would be very much greater than those of a representative of a large jobbing house, who would carry a great variety of merchandise—practically everything that a dry goods merchant or general storekeeper would want.

Second.—By selling in this way we eliminate practically all credit risk. We realize that many small stores are financially sound and perfectly good for the amounts they buy. However, were we selling to the retail trade generally, we would be compelled to maintain a large and expensive credit department. During all the thirty-four years we have been doing business, handling many, many millions of dollars worth of orders, our losses from bad debts have not exceeded \$2,000. The losses of other manufacturers who pursue a different selling policy are so large that they have to be added to the selling price.

Third.—In dealing with large jobbing firms, who contract for large quantities at the beginning of the season, we are enabled to buy our materials in bulk at lowest cost. We are also able to make up the goods during the slack season, thus keeping our mills going regularly all the year round and minimizing the cost of production.

¹ Adapted from the Catalogue of the California Cotton Mills Company, East Oakland, California.

After carefully considering this matter from all angles, we firmly believe we can put our goods into the hands of the retailer as cheaply by marketing them through the jobbing trade as we could were we to sell them direct. Not long ago a retailer in San Jose, who was aggrieved because he could not buy some of our goods direct from the factory, placed an order for towels through an eastern jobber and paid the freight from the East. When he received the shipment, he opened up the packages and was much chagrined to find that the goods were made by the California Cotton Mills Company in Oakland, California. It is our usual custom when shipping goods east to omit our own labels, but in this case we put them on in error.

We have known of many instances where Pacific Coast merchants have bought goods from an eastern broker or agent, thinking they were buying them direct from the factory and very often the goods have passed through the hands of two or three brokers, each of whom has exacted a commission.

We make this statement as we wish to have the fullest confidence of all who handle "*Imperi*" products.

Our products are handled by nearly all Pacific Coast jobbers.

2. WHOLESALING FOOD PRODUCTS¹

To emphasize the importance of quality is trite, but in our investigation it has come to us from so many different angles, in so many different ways, that quality is of supreme importance in merchandising a food product, that it seems to us in the end almost as if the importance of quality were a new discovery which should be shouted from the housetops.

A second thing that strikes one is the vastness of the industry. The food products sold at retail reach the enormous total of \$4,500,000,000—twice that of dry goods and ladies' ready-to-wear—the largest American industry.

In addition to the amount passing through retail channels, there is probably another billion dollars of product that is raised and consumed by the producer and which does not pass through retail channels. These figures are conservative, and it may easily be that the volume of food consumed reaches the huge total of \$6,000,000,000.

The third thing that strikes one is the vast extent of the sales machinery used to distribute this product. Three thousand grocery wholesalers and more than 1,000 other wholesalers, and probably

¹From C. C. Parlin, *An Address Delivered Before the District Sales Managers of the Joseph Campbell Company* (1916), pp. 3-7. (Copyright by Curtis Publishing Company.)

not far from 300,000 grocery and general stores, plus 100,000 other retail outlets, are employed in this distribution.

Again, it is difficult to grasp the significance of 300,000 retail outlets. It is more than that of dry goods, of shoes, of hardware, of jewelry—in fact of most other retail lines combined.

TYPES OF GROCERY JOBBERS

The jobbers are of three distinct types—the local jobber, the sectional jobber and the national jobber. The local jobber may live in an interior city and reach out for fifty or sixty miles; he may live in a city of 400,000 and cover the city; he may live in New York and cover merely a portion of the East Side. The term “local,” therefore, refers not to where he lives but to the type of business which he does. He does ordinarily less than a million dollars of business and has the lowest cost of doing business. He has no high-salaried employees, doing most of the important work himself; his traveling men cover a narrow territory, are home on Sunday, and often nights during the week, and his delivery expenses are small. He is, therefore, in the best position to sell manufacturers’ brands and unbranded staples.

The sectional jobber, ordinarily located in a city of 100,000 or more, reaches out over a wider territory, frequently covering a state, or perhaps several states. He has a higher cost of doing business, for he has higher-salaried employees, greater delivery expenses and greater traveling expenses. To cover these higher costs he desires to sell goods that do not compete with the local jobber; that is, he seeks to put under his private brand everything that he can, and this in general includes all lines where national advertising has not pre-empted the market. He finds his greatest opportunity in canned vegetables which are not nationally advertised, and extends his brand to tea, coffee, canned fruits and other lines that have had only a small amount of national advertising. Sometimes he tries to push into the field where strong national advertising has been used, but here he is likely to sell at a loss.

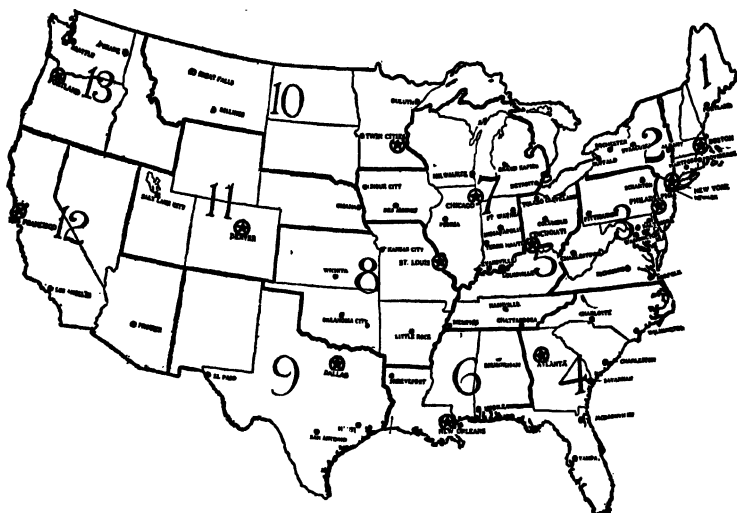
The national jobber is really three things in one—he is a local jobber in a narrow territory, a sectional jobber pushing a wide line of brands over several states, and he is a national jobber in that he distributes a narrow line of specialties widely over the country. He has a still higher cost of doing business and a still greater necessity of pushing his private brand lines.

At the present time the local jobber is the majority factor, doing, as we estimate, about 53 per cent of the \$1,500,000,000 of grocery

business that passes through jobbing channels (only about one-third of the \$4,500,000,000 of food products sold through retail channels going through wholesale grocery houses, two-thirds going through other wholesale channels, packing house branches and direct to the retail trade). The six big national jobbers do about 5 per cent; twenty-five sectional jobbers do about 9 per cent, and 316 semisectional jobbers do about 32 per cent.

We believe that the local jobber is growing in importance because, having the lowest cost, he competes at an economic advantage and because, as the sectional jobbers push private brands, manufacturers more and more turn to local jobbers for distribution, and throw the powerful weight of national advertising behind the local jobbers. The growth of local jobbing is indicated by the large numbers of centers, there being more than 1,200 cities from which groceries are jobbed. As the local jobbers grow, the sectional jobbers find it advantageous to establish branch houses, causing their business to develop in the direction of chains of local jobbing units instead of handling the business from a central location.

MAP 2.—SEVENTY JOBBING CENTERS IN THIRTEEN ZONES¹



The above map has been prepared as a guide to manufacturers desiring to localize their sales and advertising efforts. There may be differences of opinion as to the precise boundaries of the various zones as to the cities selected within them, but this map affords a splendid basis on which each case can be worked out. Radius of commercial-financial influence as indicated by the fixing of federal reserve bank centers and federal reserve boundaries, radius of jobbing influence, radius of metropolitan newspaper influence, and the transportation facilities for covering each zone were the factors considered in making the above map. The cities which are starred are the major jobbing centers in their respective zones.

¹ The Chicago Tribune Book of Facts, (1922).

3. FLOUR JOBBERS AND WHOLESALERS¹

Flour jobbing is carried on by firms engaged wholly in that business, by wholesale grocers, and by firms handling both flour and feed.

The flour jobbing business is of two quite distinct kinds—orders of carload lots and small jobbing sales in the same city or for local shipment. In the first the jobber receives the order and places his order with the mill. The flour is shipped direct from the mill to the jobber's customer. The jobber simply makes the sale and handles the transaction; he does not handle the actual flour. On such a transaction he really performs the same function as a mill salesman, and in it he does not make a profit much above the cost of putting a mill salesman on the road and assuming the sales risk. On such sales the gross margin is considerably less than the margin on flour jobbed from warehouses. When a car shipped direct from the mill is split between two or more customers the margin is usually greater than on a car lot.

In the second kind of transactions the flour jobber buys flour in carload lots, receives it in his warehouse, and distributes it in small quantities to grocers and bakers. He generally has sufficient capital to buy for cash at advantageous terms and has a warehouse in which he can store flour in considerable quantity. Most of the retail grocers and small bakers are without much capital and do not have storage facilities, consequently they cannot for either reason conveniently buy in carload lots. Without the jobber the mill would have to establish local agencies and warehouses, or the small grocer and baker would have to increase his price or go out of business because of the higher freight on less than car lots. The small dealer buying from a jobber generally buys on time, thus the jobber is the banker of the small dealer. The jobber delivers in small quantities as demand may be made on him, thus the jobber is a warehouseman for the small dealer. The jobber is even more reluctant than the miller as to making contracts for future delivery because of possible repudiation of contracts.

There is no fixed margin of profit, and the margin is claimed by wholesale grocers to be so small that some of them urge their salesmen to push other articles on which a larger profit can be made rather than to push flour, and even not to mention flour unless a customer

¹ Adapted from J. Chester Bowen, *Wheat and Flour Prices from Farmer to Consumer* (Aug. 15, 1913), pp. 42-44. [U. S. Department of Commerce and Labor, Bureau of Labor Statistics, Bul. 130].

asks for it. Wholesale grocers usually do not like to have a customer's line of credit too heavily filled with flour, which runs into money very fast. The flour jobber, like the grain jobber, aims to make money on the fluctuation of the market even more than on his margin on sales in a steady market. Occasionally a jobber can hold to a fixed margin at least for a time, but in the larger centers competition is so keen that wide variations may be found on the same day on the flour going out to different customers. Gross margins on an even market will average from 40 to 50 cents per barrel, on small lots delivered to the customer in the city, or f.o.b. at the jobber's station. In city sales the length of the haul influences the margin.

There are firms whose entire business is jobbing flour, but probably more flour is jobbed by wholesale grocers than by exclusive jobbers. In many localities flour is also handled in connection with mill feed, hay, etc. Such mixed trade is encouraged by the millers, who are always seeking a market for their flour. So great at times is the demand for feed that millers refuse to sell it unless a certain amount of flour is also taken. Flour and feed dealers generally do a mixed jobbing and retail trade in flour. Their jobbing sales are usually at a profit smaller than that of the larger flour jobber.

4. THE DISTRIBUTION OF PAPER

THE SALE OF NEWS-PRINT PAPER: THE NEWS-PRINT JOBBER¹

The great bulk of the news-print paper output on the North American continent is bought by publishers of the larger dailies on contracts which provide for the delivery of a certain tonnage at a fixed price. The contracts usually run for one year, but on the Pacific Coast the prevailing term is five years. These larger publishers use roll paper, which is shipped to them in carload lots directly from the mill, though frequently purchased from a jobber or selling agent.

The large number of the smaller dailies, weeklies, and semiweeklies, which depend upon the open market for their supplies of paper, use a relatively small part of the news-print output. Most of these publishers use sheet paper, which is purchased in less-than-carload lots from jobbers.

There are two kinds of middlemen handling news print—jobbers and sales agents. The distinction between the two is that the jobber usually buys and resells, while the sales agent chiefly sells on com-

¹ Adapted from Federal Trade Commission, *Report on News-print Paper Industry* (1917), pp. 48, 42-43.

mission. The three largest sales agents on the North American continent are the George H. Mead Co., Canadian Export Paper Co., and H. G. Craig & Co. Each of these concerns represents several mills, and together they handle several hundred thousand tons of news-print paper annually. Their sales are largely to the daily papers and jobbing trade. There are several other sales agents which handle the output of a particular mill, such as W. H. Parsons & Co., which sells for the Pejepscot Paper Co., both the manufacturing and the selling company being controlled by the same interests.

The jobber handles many grades of paper and often does a commission business as well as buying and reselling on his own account. The commission business is usually for sales of news-print and book paper on contracts with publishers. When such contracts are made the jobber covers them by making similar contracts, either direct or through selling agents, with the manufacturer, who makes shipments direct to the publisher.

Almost every city of any importance has one or more jobbers or wholesale paper houses which carry various kinds of paper. Often such a house makes a specialty of some particular grade, such as high-grade printing paper, bond paper, writing paper, kraft or wrapping paper, building paper, paper bags, twine, etc. While practically all the jobbers handling printing paper handle some news print, very few make a specialty of it. The reason given by a number of jobbers is that there is little or no profit in it, and they only carry it, as a grocer carries sugar, to attract trade for other kinds of paper. A few of the very large jobbers, however, do a considerable business in news print, both in rolls and sheets. Ten of them perhaps handle more than 75 per cent of all the news print sold by jobbers. None of these depend on a single mill for their supply of news print, although several have allotments of a certain portion of the output of a particular mill.

A considerable proportion of the sales of news print by jobbers is for miscellaneous purposes, many of them selling very little, if any, to publishers. The jobbers making a specialty of news print in addition to their contract business handle large quantities of both roll and sheet news on current transactions. Part of this business passes through the jobbers' warehouses, especially purchases in ton lots or less. Carload shipments are usually made direct from the mill. Lots from a ton up to a carload may be shipped either direct from the mill or from the jobbers' warehouses.

The principal advantage a publisher has in buying his requirements of news print through a jobber instead of direct from the manufacturer is in the matter of service. The jobber normally carries a stock of roll and sheet news, and, being more conveniently located with respect to shipping facilities than the manufacturer, can tide the publisher over in case of a sudden shortage due to such causes as failure of a car to arrive promptly, freight embargo or congestion, strikes, fires, etc. This is especially true of publishers not located in the large cities where the manufacturers keep stocks. Another advantage is in the matter of extension of credits. A customer with a good credit standing can usually secure from the jobber extensions of credit, especially if he is an old customer, whereas purchases direct from the manufacturer are usually cash or net 30 days. A third advantage for less-than-carload lots is the saving in freight. The jobber pays the carload rates for the long haul on his warehouse stock and the less-than-carload rate is charged only for the short haul.

SALE OF BOOK PAPER ¹

Book paper is sold by the manufacturers and jobbers either on contract or in the open market. The contracts usually run from a few months to a year or more. Very few, however, cover more than one year.

The manufacturers sell part of their output directly to the consumer and part to jobbers. Manufacturers east of the Pennsylvania-Ohio line sell most of their paper directly to the consumer, while those west of the Pennsylvania-Ohio line and east of the Mississippi sell most of theirs to jobbers. Taking the country as a whole, the data secured from the manufacturers show that the machine finish and coated grades under contract were sold largely to jobbers, while a very large proportion of the supercalendered paper was sold directly to publishers. In fact, most of the important magazines use supercalendered, which is bought directly from the manufacturers on annual contracts. Book publishers and the smaller commercial users generally buy from jobbers and frequently in the open market.

Book-paper Jobbers

Book paper is handled by a large number of jobbers throughout the country. All the larger cities have one or more jobbers, some of whom have branch houses at various points. Most of these jobbers carry various other lines of paper besides book paper, such as bond,

¹ Adapted from Federal Trade Commission, *Report on the Book-paper Industry* (1917), pp. 21, 31-32.

writing, news print, wrapping, etc. Practically all the book paper handled by jobbers is bought and sold by them on their own account, very little being handled on a commission basis.

A much larger percentage of book paper is distributed through jobbers than is the case with news-print paper. In fact, some of the western manufacturers sell practically all their production through jobbers, and the eastern manufacturers also dispose of a large part of their open-market business in this way.

Book paper purchased in the open market is bought largely through jobbers, since they keep a great variety of grades, sizes, colors, etc., on hand, and in the large centers also maintain a delivery service. In some cases, jobbers carry hundreds of different items in stock, or can have them quickly delivered from the mills.

Many publishers state that while the paper bought through a jobber may cost more than if bought direct, they consider that the convenience of having the jobber relieve them of the trouble of making the order and attending to the details of the transaction is worth the increased price.

Exclusive Agencies

A number of the more important jobbers have the exclusive agency in their localities for one or more manufacturers, but this does not prevent them from competing in localities where there is no representative.

5. THE CASE FOR THE LARGE ELECTRICAL JOBBER¹

No manufacturer can be expected to put his full support behind a jobber and clear all his business through him unless the jobber can clearly demonstrate that thereby both the manufacturer and the user will gain—not on each sale necessarily, but by and large. But the kind of jobbers who alone are able to prove this are those who are equipped to render a sales, credit, engineering, advertising and merchandising service of a quality good enough to satisfy the manufacturers, and at a cost cheaper than that at which the manufacturers can perform the services themselves.

There are no doubt more than one hundred jobbing houses so equipped at the present time, and there is ample room for many more. However, it requires a large amount of capital to provide and maintain an adequate jobbing establishment of this type, and a large volume of

¹ Adapted from O. D. Street, "The Case for the Electrical Jobber," in *Electrical World*, Vol. 79, No. 6 (Feb. 11, 1922), pp. 271-73.

business is needed to enable such an establishment to function profitably. Given the volume, such an establishment can make money, and the volume will be available when manufacturers realize that it will be to their advantage, and the advantage of the public to distribute their products through such channels well up to the 100 per cent mark.

A reasonably complete jobber's catalogue of the electrical supplies required more or less regularly by all classes of users in an ordinary industrial community anywhere in the United States would call for the listing of at least 30,000 separate items with at least 6,000 illustrations. It is to the advantage of the buyer in this community to have such a jobber's catalogue to refer to when working up his specifications rather than to be obliged to wade through the innumerable catalogues of the manufacturers. And he is helped too by being able to call in the jobber's salesman or the jobber's engineer to help him pick out the items best suited for his particular needs. Consider the time the buyer would waste if he had to write to all the several factories for the information this one jobber's salesman, who represents all the manufacturers, can give him. Consider, too, how much more it would add to the cost of the material ultimately if the manufacturers had to render this sales service to every individual consumer from their many distant points.

The jobber who is equipped to render a complete service in nearly every instance reduces the purchasing expense of the user and the selling expense of the manufacturer. This saving is effected every time any purchaser in a given community places an order, and the annual saving for the entire community is very great.

The jobber in a typical American community not only must have his complete up-to-date catalogue and his trained salesmen, but, behind the salesmen, capable specialized sales engineers, competent credit men and experienced merchandisers. He must also determine which of the 30,000 items in his catalogue are most frequently called for by his customers, and he must maintain at all times an ample stock of this material consisting of thousands and thousands of items. Some he can turn over rapidly, others very slowly, but since he is there to serve, he must take the lean with the fat, and carry what the community needs lest jobs shall be held up and an economic waste result.

In the jobbing end of every business—be it groceries, hardware or electrical supplies—a net profit is made on but a small percentage of the articles handled. However, an economic service is performed only when a complete stock is carried, permitting the small items to go out on a ticket with big items, thus reducing the distribution expense

of each to the jobber, the purchasing expense of each to the buyer, and the selling expense of each to the manufacturer.

An imitation jobber who stocks only the fast-moving items can sometimes undersell the real jobber who carries a complete line, because his total investment is smaller and it turns over faster. It must be obvious, however, to the buyers in a given community that by and large, year in and year out, that jobber who carries a complete stock and who maintains a complete organization is the one entitled to their support. For without access to these complete stocks for all their miscellaneous pick-up requirements jobs would often be held up at considerable cost, or else these buyers would be compelled to add to their own investments by carrying ample stocks of all such materials themselves, when their capital could be more advantageously employed in other ways.

One of these jobbers offers a complete service to the community, the other an incomplete service; one is performing an economic service, the other is not. Which one is needed by the electrical industry and should receive intelligent support?

The jobber who is willing and able to maintain a complete and efficient sales, engineering, credit and merchandising organization, the jobber who is able to buy outright, and pay promptly for a complete stock of electrical supplies, the jobber who himself is big enough to conduct his business in a responsible, broad-minded fashion, and possesses a vision that enables him to see and prompts him to support that which is good for the industry in any of its branches. This kind of a jobber, the man who actually performs an economic function, should and will both survive and prosper if Darwin's theory as to the survival of the fittest is as sound as we all believe it to be.

The electrical industry needs, and needs very much, the service which strong, capable, resourceful and responsible broad-gauged jobbers can render. Two hundred jobbers of the right sort can do far more for the electrical business than two thousand of the incompetent kind. For a complete jobbing service is the one economical service. Split the business up into thousands of parts, and the revenue derived by each part will not permit of the maintenance of adequate stocks or an adequate organization by any part, the service of no part will be complete, and the industry and the public will both suffer.

CHAPTER IX

WHOLESALE MIDDLEMEN OF THE MANUFACTURERS' MARKET (Continued)

1. MANUFACTURERS' AGENTS AND PURCHASING AGENTS IN THE HARDWARE TRADE¹

The reason for the existence of intermediaries between hardware manufacturers and jobbers is found in the fact that many hardware manufacturers confine their attention to single articles, or single lines of articles. For example, one manufactures nothing but scissors, another saws, another wrenches, and so on. Furthermore, many such manufacturers have relatively small outputs, and a good many of these are located at a distance from market centers, so that they find it difficult to keep in touch with trade conditions.

A large manufacturer, especially if he makes a wide variety of products, generally finds it economical to maintain a sales organization to reach jobbers, without employing an intermediary, and a few even sell a large part of their outputs direct to the retail trade. One of the largest hardware manufacturers in the United States reaches the larger retailers with his own salesmen, but leaves the smaller ones to jobbers, and in order to make his line more complete and reduce selling expense the salesmen of this company carry a few goods made by other manufacturers.

That such direct sale to retailers is out of the question for the small manufacturer making a single product is obvious. That he might sell direct to the few hundred jobbers is possible; but as a matter of fact, a large number have found it more economical to use a manufacturers' agent. The agent becomes the manufacturers' sales department; he combines the outputs of several manufacturers—from ten to thirty in number—and his salesmen are taking orders for a large variety of hardware goods, rather than a single product, thereby reducing the selling expense per unit of goods sold, and making it possible for goods to reach jobbers at a lower price than if each manufacturer had his own sales organization.

The manufacturers' agent does not handle the same kind of product

¹ Adapted from L. D. H. Weld, "Marketing Agencies Between Manufacturer and Jobber," in *Quarterly Journal of Economics*, Vol. XXXI, No. 4 (August, 1917), pp. 580-85.

for two different manufacturers; i.e., he sells saws for one, scissors for another, and so on, and agrees by contract with each manufacturer not to handle similar goods made by a competitor. The manufacturer, on the other hand, agrees to give the agent exclusive sale of his products, sometimes for the whole country, and sometimes for a certain section of the country. In a few cases, the manufacturer sells direct to jobbers in territory near his plant, and uses agents in more remote parts of the country. Several of these manufacturers' agents are located in New York, but they are found in many other large cities. Though they sell mainly to hardware jobbers and machinery supply houses, they not infrequently sell to the largest retailers, especially department stores.

These houses usually receive their compensation in the form of a commission on sales, varying from 5 to 10 per cent on different articles. One of the largest houses handles some of its accounts on a salary basis; i.e., it is paid a lump sum per year by the factory for disposing of its product, and prefers this method on the ground that the manufacturer is more likely to give his consent to a large order at a special price, than if he had to figure in the commission he would have to pay on such a sale. This house thinks that the best method is a salary on sales up to a certain volume, and a commission on all sales above that amount.

Manufacturers' agents in the hardware trade do practically no financing, though in a few cases they have financial interest in factories that they represent. Though they carry a few goods to supply near-by territory, they have but little of the storage function to perform, as goods are usually shipped direct from manufacturer to purchaser. Their main function is selling. They often publish catalogues of the goods they handle, and they send out salesmen just as the manufacturer would have to do if he had his own sales department. There appears to be no pronounced tendency in the hardware trade for the manufacturers' agent to become a less important factor.

As an indication of their present importance in this trade, information was procured from ninety-three hardware jobbers in the United States concerning the extent to which they buy from such intermediaries. Out of these ninety-three, only five concerns reported that they do not buy through manufacturers' agents at all, leaving eighty-eight, or 94.7 per cent of the total, that do purchase through them. Of these eighty-eight, sixty-seven reported that they use them only a little, whereas the remaining twenty-one state that they buy 25 per cent or more. Some of them report that they buy as much as 40 or 50

per cent in this way. As might be expected, it appears that houses in the South and West purchase through these intermediaries more commonly than do those in the East. Inasmuch as it is possible that many of the wholesalers who report that they buy "very little" or only to a "limited extent" in this way, purchase more than their answers indicate, it is clear that a substantial proportion of all hardware—possibly from 15 to 20 per cent—passes through the hands of these intermediaries on its way from manufacturer to wholesaler.

THE PURCHASING AGENT IN THE HARDWARE TRADE

Another interesting feature of the hardware trade is the purchasing agent, who represents the jobber. The assembling function, which is an important one for all jobbers, is simplified for them to a certain extent by the sending out of manufacturers' and agents' salesmen; but there are many products, such as wire, and other articles in which metals predominate, which they can buy to best advantage only if they follow market conditions in the principal trade centers (especially New York) with great care. The average jobber is not in a position to do this efficiently and economically. Furthermore, there are a great many small jobbers, each of whom can use but a relatively small quantity of certain products, and who would be able to buy at lower prices if they could pool their orders and thus get quantity prices.

These are the two principal factors that account for the existence of the purchasing agent in the hardware trade, viz., need of exact and continuous information of trade conditions and price fluctuations, and the ability to buy at lower prices by placing combined orders. Whereas the manufacturers' agent previously described, acts as a specialized selling organization for manufacturers, the purchasing agent acts as a specialized buying organization for jobbers.

There are only four or five important purchasing agents of this nature in the country, but some of these do an extensive business. The largest one, located in New York, represents 300 hardware jobbers scattered all over the United States and Canada. Though western, southern, and Canadian jobbers probably need this service the most, yet eastern jobbers, even some located in New York City, are clients of this company. The company works entirely on a salary basis, i.e., a lump-sum-per-year payment. This basis is necessary, because many clients employ the purchasing company principally, or even solely, for the sake of procuring trade information, whereas others buy large quantities of goods through it.

This purchasing company keeps twelve specialists at work studying the market continuously. A loose-leaf catalogue of price quotations is published and distributed to clients, and "change" sheets are sent out in large numbers every day. By finding out in advance the needs of its clients, it is able to order enormous quantities of products from manufacturers at one time, occasionally taking the whole season's output of a manufacturer. All concessions received from manufacturers are passed on to clients. The service also includes the picking up and consolidating of small lots of goods, which the distant jobber can not buy advantageously or have shipped economically without such service. This company deals not only in standard hardware, but in electrical, automobile, plumbing, machinery, and other supply lines. The annual purchases made through the company amount to many millions of dollars.

According to information received from ninety-six hardware jobbers in the United States, eighty report that they use purchasing agents, leaving sixteen that do not use them at all. Of the eighty concerns, fifteen report that they use them only for the market news service described above, rather than for actual buying. Eastern concerns appear to use these intermediaries as much as western and southern concerns, but more largely for information purposes only. The fact that 83.3 per cent of all jobbers reporting use purchasing agents at all, however, indicates that these middlemen must perform a substantial and valuable service.

2. MANUFACTURERS' AGENTS IN THE GROCERY TRADE¹

Though the lines of demarcation between manufacturers' agents and brokers in the grocery trade are rather indistinct in some cases, the former are employed mainly to market "branded specialties," and the latter to market unbranded or staple commodities. The manufacturers' agent usually sells over a much wider territory than the broker, and on the whole he is very similar to the selling agents in the hardware trade, and exists for much the same reasons, i.e., the combining of the outputs of different manufacturers with consequent reduction of selling costs.

The fact that branded staples are commonly sold this way has an important bearing on the matter; many of the well-known grocery products were started in a small way, and when national distribution was first sought, the manufacturers themselves could not judge as to

¹ L. D. H. Weld, *op. cit.*, pp. 586-89.

the probable success of their advertising campaigns. They also frequently started with but a single product, and they had no business connections. Consequently, they called on manufacturers' agents, who already had sales organizations in operation, and who were in the best situation for reaching the trade. On the other hand, as some of these grocery specialties have become widely used, and hence move in huge quantities, manufacturers have in many cases found that they could afford sales organizations of their own, and have, therefore, done away with agents. One of the largest manufacturers' agents in the country reports that, all through his history, he has been gradually taking on accounts for newly advertised specialties, only to have his commissions gradually reduced and sometimes to lose the accounts altogether as distribution has become successful and voluminous. This particular agent has also taken on other commodities—especially canned goods—on a brokerage basis, in order to increase and stabilize his business. Another has obtained control of manufacturing plants, so as not to lose important accounts. In other words, manufacturers' agents are of special importance during the early years of building up a distribution for advertised grocery products, and are likely to give way to manufacturers' own sales departments when the distribution has become successful. This constitutes a distinct tendency in the grocery trade.

The statements brought out above are admirably illustrated by the history of the methods employed by the breakfast cereal companies. The Kellogg Toasted Corn Flake Company, for example, at first used manufacturers' agents in different parts of the country in order to reach jobbers. Gradually, as output increased, this company began to develop its own sales organization, and did away with its last agent only a few years ago. In order to do this, it has had to develop a territorial sales organization, with each district in charge of a territorial sales agent (taking the place of the former manufacturers' agent.) A stock of goods is kept on hand in each district to care for rush orders. The fact that the Kellogg Company manufactures more than one product, and the fact that it probably figures that it gets better attention to its products through its own salesmen, have undoubtedly been factors in adopting this policy.

Most of the other well-known breakfast foods, such as "Shredded Wheat" and "Quaker Oats," are also sold direct to the jobbing trade, but it is said that the Cream of Wheat Company still uses the manufacturers' agent, at least in some parts of the country. When this company began putting up carefully selected and sterilized "farina"

or "purified middlings," about the year 1900, and advertising it under the name of "Cream of Wheat," it naturally could not afford a sales organization of its own, especially as the success of the venture must have been highly problematical; and it was only natural that it should have employed agents. A company of this sort naturally balances the cost of a sales organization of its own against the cost of selling through agents, and it changes to direct sale only when it is sure that it can do so more cheaply and more effectively than by employing agents. If it can induce agents to accept smaller commissions, as the volume of business increases, this may at least postpone the development of direct selling.

Manufacturers' agents in the grocery trade handle a large variety of products for manufacturers, including soap, cornstarch, stove polish, shoe polish, condensed milk, malted milk, soft drinks, confectionery, cooking oil, chloride of lime, etc. They have practically no financing function to perform; they carry only small stocks from which emergency orders may be filled. Though they generally send their salesmen to jobbers only, at least one company was found (in Boston) that sends its salesmen to retailers to take orders, which are booked through jobbers. In other words, this agent performs the service of sending out "specialty men," which is often done by manufacturers of grocery specialties themselves.

Each manufacturers' agent has a specific territory to cover: Boston houses usually cover New England, and New York houses often have territory east of Buffalo and Pittsburgh, and so on. As in the hardware trade, an agent handles each product for only one manufacturer, and has exclusive sale within his territory. The commissions vary all the way from 2 or 3 per cent to 10 per cent, varying for different products, and with the extent to which a substantial distribution has been built up.

3. THE DISTRIBUTION OF CANNED FOODS: THE BROKER¹

There are three major links in the distributive chain—the canner, the wholesale grocer, and the retail grocer. The true broker is only a minor link in the chain, and connects the first and second major links in much the same way as the second and the third links are connected by the salesman of the wholesale grocer. This represents the normal channel of trade, which, however, is not always observed. In some

¹ Adapted from Federal Trade Commission, *Report on Canned Foods: General Report and Canned Vegetables and Fruits* (1918), pp. 16-20.

cases, the distributive chain is attenuated; in other cases, one or more of the links may be entirely left out. Sometimes a wholesale grocer will sell to a broker, to another wholesaler, or even back to a packer. The large chain stores and the mail-order houses regularly obviate one of the major links in the chain. The large general-line packers try to dispense with the brokers' services as much as possible. Some of the larger packers of one line market a large part of their pack directly, i.e., without the use of the broker, although in some cases the wholesale grocer gets the brokerage fee.

The primary function of the broker in the distribution of canned goods is the arrangement for the sale of the canner's produce to the wholesale grocer. From the canner's point of view the broker is a selling agent. The broker's relations with the packer, however, may be much more intimate than this primary function would imply. Although the broker ordinarily arranges for the sale of parts of different canners' packs, he may have a permanent understanding or even an agreement to market the entire output of a particular canner, whom he then represents as a general sales agent.

The broker, especially if he be a general sales agent, may help to finance the packer, and thereby establish even a closer relationship. This second extension of the broker's primary function represents in part the commission merchant's activities, which include in addition the actual taking over of the canner's pack and the collection of his accounts.

The purchase of goods by the broker on his own account is a secondary function, and is considered "illegitimate" by many in the trade. The broker who buys and sells on his own account is performing what is in part the function of the wholesale grocer; but such a broker differs from the wholesale grocer in that he does not sell to the retail grocer, and even thinks it wrong to do so. The broker, who buys and sells on his own account is commonly designated a "merchandising broker."

It would be inaccurate to say that there are four kinds of brokers corresponding to the four different functions described because in any one brokerage business one, more, or even all of these functions may be included. Nevertheless, in the majority of cases one or, at most, two of these functions will be found predominant, and brokers can be and usually are designated accordingly. For convenience of description, then, brokers may be classified as (1) brokers (ordinary), (2) general sales agents, (3) commission merchants, (4) merchandising brokers.

(1) THE BROKER (ORDINARY)

About the first of the year the packer sends the broker his future prices, which the broker, in turn, communicates to the wholesale grocer. These represent prices for goods that are to be packed about the middle of the year and thereafter. Future prices, made so early, however, are subject to change, so that even after a broker has found a customer for a particular part of the pack, the packer's confirmation is necessary before the sale is actually effected. Sometimes the procedure is reversed; the wholesale grocer may negotiate through the broker for the purchase of goods from the packer. However, it is always from the seller that the broker receives his brokerage. When the goods are delivered they are sent directly from the canner's factory to the wholesale grocer's warehouse. Thus, the broker effects the sale of goods which he never actually has in his possession. The packer bills out the goods on his own billheads in triplicate; one copy he keeps for his own reference; one copy he sends to the wholesale grocer who must make him a remittance; the third copy he is supposed to send to the broker. But the packer is often negligent about sending the broker the copy of the bill of sale, and merely remits the brokerage with a statement, in which the actual amount of goods delivered does not always occur. Thus, the broker, as broker, merely arranges the sale and has little to do with the actual consummation of the transfer.

(2) THE GENERAL SALES AGENT

The general sales agent is a broker who either handles a packer's entire output and arranges for the marketing of it in all sections or who handles a large part of the output having as exclusive territory a large geographical section. It is easy to see how a packer would get in the habit of using a certain broker for each particular section in which he sells. Indeed, most brokers have permanent agreements of one kind or another with the packer for the exclusive agency in a certain territory, but these agreements are not usually binding on the packers and are for limited sections only. The distinctions between a general sales agent, then, and a broker lies in the fact that the general sales agent has a contract or definite arrangement to market all or a large part of the packer's output usually without limitation as to section. The general sales agent may and does use a corresponding broker or sub-broker for sales to be made at a distance from his vicinity, but he receives the commission or brokerage, and pays the sub-brokers whom he, not the packer, hires.¹

¹ Sales agents and commission merchants receive what they call "commission" (usually from 3 to 5 per cent); what they pay to sub-brokers they call brokerage.

There are, generally speaking, three reasons why a packer will employ a general sales agent. First, he may consider him the quickest and most efficient means of marketing his pack. Although he usually has to pay a general sales agent a higher rate of remuneration¹ than the ordinary broker, he is willing to bear the extra expense because it obviates his carrying on negotiations with a large number of brokers and because he has confidence in the sales agent's ability to sell his pack to advantage. Every broker considers it an important part of his duty to keep the packers he sells for informed as to the market conditions. The broker's proximity to and association with the wholesale grocer as well as his large experience enable him to give valuable advice to the packer. Second, the packer often must use the broker as a general sales agent because the broker advances him money. Advances are sometimes made on specific assignments and sometimes only sporadically, as for the financing of a particular deal; but in many cases the broker regularly helps the owner to finance his pack. Most brokers, however, have such a small capital that they are unable to make such advances. A broker who has financed a canner would ordinarily insist on marketing the entire pack of the canner whom he had helped. Third, the sales agent may act in the capacity he does because his establishment is really an integral part of the canner's organization.

Some brokers have started and own canneries; some brokers have large interests in canneries they represent; the presidents of some sales agencies are the presidents of the canneries sold for. Two of the largest selling agencies in the canned salmon trade, who sell for two of the largest packers of salmon, are so closely connected with the organization they represent that it is hard to distinguish the packers from the distributors. Such general sales agencies are practically selling departments of the packing organizations and have all the functions which brokers, independent sales agencies or even commission merchants have.

(3) THE COMMISSION MERCHANT

The distinction between the commission merchant and the broker or the general sales agent is often hard to draw. In the distribution of canned goods the commission merchant is usually a general sales agent, who handles the entire pack of the canner, who very often finances the canner, who in many cases bills out goods for him, and who collects his accounts. The commission merchant's functions are more extensive than those of the broker or of the general sales agent.

¹ See note on p. 321.

The remuneration which he receives is called a commission and is usually 5 per cent as over against the ordinary brokerage of 2 or 3 per cent. This commission represents payment for services which the ordinary brokerage does not cover, viz., financing, collection of debts, etc.

(4) THE MERCHANDISING BROKER

There are two kinds of merchandising brokers: (1) Those who do a small amount of merchandising, occasionally and from necessity; (2) those who make a practice of merchandising because of the profit they expect to realize. A large number of the ordinary brokerage businesses in the United States have always carried on a small amount of merchandising. Every broker finds it convenient, at times, to buy in order to supply small wholesale grocers, who are unable to buy the usual carload lots, or whose credit might be considered insufficient by the canner. Sometimes the wholesale grocers may be unwilling to buy at the future prices, which the brokers may consider low; the brokers in many cases buy so as to anticipate such customers' needs, and in selling the wholesale grocers later may take no profit even though the market has risen. Although most of the brokers in the United States have done some merchandising, when the Food Administration in November, 1917, required every merchandising broker to register as both jobber and broker, many of them preferred to stop their small amount of actual purchases and sales rather than apply for jobbers' licenses. This is significant of the small amount and of the importance of their jobbing business. The larger merchandising brokers insist that the reason why most brokers do not buy and sell on their own account is because their capital is too small.

The brokerage rate is usually 2 per cent, but it runs as high as 5 and 7 per cent and as low as 1 per cent and even $\frac{1}{2}$ per cent.¹ The higher rates are paid usually to general sales agents, commission merchants, and to brokers who use sub-brokers. Furthermore, the brokerage rate varies to some extent with the ability of the broker and with the bargaining power of the canner. It seems to vary also with the kind of canned foods sold. Generally speaking, the brokerage rate is higher for the more expensive lines. The highest rates are paid for salmon and sardines. This may be explained, in part, by the wider use of sales agencies in these lines; but the more expensive vegetables and fruits bring higher rates of brokerage than the cheaper lines. The brokerage paid on peas is usually higher than for corn and

¹ In exceptional cases 7 per cent is paid, e.g., for specialty goods. Some canned salmon is sold at a brokerage of 10 per cent.

tomatoes; the rate on fruits is higher than on vegetables but lower than on fish. The opposite might be expected, inasmuch as a low rate on an expensive line may mean as much profit for the broker as a high rate on a cheaper line. However, it is somewhat more difficult to market the more expensive goods, and the risks assumed are naturally greater.

CHAPTER X

DIRECT MARKETING OF MANUFACTURED PRODUCTS

1. WHY SELLING DIRECT TO RETAILER IS BECOMING POPULAR¹

Why do Spalding's, Gillette, Ingersoll, Sherwin-Williams, Melin's Food, Colgate's, Nemo Corsets, Victor Talking Machines, Gorham Company, H. J. Heinz, and scores of other representative national advertisers sell their goods direct to retailers?

Why did a big hardware advertiser plan recently a possible revolutionary shift from jobbers exclusively to selling direct in some manner?

Why are advertisers throughout the length and breadth of this country, in scores of different and unrelated lines of manufacture, very carefully looking into the subject of selling without jobbers?

These three questions are among the most searching and suggestive that could be asked in the whole selling and advertising field. They cut down into the very heart and vitals of a situation which is bound to become more acute as time goes on, if the evolution of conditions continues in the same manner as now; and will unquestionably, in time, revamp distribution methods in this country. The parcel post and reduced express rates will give the movement impetus among small weight goods.

It is now thirteen years since A. G. Spalding & Brother cut off all the jobbers from their list. This in the hardware field, where widespread distribution has made it particularly hard for manufacturers to do without jobbers, was a most radical step. It was met by the establishment of a chain of Spalding stores which served as jobbing distribution centers. These now number about thirty.

It took some years to assimilate this heavy branch agency expense, but it has proved very fruitful in the long run because of the fact that the Spalding policies are now directly controlled, and Spalding aggressiveness is disseminated without hinder or let to the retail distributors throughout the organization selling Spalding goods.

¹ Adapted from J. George Frederick, "Why Selling Direct to Retailer is Becoming Popular," *Printers' Ink*, Vol. LXXXII, Feb. 13, 1913, pp. 17-20.

Price-cutting was really the deciding factor for Spalding in cutting off the jobbers—as it is in so many instances. The jobber has so many ways of cutting price that it would take a catalogue to enumerate them. Also, it is practically impossible to get around the situation when once the jobber starts to sell his own brand. There are large and famous hardware jobbers who list in their catalogues well-known, standard goods, but side by side with them are listed their own brands in brilliant colors and strong display (contrasted with the mild and inconsequential black and white set-up of the standard goods listed) in a manner sure to introduce disparagement even if the salesmen do not say a word.

When the jobber's own salesmen, under severe orders, push the jobber's own brand of goods, and minimize the standard advertised brand, how can the adoption of selling direct be anything but a matter of a short time? And what right or reason have jobbers to complain when it happens?

The activities directed upon retailers by manufacturers are constant warnings to jobbers that the manufacturer has already a line on a considerable portion of his retail trade, and that the manufacturer is not so wholly in the jobber's hands as he used to be in the old distributive days of long-distance jobbing and complete alienation of manufacturer from retailer.

The number of salesmen who travel for old-line houses and houses in staple lines of trade are rapidly increasing, even though they do still sell only through the jobber. Even in cases at present where the salesmen simply take orders and turn them over to jobbers, the field is being closely studied and relationships with retailers established, and the data concerning local conditions gotten in such shape that the indifferent or drastic action of jobbers will not catch them unawares, and that they will have the means of self-protection, in any case of controversy or conflict.

In the 75 or 100 individual concerns whose direct selling policy with regard to jobber and retailer I have in my special investigation closely examined and reported upon, I found the same principle operating in each. This principle was the endeavor to control their distribution and protect it. In other words, manufacturers are now realizing that as live manufacturers their business is not finished when they deliver goods into jobbers' hands, nor even when they insert ads in the magazines.

They find that they must police the goods along the entire line of distribution down to the very door of the consumer, in order that the

consumer may get the article where, when, at the price, in the condition, and with the guarantee which the manufacturer in his pride of making has decided should be his standard.

At present, jobbers, as a rule, do not at all comprehend either their opportunity for concentrated service, or the value to them of the decreased discount but more rapid turnover in well-known and well-advertised articles. They are not ambitious to be efficient jobbers; they have been led into false and mixed ideals of their business, and they have failed to understand the economics of the changes which have taken place in population, selling methods, and selling relationships in the past fifteen or twenty years.

Manufacturers have not in all cases given jobbers the right consideration, for jobbers have been up against unusual situations of their own; (1) because of weak retailers and the extent to which jobbers have had to carry them; and (2) the evils of the personal element in jobbing salesmanship, which has concentrated arbitrary power and excessive cost upon the jobber's salesmen. Real salvation from the highly autocratic jobbing commission salesman, in whose hands jobbers themselves virtually are in many cases, must be secured before efficient, impartial, aggressive service can be rendered manufacturers.

A list of manufacturers who are selling direct to retailers is the most amazing roster of live and famous manufacturers that has ever been compiled. The significant part of it is that the names represent a majority of the best known trade-mark and advertising good will of the country. This to an observer proves that the development of good will and independence with the consumer through advertising means not only increased control of distribution, but a very much more widespread market. There would be many more advertising accounts if distribution were less of a stumbling block to manufacturers. It is to the interest of all makers and distributors that all goods offered for sale be obtainable without proselyting or delay when the buyer wants them. The channels of distribution should be open and easy, and the contest centered upon educating and energizing the consumer to get exactly what his mind decides he wants. The contests should not be over the control either of jobbing advantages or of retail opportunity to swerve consumers from their own minds.

To reach this ideal are needed open, quasi-public service jobbing and distribution machinery, instead of star chamber, private brand, proselyting distribution facts. We would then have more and bigger manufacturers, more and bigger service to consumers.

2. AN EXPERIMENT IN DISTRIBUTION: THE WINCHESTER-SIMMONS COMPANY¹

We are welding together a manufacturing business, a jobbing business, and several thousand separately owned retail stores into a national organization with a common purpose. We aim to lower the cost of distribution as it affects the merchandise we manufacture and job.

In the first place, we had no quarrel with the established methods of distribution. They served us (The Winchester Repeating Arms Company) very well up to the time of the war. With the war we were, of course, thrown headlong into producing munitions: principally U. S. rifles, U. S. cartridges, and Browning machine guns. When the Armistice shut us down, we had 21,000 employees and several times the plant capacity of pre-war days. Incidentally, we had been the first plant to make deliveries to the Government, on each of the articles we were making. That is a record we are proud of.

Essentially, we are highly skilled forgers; almost every metal part of a fire-arm is forged. So we had been planning, in the few spare moments that the war had left us, that on the coming of peace we should turn our excess plant capacity to forge products. That was about as far as we had gone with the plan by November of 1918.

The Armistice brought us face to face with the whole problem. We had to design and get quantity production on a whole new line of products. We had to get distribution for our output. And we had to accomplish both of these results in record-breaking time.

When it came to deciding on the products we should make, we considered carefully the whole hardware field. Obviously, we could not make the whole line; what part of it, then, should we select as our own?

SPECIALIZATION ON ARTICLES OF PERSONAL USE

Considering our long history and good name as makers of fire-arms, we saw that we could build most quickly and surely on articles toward which we could divert our reputation. That meant articles of personal use.

If you carry a pocket-knife, you probably know who made it. You selected it largely because you considered it of good make. We saw that, to a man who owned a Winchester rifle, a pocket-knife of the same make would be a preferred brand. If he used a hammer, he would be favorably inclined toward a Winchester hammer. If he

¹Adapted from John E. Otterson, "An Experiment in Distribution," in *System*, Vol. XLIV, No. 5 (Nov., 1923), p. 567 ff.

took his winter recreation on the ice, he would feel sure Winchester skates would be of high quality. To anyone who knew our reputation in our pre-war field—and nearly everyone did—we could sell articles of personal use with comparative ease.

It would be harder if we went into what I may call impersonal lines. Unless you are closely connected with the specialized field, you care little about who made the hinges and nails in your home, or the castors on your wife's dressing table. Neither does the man who built your home or made your furniture, so long as they serve their purposes. Brand preference, which means easier selling, is much more significant in the articles of personal use.

How we designed the different articles, and then got into production, is a story aside from this one. We had competent factory engineers, and they drove hard to the work. After their plans were completed and put into effect, the production side of the business ran comparatively smoothly.

DISTRIBUTION PROBLEMS

The real problem was that of distribution. How could we go about selling, at a profit, the new hardware and sporting goods lines which we were getting ready to make? Obviously, the existing jobbers could not be expected to push our new line; it would have taken a tremendous amount of selling and advertising energy to build up a consumer demand that would have drawn our large output out of our factories and through the existing channels. We needed something that did not exist.

The Dealer Organization

So we set out to create it for ourselves. We decided to build a dealer organization, and serve it direct. Long before we had any of the new products ready to sell, we had signed up more than 1,000 of the best retail hardware dealers of the country to be our agents, to conduct the local "Winchester Store."

That these dealers were among the best in the country is no idle assertion, based purely on pride. With the utmost care we listed the best hardware dealer in each community. We considered, in making these selections, the general reputation of each store; its financial strength; its stock; its location; and several other facts of similar importance.

It was no simple job to compile this list. But we had arms and ammunition salesmen who had been calling on the retail trade for years.

We had a good many executives of wide personal experience in the field. After weeks of painstaking work, involving the whole time of a number of people and the part time of everyone in the sales and executive organization, we had our national list of best dealers.

That is the list upon which our "contract salesmen" called—with instructions to exert every effort to sign up the best dealer.

Dealer Relations

What we offered the dealer, as an inducement to become the local Winchester agent, was essentially what we offer him today. In the first place, he becomes the exclusive local agent for the new Winchester line. He may designate his store "The Winchester Store" in connection with his established name. He becomes a member of the district or state club of Winchester agents, and a subscriber to the company's dealer service.

In return, the dealer agrees that he "shall at all times use his best efforts and facilities to establish, maintain, and increase the sales of Winchester products at the location hereby assigned to him; shall always keep on hand a stock of Winchester products sufficient to supply the demand therefor in his place or places of business; shall constantly bring such products to the attention of the public, and shall always sell them when called for and when opportunity offers. The retailer shall at all times give the products of the company first preference, in display, advertising, and sale." Also, the agent purchases—on the open market, not from the company treasury—at least three \$100 shares of 7 per cent preferred stock. The agreement is terminable on 30 days' notice by the dealer, or "by the company, provided the Executive Committee of the Winchester Club of the district in which the dealer is located shall, by a majority vote, recommend such termination, and provided further that the company shall give 30 days' written notice to the retailer, of such termination."

To serve our national organization of dealers, we installed district warehouses. We were, you see, setting out to function as jobbers of our own products. As I have said, this was not because we had any quarrel with the regular jobbers. It was because we had to have a quick and complete distribution that would keep our plants working. The existing jobbers could not, obviously, distribute our new lines exclusively to our agents.

OPPOSITION TO THE PLAN

But if we had no quarrel with the jobbers, some of the jobbers quickly saw a quarrel with us. To some of them it looked as though

we were attempting to upset the apple-cart, to do away with jobbers. They rallied to the attack—and soon the trade was hearing dismal predictions of the utter failure of our plan.

It is almost always that way with innovations; the people who are well established under the existing order of things tend to oppose anything new, because it offers the possibility of disturbing the *status quo*.

Strangely enough, we found the general attack good advertising. The dealers who had joined our organization resented the slurs on their judgment. Many who had not signed up decided that if our plan was as good as it must be to arouse such opposition, then they had better look into it. The rumpus brought more dealers to us than it frightened off.

By June of 1920, when we held our first convention of dealers at New Haven, we had over 2,000 agents.

Then the slump caught us amidships. Sales fell off as our dealers liquidated their stocks, and while we went ahead developing new lines and signing up new agents, our volume was badly hit. If we had had the plan two years further along when the slump came, I doubt whether we should have felt it nearly as much. As it was, the chief effect was to delay by almost a year our completing the distribution structure we had begun to build.

THE WINCHESTER CLUBS

One of the important parts of our plan has been only casually mentioned—the district clubs of our agents. As soon as the agents had been signed up in a state, we helped them to organize a state "Winchester Club." Each club is organized with officers and an executive committee elected from the membership.

Since the very beginning, the clubs have formed one of the strongest parts of our organization. Their meetings have served to build up a spirit of loyalty, of enthusiasm, of whole-hearted coöperation in the ranks of the dealers. And it is no easy task, as a great many business men can testify, to enlist any more than desultory interest throughout a large body of retail distributors.

The clubs have given us this extra enthusiasm, this willingness, even eagerness, of every dealer to get behind us with every last ounce of energetic push that he could muster. Without the club organization, I doubt whether we could have succeeded.

Every Winchester dealer is a member of his district club, which in most instances is bounded by the state lines. Each club meets

annually for a two-day session. It functions under its own officers, with what assistance they may require from the national secretary, a man at company headquarters who gives his full time to the clubs.

The club meetings are scheduled so that a group of company representatives, usually from New Haven, can meet with several districts in one trip. Usually some of the higher officials of the company go to these meetings.

Through these personal meetings with the corporate officers, the dealers quickly develop a feeling of personal interest in and intimate contact with what otherwise would to them be "only a soulless corporation" hundreds or thousands of miles away. Since each dealer is also a stockholder, he has the proprietary feeling which makes anyone give his best efforts to an enterprise. It is hard to estimate, in dollars, the tremendous value this all has to our plan.

While the jobbers had been fighting the plan tooth and toenail, we had been making steady progress, so that by June of 1922 we had 4,000 dealers. It was plain that our plan was on the way to success.

COMBINATION WITH THE SIMMONS HARDWARE COMPANY

In the spring of 1922 it was suggested that The Winchester Company and the Simmons Hardware Company combine. The Winchester Company had excellent manufacturing facilities and an enthusiastic dealer organization. The company had organized several warehouses as necessary channels for regional distribution.

The Simmons Hardware Company operated a few smaller factories, and had a complete organization for the distribution of hardware lines—the largest organization of its kind in this country.

The suggestion for the merger grew out of this combination of circumstances. Here was an opportunity to eliminate duplication of effort with resulting economies and at the same time to develop more complete and efficient manufacturing and distribution facilities.

You see what the whole plan now accomplishes: It has built up an indentity of interest among the manufacturer, the distributor, and the dealers.

As manufacturers we are bound to produce the best merchandise we can at the lowest price, so that our distributing organization and our dealer-stockholders can resell it easily and profitably. We sell our new lines exclusively through local Winchester agencies. Our jobbing houses also buy hardware from other manufacturers.

The Winchester agents purchase, through our jobbing houses, all of our new lines of hardware and sporting goods. They buy their gen-

eral lines of hardware through whichever jobbers they please. Of course, other things being equal, they give the preference to our houses, of which they are part owners by reason of their stock-holdings.

We have been able to reduce operating expenses materially. The savings have been considerable through centralizing sales, buying, finance and general management at New Haven. And savings fully as large have come about through the increased volume per salesman.

The combined companies had salesmen, duplicating effort in a large proportion of the country. That has been done away with.

Where previously a Winchester salesman could make only one sale per town (except in the large cities where we have a number of agents) and where a Simmons salesman could sell the local Winchester store nothing in the lines Winchester offered, the combination salesman can now sell his general line to all the stores in town, and can expect almost all of the business of the Winchester store.

As one of our agents expressed it to us last year, "Every time we have a new line of Winchester goods that we can show in our store, we know that people cannot go outside and get 10 per cent or 15 per cent off on the same make. They can't get the same make, except from us." That is a powerful inducement to the dealer who faces price-cutting competition.

We are approaching—not closely, to be sure, but still approaching—the saturation point on dealers. We have 5,600 today, and have on our prospect map about 2,000 that we desire. When we have attained the desired total of 7,000 or 8,000, our dealer organization can expand only as new trading communities develop. And that will not be as fast as we desire our agency business to grow.

So it behooves us to have as agents dealers who will increase their volume of business steadily. In the aggregate, they will thus keep our sales and production growing.

SERVICE FOR DEALERS

We have a whole department of store service for the purpose of furthering the success of our agents. Each agent pays a monthly subscription to our dealer service. It costs us a great deal more than the subscription price but the subscription money enables us to give a more complete service than we might otherwise feel we could afford to give.

In the first place, we offer a service in store layout. A dealer may have an answer to any problem of store layout which he propounds.

Then there is the *Winchester Herald*, the monthly "Official organ of the National Association of Winchester Clubs." This is not just a casual house-organ; it is a 48-page magazine, more pleasing in appearance than any trade paper I know of.

There is in it always a monthly letter from me to the agents, in which I sum up the latest developments of our plan and keep the retail organization in touch with what the management is thinking. And there is usually at least one article from the head of a department—the manager of the fishing tackle factory tells how his products are made and how they may be used to increase a store's volume; or the chief store engineer gives an idea of some of the principal considerations in layout that makes customers buy more freely; or perhaps the advertising manager outlines our plans for a national campaign, and points out how dealers may "merchandise" this advertising to build up sales.

Each issue urges the pushing of seasonable lines, and usually has an article from or about a merchant who does an unusually good business in the class of merchandise under discussion. Sometimes these articles are coupled with others by factory experts on how to sell these lines most successfully.

Descriptions of plans and methods which have made profits for some of our dealers are given in detail so that the other agents can adopt and adapt them to increase earnings in their own stores. Window-trims are reproduced, mail campaigns described, and everything of the sort is told so that it may be "lifted" with profit.

Besides serving as a clearing-house for the best ideas that have been developed in our whole organization, the magazine develops enthusiasm. When a noted big-game hunter sails, or returns from a trip, we show photographs of him with his favorite guns. We ran a prize contest for the most interesting stories of old Winchester rifles still in existence, and published the best half-dozen or so. When one of our professional trap-shooters wins a championship, we have a feature story about him.

Again, we find this our best way to announce new lines—something we have to do every month or so, nowadays. With a page or two of display advertising on the new goods, plus an editorial article describing them, we can be sure of several hundred orders by return mail.

Our New York City store, at Forty-second Street and Madison Avenue, is one of the most valuable assets in our whole dealer service. Never a day passes but half a dozen or more of our out-of-town agents drop in there, inspect the store, talk with the manager—and go out determined to display sporting goods better and sell more of them

when they get back home. That is a service which pays—and, at the same time, is more than self-supporting.

* * * * *

What are the facts of greatest significance to other business men, as they have been developed through our new method in distribution? Those facts are, I think, to be summarized in four general principles, by no means all new:

1. So long as the respective distributive functions of the manufacturer, the jobber and the retailer are kept clearly in mind, there is no inherent reason why all three of the functions may not be smoothly combined under one management, without giving up the profitable business with others outside the concern.

2. By concentrating on his dealer organization the best available merchandising assistance, a manufacturer can up-grade the whole industry with profit to every one concerned.

3. An established good will for one class of products can be broadened to include a greatly increased line of merchandise if the new lines are well chosen and of equally high standard.

4. "Dealer disloyalty" is absolutely unnecessary. Give a dealer half a chance to get enthusiastic, with some guarantee that he will be free from cut-throat competition, then he will push a line just as hard as does the man who makes it.

3. HOW SWIFT & COMPANY MARKETS¹

Meat is not the only product that Swift & Company sells. There is a variety of by-products for which a market must be found. We cannot sell these products through the same sales organization or to the same class of users. Different methods have to be used for the various products.

Meat is of course our most important product, and this we sell direct to retailers through our own branch selling houses and by means of our own refrigerator cars which are routed direct from our plant to thousands of towns all over the country.

DIRECT SALE TO RETAILERS

Why do we sell meat direct to retailers?

First, because the product is perishable, and we have to see that it gets into retailers' hands while it is sweet and fresh. Second, because

¹ Adapted from Swift & Company, *Yearbook*, 1923, pp. 22-25.

we have to supply all parts of the country evenly so that there will be no gluts or scarcities. We are able to sell direct to retailers because we have such a large volume of business that we can distribute through our own branch houses at a very low cost.

Besides meat we handle other perishable products like butter, eggs, cheese, and poultry. These, too, we sell direct to retailers. In fact, it is only because we have built up a smooth-working distributing machine for meat that we have taken on these other perishables. In order to handle this class of business we have built many collecting plants and creameries through the Middle West, where butter, eggs, and poultry are produced in abundance. From these assembling plants we ship solid refrigerator carloads direct to our distributing houses all over the country, where sale is then made to retailers. In other words, these products are handled as rapidly as possible and as direct as possible from farmers in agricultural sections to retail stores in distant cities. There is no unnecessary handling.

BY-PRODUCTS

Now we come to our other products. Take hides, for example. These cannot be sold through our regular sales outlet because retail meat dealers have no use for them. After we have salted them down and cured them, we have to get them into the hands of tanners so that they can be made into leather. Different tanners make different kinds of leather, and therefore each tanner wants a certain grade or quality of hides. So we sort the hides into several different grades and weights to meet the requirements of tanners, both large and small. Large tanners usually have their own buyers to whom we sell direct, whereas small tanners occasionally employ brokers to do their buying for them. We have to maintain a special sales organization to take care of this business.

Fertilizer

Fertilizer is a problem in itself. It cannot be sold to tanners; retail meat shops and grocers do not handle it. We have to get this product into the hands of farmers, and they buy it mostly in the spring.

We found that the best way to reach farmers was through their local dealers in country towns, to whom we sell direct. Some of these local dealers are general stores; others are feed dealers. In some cases, in the South, we sell through cotton warehouses; in the grain section, through country elevators;—any channel that gets the fertilizer into the hands of farmers at the lowest cost and at the time they

want it. We naturally have to keep specialists busy on this complicated sales problem.

Animal and poultry feeds, made from meat residues, blood, and bone, are by-products specially prepared for feeding livestock and poultry. They are rich in protein and mineral matter and very valuable in helping the feeder make up balanced rations at lowest cost.

The bulk of these feeds is sold to retail feed dealers and consumers, but a considerable tonnage goes direct to millers and mixers of nationally advertised brands of commercial mixed feeds.

Glue is another product which has to be sold to manufacturers. Some people might think that the principal way to market glue is in little bottles through drug, hardware, and stationery stores; but the quantity sold in this way is insignificant. The principal users of glue are manufacturers of matches, gummed tape, paper in various forms, such as wall paper, paper boxes, and sandpaper, and furniture manufacturers. Indeed, practically every industry uses glue to a certain extent. Glue, which is made out of bones and scraps of hides, is of different qualities, and manufacturers wanting different grades, buy it "on test." Since glue is bought in fairly large quantities, we sell direct to the manufacturers who use it.

Wool

Practically all our wool goes direct to woolen manufacturers. Our salesmen call upon them, carrying samples of the different grades, of which there is a very large number. This careful assortment of wools is necessary, because, as in many other industries, woolen manufacturers specialize on certain fabrics and require only certain grades of wool. For example, manufacturers of high-grade flannels, women's dress goods, and fine goods for men's wear, and the higher grades of blankets take the finer grades of wool. On the other hand, coarse wools go into the manufacture of certain overcoating materials, low-grade blankets, and carpets. Between these finest and coarsest wools there are many medium grades.

So our wool is sold entirely by sample, except in the case of those manufacturers who have used some of our standard grades in previous years and now buy without seeing the sample.

Swift & Company has no pet scheme of marketing. We simply use the method that gets our goods through to consumers at the lowest cost. To do this we have to use a variety of methods, depending on the nature of the product and the uses to which it is put, and whether or not it is a raw material for further manufacture.

4. THE DISTRIBUTION OF MEAT BY THE LARGE PACKERS¹

The Federal Trade Commission summarizes the branch house organization as follows:²

These branches are something more than selling agencies. They are factories in a way, where, for example, meats are cured and sausage manufactured; they are cold storage plants for holding stocks for limited periods; and so far as goods are withdrawn from them to ship to surrounding territory or for supplying car-route cars, they may not improperly be called warehouses; but primarily they are wholesale markets.

In the case of Swift & Company and Armour & Company there are over 800 branches and over 6,000 salesmen. As regards Armour & Company, in addition to sixteen complete packing plants, fifty-nine of the branch houses conduct some slaughtering on their own account as well as manufacture sausage and maintain smokehouses for the smoking of hams and bacon, and cooking of hams under Government supervision. One-third of the branch houses maintain mechanical refrigeration plants and another third are equipped with natural ice refrigeration.

BRANCH HOUSE ORGANIZATION

Each of the branch houses has its own manager, office force, and sales and delivery organization. The branches are grouped into districts—in the case of Armour & Company, some twenty-five in number—under the supervision of a district manager, or field superintendent. The field superintendents in turn report to the general branch house superintendent's office in Chicago. Each branch house is, therefore, an integral part of the system of distribution.

The meats, especially carcass meats, are often handled by the branch house on a commission basis, the commission ranging from 48 to 65 cents per hundred, but this does not mean that the manager is acting in the capacity of commission merchant. He, like all the other branch house employees, works on a salary basis, and the commissions merely supply means for paying the expenses of the house. It is desirable from the company's point of view to make the manager feel that the business is his in the sense that he must make it pay. Wilson & Company, Inc., since 1916 has followed the plan of assigning a definite capital for each branch, according to its needs, and charging interest thereon.

¹ Adapted from Rudolf Alexander Clemen, *The American Livestock and Meat Industry* (1923), pp. 390-92. (The Ronald Press Company.)

² Federal Trade Commission, *Report on the Meat Packing Industry*, Part IV (1920), p. 34.

The branch house manager is charged, or "pays" prices fixed absolutely by his company for goods of the company's production. He is not at liberty to buy where he will, and is not free to pursue his own selling policy, but is subject to instruction from the district superintendent, the district inspector, and the managers of the various departments from which he draws supplies at the plant.

These houses, however, are something more than branches. They constitute an important part of a great system of production and distribution. To say, therefore, that Swift & Company has 415 branch houses or Armour & Company has 370 such houses and employs in connection with them more than 3,000 salesmen, does not disclose the full scope of the big packers' position in the wholesale market. The manner in which the location of branch houses is decided and the houses are supplied with products to meet every grade of want, the opportunities they furnish for gathering market and trade information, the way in which they are connected by every means of communication with one another through the district superintendent and with the central office by private wires, the mails, the telephone, and by weekly and monthly reports, gives them a selling efficiency more than proportioned to the number of outlets they furnish. The general branch house superintendent is not necessarily a general sales manager. For example, Armour & Company has no general sales manager. The general superintendent of branch houses does not concern himself with specific distribution of the products of any particular department. Something like the functions of a general manager, however, are supposed to be performed by each of the twenty-five field superintendents in his own territory.

DEPARTMENT SALES MANAGERS

Each department of the business has its own sales manager in the Chicago general office. There are some twenty-five of these, each corresponding directly with the field superintendents or branch house managers and individual salesmen. Each department promotes among the superintendents, managers, and salesmen of the branch houses the interests of the particular products that come under the jurisdiction of the individual department. In addition to the regular branch house salesmen, each department has its own specialty men whose operations are not confined to any particular branch house. The canned meats department, for example, has fifty-three specialty men in the whole United States, educating regular salesmen and reinforcing their work. The soap department has some

one hundred and twenty-five men and these men simply supplement the work of the regular branch house organization.

OTHER OUTLETS

In addition to the full-fledged branch houses, some of the companies have outlets closely associated with the branches and subsidiary to them. Swift & Company, for example, has a considerable number of "substocks," that is, houses with an organization in all respects like the branch house, except that they have no accounting department. Sales tickets and reports of all kinds are sent to a neighboring branch, through which all accounting to the district office and the Chicago office is done. In 1918 the company had thirty-nine of these substocks, twenty-four of which were located in the South and Southwest.

Still another outlet closely associated with the branch house system is found in the storage and delivery houses. These are merely the establishments of local merchants who enter into contract with the packing company to store goods as shipped and to deliver them to customers secured by the company's salesmen attached to a branch house having jurisdiction of the territory. The storage and delivery service is performed on a percentage basis.¹

Besides the branch house system the packers have access to the markets by all the avenues open to their competitors, such as the hotel supply companies, some of which they own. The hotel and restaurant trade seems to be a part of the food distributor's business that requires special care. It stands midway between the retail and the wholesale trade. In character the hotel is an ultimate consumer and might be expected to buy its supplies from retailers, as other consumers do. From the point of view of volume and economy in delivery it may, and often does, surpass all but the largest retailers and may claim the right to buy at wholesale prices.

5. CAR ROUTES FOR THE DISTRIBUTION OF MEAT²

The branch house was the first extensive method of distribution used by the large packing companies; but branch houses could not reach thousands of small towns. To make fresh meats available to such places some other system had to be devised.

The simplest way to describe a car route is to say that a salesman calls on the retail dealers in towns tributary to one of our plants. He

¹Federal Trade Commission, *op. cit.*, p. 37.

²Adapted from Swift & Company, *Yearbook*, (1922), p. 39.

travels along a certain line of railroad, and has a definite schedule of days upon which he makes these calls and sends his orders to the plant. A refrigerator car is loaded and sent out over the line of railroad covered by the salesman, and the orders are dropped off at the proper stations for the various buyers. These cars, too, go out on a schedule, on the same hour and on the same day of each week, so that the retailer knows just when his supplies will reach his shop.

The work of filling these orders at the plant is highly organized to secure both accuracy and rapid handling. To illustrate, suppose a car must leave the loading dock at 12 o'clock noon. Orders for goods to go in this car must reach the office not later than 9:15 that morning—just $2\frac{3}{4}$ hours before the car pulls out. Fifteen minutes is allowed for typing the order, checking the prices, making the necessary number of copies to go to all the different departments from which a given customer's goods are to come. Another fifteen minutes is allowed to distribute these copies to the proper departments. New accounts must be passed upon by the Credit Department. At 12 o'clock these departments will have sent their goods to the loading dock and loaders will have loaded them into the car, while a checker checks them carefully off the list to make sure everything is correct. The goods must be loaded in "station order"—that is, those for the first stations must be nearest the door. Within an hour from the time the car leaves the loading dock the bill of lading and invoice must be ready.

Of course, before this loading takes place the car must have been iced for several hours. Each car requires about 5,000 to 6,000 pounds of ice and 500 to 800 pounds of salt.

In order to satisfy our customers' needs, over 65 per cent of these cars out of our Chicago plants must leave on Wednesdays and Saturdays. The same thing is going on proportionately from seventeen of our plants in the United States.

Our Car Route System delivers supplies to nearly 10,000 towns, many of which could not get as good a supply of meats regularly in any other way. To take the orders, get them to the plants, copy and distribute them to departments, assemble the products, load, ship, and deliver them is no mean accomplishment.

6. THE PALMER-PACKER AGREEMENT¹

The view that there is danger of monopoly [in the distribution of food] seems to be taken by the Department of Justice. After four or

¹ Adapted from G. O. Virtue, "The Meat-Packing Investigation," *The Quarterly Journal of Economics*, Vol. 34, No. 4 (Aug. 1920), pp. 677-79.

five months of study of the evidence collected by the Commission during the spring and summer of 1919, the Department concluded that there had been established such a degree of probability of monopoly as to warrant prosecution under the anti-trust law. During September and October an investigation was made before the Federal Grand Jury at Chicago, and a similar investigation was being arranged for in New York late in October, when the Attorney General received intimations from the packers that they desired to confer with him, that they felt they had never been accorded a proper hearing before the Federal Trade Commission and that before action was taken by the Department they would like to present their side. This led to a series of discussions which ended late in December in an agreement on the part of the packers to the terms of a decree to be filed in the Federal Court for controlling their activities. This was before suit had been commenced and before it had been decided whether to proceed under the civil or the criminal sections of the law. Following is a summary of the terms as prepared by the Attorney General.

Under this decree the defendants, and each of them, either as corporations or as individuals, are compelled in brief:

1. To sell, under supervision of the United States District Court preferably to livestock producers and the public, all their holdings in public stockyards.

2. To sell, under the same supervision, and in like manner, all their interest in stockyard railroads and terminals.

3. To sell, under the same supervision, and in like manner, all their interests in market newspapers.

4. To dispose of all their interests in public cold storage warehouses except as necessary for their own meat products.

5. To forever disassociate themselves with the retail meat business.

6. To forever disassociate themselves with all "unrelated lines," including wholesale groceries; fresh, canned, or salt fish (and a large number of other commodities enumerated).

7. To forever abandon the use of their branch houses, route cars, and auto-trucks, comprising their distribution system, for any other than their own meat and dairy products.

8. To perpetually submit to the jurisdiction of the United States District Court under an injunction forbidding all the defendants from directly or indirectly maintaining any combination or conspiracy with each other, or any other person or persons, or monopolizing or attempting to monopolize, any food product in the United States, or indulging in any unfair and unlawful practices.

The decree further provides that jurisdiction is perpetually retained by the court for the purpose of taking such other actions, or adding at the foot of the decree such other relief, if any, as may become necessary or appropriate for the carrying out and enforcement of the decree, or for

the purpose of entertaining at any time hereafter any application which the parties may make with respect to this decree.

The question of dealing in butter, cheese, eggs, and poultry was considered, but was left out of the settlement altogether. The packers were left undisturbed in their cottonseed oil and oleo operations, and also in the possession of their refrigerator cars. Mr. Palmer explained to the House Committee on Agriculture that by disassociating the packers from the handling of groceries and other "unrelated" products, and by debarring them from using their cars for transportation of such commodities owned by others, he had taken "the poison out of the refrigerator car complaint." It should be noted that while the companies cannot handle the "unrelated" commodities, nor own the stock of companies handling them, the packers as individuals may; but individually or jointly they may not own more than 50 per cent of the stock of such a corporation or more than a half interest in a firm handling these goods.

This settlement does not decide the question as to whether there is or was a combination in restraint of trade. The language of the Attorney General leaves no doubt, however, as to his belief in a combination and in the danger of the development of a vast food monopoly; that, in his view, is where the development of the last few years was leading. He seems to recognize the fact that he was smashing a highly efficient machine but that it was necessary to choose between efficiency, monopoly, and semi-benevolent autocracy on the one hand and relative inefficiency, free competition, and the open door to industry on the other.¹

7. MARKETING MEN'S FACTORY-MADE CLOTHING²

The several methods of distributing men's factory-made clothing are as follows: By selling direct to the retail trade, by "tailoring to the trade," by "mail order," or by selling to jobbers. The bulk of men's factory-made clothing is sold direct to retail stores. In order to reach this trade the manufacturer employs traveling salesmen who cover a defined territory and call personally on the retailers.

Practically all men's ready-made clothing is made to fill orders, and little, particularly in the higher-priced lines, is made for stock.

¹The memorandum containing the terms agreed on is printed in the Hearings on the Kendrick-Kenyon bills, Pt. IV, pp. 18 ff., January 7, 1920. Mr. Palmer's explanation of the terms follows. See also his statement before the House Committee on Agriculture in the Hearings on the Anderson bill, Pt. XXXI, April 3, 1920.

²U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce, *The Men's Factory-Made Clothing Industry* (1916), pp. 239-241.

The manufacturer has new designs perfected well in advance of the opening of the season. Sample garments are made up for each traveling salesman, and in addition "swatches" or samples of various styles of cloth, are carried. The salesman submits these samples to the retailers in his territory and takes orders for future delivery, these orders being sent to the factory and there made up according to specifications. Orders are recorded three to six months before delivery.

"TAILORING TO THE TRADE" AND MAIL-ORDER SALES

There has been a growing tendency in recent years for manufacturers to do "tailoring to the trade." This branch of the industry is making rapid strides, and certain concerns confine themselves entirely to this line of business. Others use it as a "side line," in addition to dealing with retailers in ready-made clothing. The initial expense is very large, as it requires the making up of an entire line of samples bound in book form, and in addition, very frequently, made-up models are furnished. It is said, however, that the returns justify the expense, as ventures in this line have proved very profitable. "Tailoring to the trade" is handled for the manufacturer by merchant tailors, or, in the smaller towns and villages, by retail stores. The customer selects the style of cloth he desires from the books of samples, his measure is taken, and the order sent to the factory. The garment is made up and sent for a try-on, and if necessary, is returned to the factory for proper alterations.

Mail-order houses sell entirely through catalogues or by advertising. Both ready-made clothing and made-to-order garments are sold in this way. Some mail-order houses have their own factories, while others buy from the regular manufacturers. It is also said that mail-order houses buy up the left-over goods and odds and ends that the manufacturer is unable to sell to the retail trade. The greater part of the clothing sold by mail-order houses is disposed of in small towns or in rural districts.

Mail-order houses that make clothing to individual order secure their trade principally through advertising. Cloth samples are sent to the customer, from which he makes his selection; he has his measure taken and sends the order to the mail-order house, where the garment is made up. This branch of the mail-order business is similar to "tailoring to the trade."

ELIMINATION OF THE JOBBER

There is very little field for the jobber now in handling men's factory-made clothing. Changed conditions in the industry have

caused almost the entire elimination of the jobber as a medium of distribution. The manufacturers have preferred to deal directly with their customers, and desire to establish a custom which is their own and upon which they can rely. The little business that is now done with jobbers is in the cheapest lines only, and in job lots and left-over stock.

Table 8 shows the distribution of net sales in the sixty-four establishments from which information was secured:

TABLE 8.—DISTRIBUTION OF NET SALES

Number of Establishments	Sold to Retailers	Sold to Jobbers	Sold by Mail Order	Sold "Tailoring to the Trade"	Exported
	Per cent	Per cent	Per cent	Per cent	Per cent
52	100.00	.....	.....	.....	.....
2	99.00	.....	.....	.....	1.00
1	99.00	1.00	.....	.....	.....
1	95.00	5.00	.....	.....	.....
3	90.00	10.00	.....	.....	.....
1	90.00	.....	.....	.....	10.00
1	85.00	.....	.....	15.00	.....
2	75.00	25.00	.....	.....	.....
1	.....	80.00	20.00	.....	.....
64	98.21	1.29	.21	.08	.21

THE EXCLUSIVE AGENCY

Manufacturers have two methods of selling to retailers; they sell to all from whom orders can be secured or confine their business to one or two retailers in each city or town.

There is much difference of opinion in the industry as to which is the more advantageous method. To be successful in selling by the "sole-agent" plan the manufacturer must advertise extensively and establish a national reputation for his merchandise. This plan requires a considerable amount of capital, and none but the large concerns can afford to embark on such an extensive advertising campaign. The manufacturer selling to sole agents selects the stores in each community handling his merchandise and without doubt has more reliable customers than the manufacturer selling to all retailers. Further, under normal conditions, he can better estimate the volume of his business in advance of the season and has to contend with fewer cancellations and returns and allowances.

The retailer who acts as the sole distributor in a community for a brand of nationally advertised men's clothing enjoys many advantages over his competitors. The fact that he is agent for a well-known make of clothing gives his store a certain prestige. The extensive advertising done by the manufacturer will bring trade not only in men's clothing, but in other lines as well. The retailer acting as sole agent has little trouble on account of late delivery, and he avoids cut-rate sales. Certain retailers, however, object to the sole-agent method, preferring to sell under their own brand and stand behind the reputation of their merchandise, rather than sell under the trade-mark of the manufacturer and do business on his reputation.

There is an opinion in the retail trade that the confining of sales by the larger manufacturers to one or two retailers in each locality is restricting the number of retailers of men's factory-made clothing. It is without doubt a fact that anyone starting in the retail-clothing business experiences great difficulty in securing the agency for any of the large nationally advertised manufacturers. Establishments of this description have their sole agents in all the principal places in the country, and the new retailer is apt to find the brands he desires to handle already controlled by other retailers.

There are, however, numerous manufacturers of men's factory-made clothing who do little if any advertising and whose product is entirely unknown to the general public. Many of these factories turn out high-grade merchandise, garments that will put their customers in direct competition with retailers handling nationally advertised brands. Many retailers prefer to buy from houses of this kind, for they can sell under their own brands and build up a reputation for themselves rather than for the manufacturer. Some manufacturers of non-advertised lines of men's clothing state that when the difference in cost of advertising is taken into consideration they prefer to establish a reputation for quality with the retail trade rather than with the general public.

8. MARKETING HOUSEHOLD FURNITURE¹

SPECIALIZATION IN MANUFACTURE

The household-furniture industry is highly specialized, and the companies engaged therein are known as manufacturers of case goods (consisting principally of bedroom furniture, but including china

¹ Adapted from Federal Trade Commission, *Report on House Furnishings Industries*, Vol. I, *Household Furniture* (1923), pp. 43-45, 144-47.

cabinets and buffets), of chairs or of extension tables, and of living-room furniture, including upholstered articles. Companies specializing in only one line buy from other manufacturers the pieces needed to complete the suite. The pieces thus purchased are frequently unfinished (in white), i.e., not filled, stained, or varnished, which enables the manufacturer to finish the manufactured and purchased pieces alike. Some manufacturers buy the cut stock and assemble and finish the pieces. There is a tendency in the industry for companies manufacturing specialized lines to integrate or to become affiliated in order to manufacture complete suites for bedroom, living room, and dining room.

Within each line there are various grades of furniture based on materials and construction. In case goods, and upholstered furniture particularly, two pieces of identical outward appearance, may be of very different materials and construction and therefore of quite different grade. Finally, added to the many different grades in which a given design may be produced, there is the multiplicity of styles and designs produced to tempt the buyer's taste. All these differences in design, construction and materials make the furniture industry one that all but defeats efforts to standardize and grade its products.

Furniture manufacture is carried on by a comparatively large number of mutually independent producing interests. Even limiting its selection to firms capitalized according to Thomas's Register,¹ at \$25,000 or more, the commission's mailing list of manufacturers of wooden household furniture to whom schedules were sent in connection with this inquiry included approximately 800 firms. Some of these firms were located in practically every state east of the Missouri River, as well as along the Pacific Coast. The bulk of the production, however, centers in the Mississippi Valley, the Lake region, and the Atlantic Seaboard states. Centers of particular importance are Grand Rapids, Mich.; Chicago and Rockford, Ill.; Jamestown, N. Y.; and High Point, N. C.

THE RETAIL TRADE: STYLE PROBLEMS

In the wholesale and retail trade furniture of all lines and of all styles and grades in each line, as well as the product of many other industries becomes the stock of trade of the merchant. Distinctiveness in style and appearance is becoming more and more important as the tastes of consumers come to demand furniture of better construction and more distinctive character. The stock is bulky, and for its proper

¹Thomas's Register of American Manufacturers, 1921 edition.

display requires a large amount of space, well-lighted show rooms, and large storage space. Furthermore, except in the cheapest grades, styles change rather quickly, and a design that is quite popular one season may be almost obsolete the next, so that the retailer may find himself with a considerable stock of furniture on his hands which he must sell at reduced prices. An example of this type is the highly colored enameled furniture, which had rather brief popularity. On other and more stable designs and finishes the changes of fashion are less rapid, but the rate of stock turnover is rather slow, while advertising and selling expenses are high. Furniture, too, is a commodity for which the volume of demand, particularly in the more expensive styles of medium grades, is affected sharply by periods of business depression.

When employment is plentiful and wages high people buy more and better furniture, while in times of depression they refrain from buying at all or content themselves with lower grades. Consequently, the retail furniture trade not only entails larger selling expenses than many less bulky commodities but it also fluctuates from season to season and from year to year with general industrial and business conditions. This fluctuation naturally affects not only the retailer but the manufacturer and wholesaler as well.

THE WHOLESALE IS OF MINOR IMPORTANCE

The wholesaler, while he occupies a well-recognized position in furniture distribution, actually handles only a minor part of the total production of the country. In territory that is at all adjacent to his factory the manufacturer generally sells the bulk of his product direct to the retailer through salesmen and at the various furniture "markets" or exhibitions that are held from time to time in various furniture centers. It is only in territories remote from the factories, to which the cost of sending salesmen would be prohibitive, that the jobber or wholesaler handles any large part of the business.

Undoubtedly the wholesaler who stocks a number of lines can offer advantages of prompt delivery to the retailer and of larger purchases to the manufacturers. However, the fact remains that while a few manufacturers, particularly of the cheaper grades, sell the bulk or even all of their product to the wholesaler and jobber, a large majority of manufacturers of medium and better grades appear to sell less than 20 per cent of their product through these channels, and these sales generally are, as stated above, to wholesalers and jobbers located in the territory most remote from the factory.

MANUFACTURERS SELL DIRECT

Manufacturers of furniture, as previously stated, generally sell the bulk of their output directly to the retailer, and in some cases also job or wholesale some furniture which they do not themselves produce. A scattering few are also engaged to a limited extent in the retail distribution of furniture. Twenty-eight of the 332 manufacturers reporting were engaged in the wholesale end of the industry, having yearly wholesale sales of \$13,816,576.28, and five manufacturers with total factory sales of \$2,694,923 reported retail sales amounting to \$1,186,470.06 for the year 1921. In general, however, the manufacturing, wholesaling, and retailing of furniture are conducted by independent concerns, and there is at the present time little indication that the three functions are being combined under one management to any great extent.

In all, 97 wholesalers of furniture returned organization schedules, an examination of which indicates that the wholesale furniture business is predominantly carried on by mutually independent concerns which have little or no relation either with manufacturers or with firms engaged in the retail trade. Many retail stores do a little wholesaling, but it is generally too small to warrant their being considered wholesalers, except in the case of a few large department stores conducting both wholesale and retail businesses, of which Marshall Field & Co., of Chicago, may be cited as an example. The typical retail furniture store and the typical wholesale furniture establishment, however, are generally not related to each other or to manufacturers through stock ownership or interlocking officials.

FURNITURE EXHIBITIONS

There are two recognized seasons in the manufacture of furniture—the spring season, extending through the summer, and the fall season extending through the winter. The manufacturers' selling campaigns, during which orders are taken for the spring manufacturing season, may start as early as November and for the fall seasons as early as May or June. The selling campaigns are usually started with furniture exhibitions in the principal furniture markets, as manufacturers generally endeavor to secure orders before manufacturing the article.

Furniture is a product that cannot be sold by sample on the road. The nearest to this that a salesman can attempt is to sell from photographs and description. The furniture markets or exhibitions

held periodically by manufacturers in various furniture centers such as Chicago, Grand Rapids, Jamestown, N. Y., and High Point are the manufacturers' attempt to solve the problem of selling direct to the retailer by sample. At these markets, which are financed by the manufacturers, a building or a part of a building is secured and space rented to manufacturers desiring to exhibit at the market. Here the manufacturer places on the floor samples of his product for the inspection of the retailer. Semiannually it is the practice of all manufacturers exhibiting in a given market to have their representatives present at the exhibit for what is known as a market. The fact that a market will be held is widely advertised and retailers in large numbers go there, inspect the various lines, and place such orders as they desire to place at the time. Later, when salesmen visit the retailers with pictures, the retailer can place further orders with the feeling that he has actually seen the goods on display at the market. Manufacturers generally bring out their new designs at the various markets, hence the retailer who visits the market is enabled to keep abreast of changes in styles and design as indicated by the bulk of the furniture shown at the market much better than he would be able to do if he merely awaited the visit of salesmen.

Each principal manufacturing center [Grand Rapids, Mich.; Jamestown, N. Y.; Evansville, Ind.; Rockford, Ill.; and High Point, N. C.] holds at least two exhibitions annually, lasting from one to two weeks. The exhibitions are scheduled to occur at different times during the year, so that all buyers may have an opportunity to attend all of them. The exhibitions are held in more or less permanent display buildings and are not necessarily limited to displays by local manufacturers. Manufacturers in other localities maintain displays provided there is space and the market is profitable. High Point maintains a permanent display building, which is open to buyers at all times, and invites manufacturers from all over the country to exhibit their products there.

The furniture exhibition system eliminates the traveling salesman to a degree, and has the advantage, from the manufacturer's point of view, of concentrating the buying, so that the manufacturer can work to some extent on orders. By concentrating the buying the manufacturer is enabled to put through a season's requirement in any design in one lot. Most manufacturers cut at one time sufficient material to make 50 to 250 suites of furniture. These lots usually cover all orders placed and in addition a number of suites for anticipated business. In order, however, to give prompt delivery, the manufac-

turer frequently anticipates the demand for his products and starts producing in advance of sales. The preparation of designs, samples, cuts, catalogues, and production for quick delivery starts well in advance of the furniture exhibitions, as it takes from 60 to 90 days to put an order through the factory.

9. MARKETING REFINED PETROLEUM PRODUCTS ON THE PACIFIC COAST¹

Refined petroleum products are distributed in wholesale quantities in tank steamers, tank cars, tank trucks, and wagons. In distributing such products, particularly gasoline and kerosene, shipments are made in tank cars or tank steamers from the refinery to the principal marketing centers, where storage facilities are maintained for bulk shipments from which the requirements of the retailer are supplied. The retail trade, especially that in sparsely settled sections remote from the main distributing stations, is often served in barrels, drums, cases, and cans. Refined products are distributed to the ultimate consumer by various retail agencies, (1) service stations where the merchandising of certain products, such as gasoline and lubricating oils, constitute the sole business; (2) as a side line, for example, in connection with the garage business, or when handled with other merchandise, such as hardware, paint, groceries, or in a general store.

The distributing organization is well illustrated by that of the Standard Oil Co. (California), which is the largest factor in the marketing branch of the Pacific Coast petroleum industry. On January 1, 1920, this company operated 16 main sales stations, 385 substations, and 220 service stations throughout the Pacific Coast territory and Hawaii. The main stations and the substations handle all petroleum products and are used for wholesale and retail distribution, while the service station distributes directly to the consumer. Refined products, such as gasoline, kerosene, and lubricating oils, are shipped from the company's refineries in tank steamers, tank cars, or motor vehicles to the various main and substations, which supply their own service stations and the retail trade. The distribution of main stations, substations, and service stations operated by the Standard Oil Co. on January 1, 1920, is shown in the following table:

¹ Adapted from Federal Trade Commission, *Report on Pacific Coast Petroleum Industry*, Pt. II., *Prices and Competitive Conditions* (1921), pp. 51-53, 56.

TABLE 9.—MARKETING STATIONS OPERATED BY THE STANDARD OIL Co. (CALIFORNIA) JAN. 1, 1920

District	STATION		
	Main	Substation	Service
Phoenix, Ariz.....	1	24	..
Bakersfield, Calif.....	1	19	2
Fresno, Calif.....	1	24	8
Los Angeles, Calif.....	1	45	52
Oakland, Calif.....	1	9	23
Sacramento, Calif.....	1	34	13
San Diego, Calif.....	1	5	5
San Francisco, Calif.....	1	23	24
San Jose, Calif.....	1	14	14
Stockton, Calif.....	1	20	9
Reno, Nev.....	1	14	1
Portland, Oreg.....	1	53	26
Tacoma, Wash.....	1	27	13
Seattle, Wash.....	1	41	21
Spokane, Wash.....	1	30	9
Honolulu, Hawaii.....	1	3	..
Total	16	385	220

As shown above, there is one main station in each district. Each district is under the supervision of a manager, who has general charge of the business in his territory.

INTEGRATION WITH RETAILING

Prior to 1915 the marketing functions of the large companies were confined chiefly to wholesale distribution of refined petroleum products, and there was practically no integration of the retail branches of the business in their marketing organization. Some of the companies did retail gasoline and lubricants through their own service stations, but their activities in this field were not of sufficient magnitude to be significant. However, beginning with 1915 the development of the retailing activities of the large companies began on a large scale; this was especially true in the case of the Standard Oil Co.

Leased Retail Equipment

A noteworthy feature in connection with the development of the retail branches of the petroleum business was the practice of leasing

free of charge or selling on a convenient installment plan service-station equipment to dealers under the condition that the equipment be used only for the sale of the company's products. The Associated Oil Co. is known to have engaged in this practice on a very large scale, having thus brought under its control, at the end of 1919, 757 retail stations. The Union Oil Co. has also engaged in this practice to some extent, but its activities seem to have been confined to the city of Los Angeles and to a less extent to other parts of its marketing territory. The Shell Co. reported that although it made a practice of renting or leasing equipment to dealers, it never had any understanding whereby the parties using its equipment were obligated to purchase its products. The Standard Oil Co. stated that it had furnished equipment free of charge to only four stations in the Yosemite National Park, which bound the respective dealers by an exclusive sales contract.

The large marketing companies sell gasoline and lubricating oils at retail from their own service stations, while sales in wholesale quantities are made from the refinery or from large distributing stations.

The information secured by the Commission regarding the sales methods of the small marketers shows that some degree of integration between the refining and marketing branches has taken place among them and that the bulk of the products manufactured by them is distributed directly to the retailer or to the ultimate consumer without being handled by a wholesaler. The small refiners have been able to largely eliminate the wholesaler because the products of their refineries are marketed in territory contiguous to their plants. This lends stability to their business and allows them to distribute their products at a minimum expense. On account of the local character of this business, considerations of economy connected with carload shipments lose their importance, thus bringing into play an additional factor that tends to eliminate the middleman in the distribution of the products manufactured by this class of refiners.

10. ARGUMENTS FOR AND AGAINST THE PARTICIPATION OF MANUFACTURERS IN RETAILING: SOFTWOOD LUMBER¹

Recent consideration of the retail distribution of lumber on the part of many manufacturers is undoubtedly a potential influence of a competitive nature because of the actual competition which it may

¹ Adapted from Ovid M. Butler, *The Distribution of Softwood Lumber in the Middle West: Retail Distribution* (1918), pp. 96-97. (U. S. Department of Agriculture, Report 116, *Studies of the Lumber Industry*, Pt. IX.)

develop. There have been frequent cases of interlocking directorates and still closer business connections between retailers, wholesalers, and manufacturers. In some instances a single firm has engaged in every branch of the industry. Of late, however, the increasing pressure of timberland investments and other manufacturing conditions have stimulated effort among lumber producers to participate more actively in its distribution. One of the largest lumber manufacturing companies in the country has recently acquired lines of retail yards in the Northwest, adopting a very progressive and aggressive merchandising campaign. It is already a strong influence toward more modern methods of merchandising in the territory in which it operates.

The control of retail yards generally by manufacturers, even in country communities, will be held back by the financial resources required and by the diversified nature of lumber and its sources of manufacture. From a public standpoint it is questionable whether any larger advantages would be gained. It is merely the same system under different and more centralized management and capital. The very fact that retail lumber yards in the country districts cannot exist on lumber alone makes the manufacturing and distributing operations two more or less distinct businesses.

While certain economies could undoubtedly be effected by centralized control, it may be questioned whether men hired as retail dealers to advance the sale of lumber primarily can serve the public as effectively as men whose own money is in their business and who develop and apply an expert knowledge of the most economical uses of all building materials. Furthermore, a general move on the part of manufacturers to enter the distributing field by the establishment of new competing yards rather than by the acquirement of existing yards might involve an added burden to the already heavy charges on the distribution of lumber.

On the other hand, lumber manufacturers obviously have a direct interest in the distribution of their product, which forms the bulk of the retail dealer's trade. This interest has not been applied as effectively in the past as progressive merchandising has demanded. If retailers in certain regions are charging excessive prices for lumber, or if manufacturers can develop more efficient merchandising than can independent capital, both the industry and the public will be benefited to the extent to which these conditions are bettered. Manufacturers also have an entirely legitimate interest for entering the retail field, in seeking to increase the sale of lumber. The independent dealer may have no incentive to push the sale of wood if he can make

equal or larger profits on the sale of other building materials. In the nature of things, it rests upon the manufacturer to supply this incentive—by forceful participation in merchandising. This does not require necessarily the ownership of retail establishments, but may be accomplished by coöperation with independent distributing agencies through furnishing expert salesmen, demonstrations of lumber uses, advertising, and the manufacture of special products adapted to the requirements of particular sections.

As has been indicated, recent activities on the part of manufacturers to develop more progressive methods of merchandising, whether accomplished through direct competition with existing retailers or through coöperation with them, which is the preferable policy in the judgment of many lumbermen, are undoubtedly wholesome influences from the standpoint of efficiency in the retail trade and greater service to the users of lumber. The extent to which the general consumption of lumber will be actually increased thereby is, of course, problematical.

CHAPTER XI

RETAIL DISTRIBUTION

1. THE RETAILER AS A NECESSARY FACTOR IN DISTRIBUTION¹

Complaints are sometimes made that prices are too high and that the retailer receives more than his share of the amount paid by the consumer.

Let us try to determine whether the retailer has a substantial reason for his existence as a factor in distribution and whether there are not economic forces at work which prevent the retailer from obtaining more than a reasonable profit for his services.

Methods of distribution have occupied the best thought of keen merchants for ages past. Constant efforts have been made to simplify the process and to deliver to the consumer the products of the farm and factory at the lowest possible price. The system employed today is a growth from past experience. It is not claimed that the system is perfect. Better methods of distribution will yet be found and will be accepted as rapidly as they are discovered.

In the past many efforts have been made to dispense with the services of the retailer. These efforts have largely resulted in failure. If it were now possible for the consumer to purchase all of his wants direct from the producer, would it be desirable to do so? If he could buy somewhat cheaper, what about the time spent by himself and family? Time is money and should be taken into consideration.

And, too, the consumer usually desires to inspect the article before making a purchase. This would be practically impossible in buying direct from the producer.

But, consider the price which the producer would be compelled to charge in case he should undertake to sell direct to the consumer. His sales would be in small amounts. He would ship over a wide area to a large number of customers. The cost of packing and shipping would be immense. The return of articles would be frequent. He would need to have a selling organization. He would need to advertise extensively. He would need to prepare a selling list and to keep it fully

¹ Adapted from J. M. Barnes, "The Retailer as a Necessary Factor in Distribution," in *Field Quality News*, Nov. 23, 1923. (Marshall Field & Company, Wholesale, Chicago.)

revised. All of these charges would be added to the producer's present price. With all of these additional expenses, would not the producer be obliged to charge as much as the retailer now charges? Consider also the constant correspondence, the constant dealing with the transportation companies and the constant trouble of returning unsatisfactory merchandise.

Experience shows that the average consumer thinks that it is more profitable to go to some reliable retail store where he finds assembled numberless articles of desirable merchandise brought from all parts of the world. There he can quickly and conveniently make his purchases. There he can easily go if adjustments are necessary.

It follows, therefore, that the retailer exists because he is a necessity and because he is able to supply the wants of the community better than the community could supply its own wants by dealing direct with producers.

But could not the retailer sell his merchandise at much lower prices than he now demands? What prevents the retailer from charging exorbitant prices? Each retailer has certain fixed items of expense which he must pay before he receives any profit for himself. He must pay rent; he must pay clerk hire, advertising, heat, light, insurance, etc. Having added these items to his cost, he then adds a reasonable profit. He marks his goods accordingly. His competitor does the same. In their struggle for the patronage of the consuming public, each merchant tries to reduce his fixed expenses and profits to a minimum. He knows that when the merchandise is of the same quality the retailer who is able to sell at the lowest price will win the favor of the consuming public. It is the case of the survival of the fittest. The consumer gets the benefit. The retailer who is not efficient and able to sell at minimum prices is doomed to failure. In fact, about one per cent of all merchants in business fail every year. It is this fierce competition which leaves the most efficient retailer in the field and prevents the consumer from paying exorbitant prices.

2. ON THE IMPORTANCE OF THE RETAILER TO THE CREATION OF CONSUMER DEMAND¹

Many manufacturers have been led to assume that "created demand" will close sales and prevent substitution. The demand of the consumer is, it is claimed, the pivot upon which distribution

¹ Adapted from George L. Louis, "The Dealer's Part in Distribution," *System*, June, 1912, pp 584, ff., quoted in P. T. Cherington, *Advertising as a Business Force* (1913), pp. 39-43.

revolves, and this consumer's demand alone is sufficient to bring about the coöperation of the dealer.

What is commonly termed "created demand" is, in my opinion, no more than a *primary* selling influence. In itself it is not sufficient to make sales. Psychologists tell us that sales are made by a process of elimination; the consumer does not argue, "Why I should buy," but questions, "Why should I buy?" Advertising that starts this reasoning is only a preparation; something more tangible than printed words or pictures must be added to complete the sale.

In a series of one hundred instances where consumers were watched to note how and why they bought advertised goods, eighty-three couched their first question, "Have you so-and-so?" and seventeen, "I want so-and-so." This shows the attitude of the average purchaser when entering a store with the intent to buy. The question "Have you so-and-so?" is a lead for the merchant to put forth his final and necessary sales force. The consumer is simply in an interrogatory attitude.

With his direct contact, his personal influence, and his final selling talk, the retailer is the power that concludes sales. The influence of the retailer in intimate touch with the consumers is far greater and more effective than that of a distant manufacturer whose appeal is by means of the printed word alone.

No matter how successful selling by threat may have been—with the consumer as the innocent wielder of the "big stick"—the retailer today knows his power. He is no longer susceptible to anything but the direct approach, with goods and prices as the selling basis. This does not mean that he does not recognize and appreciate the wonderful aid of a selling campaign directed by the manufacturer at the consumer. But it means that such a campaign as a selling force from the manufacturer must follow the goods and not precede them in importance.

AN EXPERIMENT IN SUBSTITUTION

In order to verify the conclusion that the dealer is the court of last resort, to whose influence the consumer is more susceptible than he is to that of the advertising manufacturer, the experiment was made of submitting substitutes for a number of widely advertised articles now before the public. A list of the best-known advertised goods, clothing, shoes, toothbrushes, saws, food products, soap and furniture, was used as experiments by retailers in various lines for my benefit. Without one exception, each substitution was easily effected. I was rather startled at the ease and quickness with which it was done in all instances.

For example, a woman who had been a patron of a certain grocery store for many years, and who at regular intervals ordered a dozen bars of a well-known advertised soap, gave a list of the items she desired to the proprietor of the store. When she mentioned the soap he produced an unknown brand and quietly said: "Try this instead of that, Mrs. Brown; it's just as good." Mrs. Brown looked at him curiously for a moment as if surprised at the suggestion, met his firm, assuring glance, then answered, "All right." The dealer did not argue or say anything detrimental to one soap or in favor of the other.

The consumer—the final purchaser—is in direct contact with the retailer. To distort conditions and attempt to influence the consumer directly without the coöperation of the dealer is to describe a circle instead of a straight line in securing maximum sales at minimum cost.

3. THE DEMAND FOR BETTER QUALITIES OF MERCHANDISE¹

Several influences are coöperating to produce a demand for a better quality of merchandise.

First. The effort of jobbers and retailers to sell a good grade of merchandise, knowing that these grades offer greater values to the consumers, and that in serving the consumers' best interest lies the future success of their own firms.

Second. The department stores having furnished facilities for shopping, women have taken advantage of the opportunity to train themselves in the art of buying.

Third. The national magazines have carried quality and style ideas from one end of the country to the other until today the old time crossroads trade has disappeared, and there is scarcely a locality in America where last season's goods can be sold.

Fourth. The schools and colleges have made women more intelligent and more earnest. In the management of the household there are two economic functions: the earning of money, and the spending of money, the former usually the duty of the husband, the latter often the privilege of the wife. Many women have come to realize that the happiness and economic welfare of the family depends quite as much upon a wise expenditure of the family income as upon a successful gathering of wealth; and hence have come to consider the spending of money not as a privilege, but as a serious economic duty worthy of careful thought and effort.

¹ Adapted from C. C. Parlin, *The Merchandising of Textiles* (1912), pp. 33-35. (Curtis Publishing Company.)

The consuming public is every year becoming more intelligent and better trained in buying. This deserves serious consideration by all those interested in merchandising; for only upon a recognition of this fact can successful business be founded. We talk about manufacturers, jobbers, and retailers, but in the last analysis the consumer is king. His whim makes and unmakes merchants, jobbers, and manufacturers; whoever wins his confidence has won the race; whoever loses it, is lost.

4. BUYING AND SELLING PROBLEMS OF THE RETAIL MEAT TRADE¹

Retailers in the larger cities commonly buy their meat by personal inspection in the "coolers" of the packers' local supply houses. Packer salesmen solicit business, but few butchers buy much meat without seeing it. Carcasses are often shipped to the branch house when only two or three days old, too "green" to be suitable to sell. Those selected by the butcher are marked and left to hang seven to fourteen days before delivery. During that time acid formation in the tissues softens the tough fibers and adds flavor.

RELATIVE VALUE OF CUTS

Four problems confront the retail butcher in ordering meat and in determining his selling price: What grade of meat shall he buy; what cuts will move the best; what does each cut cost per pound; and what price must he charge above that to include expenses and profit? The quality of meat that a shop can sell depends on its location. Prosperous communities buy the better grades, such as prime steers. Workingmen's communities consume more cow beef. Some downtown shops trade with all classes and sell both grades. The tastes of different cities also vary, and Minneapolis is said to be more of a "cow town" than St. Paul. The same thing holds true with regard to cuts of beef. A carcass is composed of several cuts, each having a different character, a different demand, and a different value. Shoulder cuts contain considerable bone and are apt to be rather tough; rib is good, and adapted to roasting. The loin furnishes the choicest cuts and, together with the round, can be best sold in that popular American style, steak. If a butcher were to cut a side of beef and sell it all at the same price, the choicer parts would be taken up immediately, while the poorer cuts would be unsalable. To move the

¹ Adapted from K. F. Warner, "The Marketing of Livestock Products in Minnesota," in L. D. H. Weld, *Studies in the Marketing of Farm Products* (1915), pp. 25-27, 30-31. (University of Minnesota, *Studies in the Social Sciences*, No. 4.)

whole, then, the butcher raises the price of the more popular cuts and lowers it on the others, until economy induces part of the trade to take the "boils" and "stews." The class of buyers again makes a difference in the cuts a shop can handle. When they are all well-to-do, price gives way to palate and only good cuts move. If a shop were to buy straight cattle in such a district it would soon be loaded up with "chucks" and "plates," while if located among less prosperous people the "loins," "rounds," and "ribs" would move more slowly. It is of interest to note, however, that porterhouse and loin chops are often demanded by people who can ill afford them. Poor loin steaks have the preference over good chuck regardless of price. To balance these differences the jobbing houses cut some carcasses themselves and distribute "chucks" or "loins" as the trade demands. As a result, the wholesale prices of different cuts also vary.

Sheep and lambs are usually sold to retailers as whole carcasses, though cuts are quoted on most of the markets. Cattle cuts are numerous though much less so than those of hogs. Much of the pork that is sold is first pickled, smoked, or rendered, operations which the big companies can do more cheaply than the retailers. A few dressed hogs are sold, especially in the winter, but cured and smoked meats, fresh loins, and some fresh shoulders and hams are the principal pork products that are sold to retailers, pork loins being the principal fresh pork product. Thus, even though a butcher buys whole carcasses, he must consider the relative cost of each when he figures out the selling price.

WASTE

In figuring his selling price, after his shop expenses, comes the item of waste. While not so true with pork, as fewer whole carcasses are bought, there is considerable waste with beef and mutton. Pieces of bone or tallow are frequently cut off before weighing and the price of the amount sold must be high enough to pay for them. Then, too, there is always a certain amount of meat lost in a shop. A piece which goes out on the wagon may not prove to be what the customer ordered and may be returned. After a half day in the sun the chances are against its keeping. Some pieces move very slowly and there are always stale odds and ends which represent either a sacrifice or a total loss. Figures obtained from a number of Twin City butchers indicate that the amount of meat actually lost in a shop, together with the bone and trimmings which find their way into the fat box, constitute nearly 10 per cent of the

total amount handled by the shop. This fact enables one to understand why the butcher hates to cut off even a tenth of a pound of fat and bone from a two-pound steak. As indicated, however, this 10 per cent waste is not an entire loss. Part of it can be used for sausage and sold at a profit. The bones and rough fat are bought by rendering plants for 1 to 2½ cents a pound. The rest, however, is total waste and includes shrinkage in weight, spoiled pieces, bloody spots, and those mysterious odds and ends which no one can account for. In the better class of shops meat is often trimmed before being weighed for the customer. The price, however, is correspondingly higher in these shops than in those where all purchases are weighed untrimmed.

Before making out his prices a butcher must also consider the seasonal variation. Cattle, for instance, show fairly strong in January, sink in February when the renters are moving and unloading their stock, move back and forth through the spring, reaching the high mark usually in June when most of the farmers are feeding their stock on grass. Fall, with its run of grass and range stock, always brings a slump, although the demand for winter feeders in September generally tends to strengthen it.

5. RETAIL DISTRIBUTION OF PRODUCE IN CHICAGO¹

There is a very complete separation between the wholesale and the retail produce business in Chicago. The great wholesale markets are practically closed to the consumer. Occasionally, a thrifty householder ventures into South Water Street to buy a case of berries or a bushel of peaches for preserving purposes or to get a barrel of apples in the fall, if he is so lucky as to have a cellar where he can keep them. But the only buyers, not themselves dealers, who regularly frequent "the Street" are the purchasing agents of hotels, restaurants, and clubs.

TYPES OF RETAIL ESTABLISHMENT

Even the producers' markets on Randolph Street and at Seventy-first and State streets or elsewhere do not cater to retail trade. They sell mainly to retailers, and, unless the consumer is in a position to purchase in rather large quantities, he will find scant opportunity of buying in these markets.

¹ Adapted from E. G. Nourse, *The Chicago Produce Market* (1917), pp. 92, 93-99, 103-6. (Published by Houghton, Mifflin Company, copyright by Hart Schaffner & Marx.)

Public Markets

There is one public retail market in Chicago—that on Maxwell Street running three blocks east from Halsted, in the heart of the Ghetto. This is a municipal market, and is supervised by a market-master under the jurisdiction of the city auditor's office. Along the curb on both sides of this street pushcarts or permanent stands may be stationed under direction of the market-master, who collects a fee of 10 cents per day for this use of the city's thoroughfare. The dealers of the Maxwell Street market procure their small stocks (generally of rather inferior quality) from the Randolph Street or the down-town market, or from wagon jobbers, and resell them in small quantities with much higgling to the denizens of this slum district.¹

Since public markets fill so small a rôle in Chicago, the great part of the retailing of produce falls into the hands of regular storekeepers and of peddlers. Both store and peddler businesses are, in turn, to be divided into several classes. Of the former, there are department stores which operate a food section; specialty shops which handle only one or two lines of perishables, such as butter and eggs, in connection with some other line (say tea and coffee); "ice-cream parlors" which feature certain fruits; delicatessen shops; grocery stores and butcher shops; specialized greengrocers or fruit and vegetable stores.

Department Stores

Of the first of these groups the number is limited and their field of business rather strictly circumscribed. Five of the big downtown department stores (the low-price group) maintain grocery departments and, in this connection, they find opportunity to engage in a certain amount of produce business.² For the handling of poultry, butter, cheese, citrus fruits, apples, potatoes, and other vegetables of staple demand and not too perishable a character, these stores are well situated. They can buy large quantities and sell on a narrow margin such goods as have a steady and dependable sale. They are frequently in a position to snap up some special bargain in the wholesale market and then feature it as a "leader" in connection with their grocery business of the week which follows. Such an article may be sold at cost or even at less than cost under the restriction that only one

¹ Vegetables, fruits, poultry, eggs, and fish are the principal articles dealt in, but, at the east end, the market runs off into second-hand clothing, old carpets, and household goods.

² Also several stores of the cheaper sort which carry about the same range of goods, located on Milwaukee Avenue, Halsted St., Blue Island Avenue, etc. They sell a good deal of produce, much of it of inferior quality, at bottom prices.

order will be sold to a person and not unless accompanied by a grocery order of stated amount. In general, the department store does not aim to provide the consumer with his whole supply of produce, but to sell certain staples at a saving and to feature frequent special bargains. It does not appear that this type of business will grow.

Butter and Egg, Tea and Coffee Stores

The butter and egg store or the tea and coffee store, which devotes particular attention to its butter and egg business, presents an interesting case of specialization. Such a store is often able to buy these goods in quantities larger than those handled by the retail grocer and, therefore, make its purchases upon favorable terms. This is particularly true of the store which belongs to a chain of such specialty shops.¹ Apparently, too, the same keen discernment which enables the experienced coffee-man to identify several grades of coffee in the same drum, to find for these esoteric grades distinctive and pleasing names, and to secure for them prices which rise from 20 cents to 40 cents a pound, enables him also to discover in a case of eggs or tub of butter certain hidden virtues which can be given a pretty name and sold at a pretty price. In fairness, however, it should be added, that, if such a retailer be a real expert and also a shrewd buyer, he will often be able to pick up rather miscellaneous lots of good average quality, candle the eggs and sort them according to size and color, or repack the butter in pound prints in such a way as to recognize honest differences in quality, give the economical housewife a low price, the more fastidious buyer a fancy quality, to each his money's worth, and to himself a fair profit.

Fruit Stores and Ice-cream Parlors

The fruit store or ice-cream parlor deals primarily in fancy goods in small lots. Besides a regular stock of bananas, oranges, and fancy apples, many of these stores carry winter strawberries, fancy grapes, early peaches, apricots, and perhaps the rarer fruits like avacadoes and pomegranates. Most of the proprietors are Greeks or Italians and are thus in a position to buy at the best advantage from their fellow-countrymen who are jobbers downtown. This does not mean, however, that these retailers sell at low prices. While they work long hours and employ their women and boys to reduce labor expense, they seek the

¹The Atlantic & Pacific Tea Company operates nearly three hundred retail shops in Chicago. Nearly all of these have been established within the last three years. Of produce commodities they handle only butter, eggs, potatoes, and some eating apples in season. The All-Package stores are similar in character.

relatively expensive corner-store locations and rely on fancy quality and high prices, rather than large sales on small margins, for the making of profits. Their rapid rise in fortune seems to testify both to substantial returns from the business and to their ability to save.

Delicatessens

The delicatessen shop falls into practically the same class. It does not aim to carry all the lines of goods which housewives buy for family use, but rather to carry those ready-to-eat products which are in demand among apartment-house dwellers and those who do "light housekeeping." The butter which they handle is generally bought from a creamery company, already packed in pound and half-pound cartons; their eggs often come to them in dozen or half-dozen trade-marked containers; they tend toward box apples and big peaches separately wrapped and packed in small baskets. In other words, they are not close buyers. Many of them do not even go to the wholesale market to make their purchases, but deal through "truck jobbers." The small quantities in which their goods are sold requires much time in serving customers and much paper and string in wrapping parcels. On the other hand, there is ordinarily no delivery charge, little if any credit loss, and the extra labor of rush hours is usually supplied gratis by some member of the family. Prices are likely to be of the highest, but the volume of sales is comparatively small and efficiency of operation not great enough to make profits large.

Grocery Stores and Butcher Shops

But the great bulk of produce commodities are sold at retail by small grocery stores and butcher shops, of which Chicago has about twelve thousand.¹ In recent years there has been a strong tendency for stores of this class to take on a dual character, selling both groceries and meats. Further, with the growth of the great baking companies which do their own distributing to retailers in swift-moving motor trucks, the selling of bakery goods has also been added, so that the so-called grocery becomes in fact a general food store with the ambition of furnishing to its patrons whatever is needed for their tables—shelf groceries, greengroceries, bakery goods, meat, and fish.² This desire to have on hand whatever the housewife may call for has had an important influence on the development of the retail method of handling perishables, leading in many cases to an overstocking with

¹ Delicatessen shops are estimated at more than a thousand in number.

² The practice common in many coast cities of having separate stores for the sale of sea-foods is practically unknown in Chicago.

such goods and a resulting heavy loss due to wilting and decay. If the store is of small size (and at least seventy-five per cent of the total twelve thousand are small establishments), this feeling of necessity to have on hand whatever is in the market has become a serious burden and has caused a constant leaking away of profits.¹ Likewise, the retail dealers have felt themselves forced by competition into the rendering of extensive and costly forms of service to their patrons.

Fruit and Vegetable Stores

The last class of retail dealers who handle produce might be designated by the old and familiar English term "greengrocer," though in Chicago such establishments are most likely to be known as "fruit and vegetable stores." Such places are not very numerous as yet, but appear to be increasing in number at the present time. Their chief interest for us consists in the possibility that they may be destined to supersede the ordinary grocery store and butcher shop as sellers of produce. They are not at all analogous to the fruit store of the ice-cream parlor affiliation, already discussed, but enter precisely and fully into competition with the grocer's fruit and vegetable business. They aim to carry full stocks of both staple and fancy vegetables and fruits for supplying the needs of housewives and also the more casual trade of the "fruit store" type. Presumably this specialization should enable them to purchase at better advantage and to avoid the wastage which constantly besets the small grocer's stock of perishables. If these savings (and others due to the elimination of delivery costs and credit losses) are translated into lower prices, it would seem that these stores might to a considerable extent supplant the small grocer in this line of business. No measurable effect in this direction has yet become noticeable, however, though inevitably the establishing of such stores must still further reduce the volume of grocery-store sales and multiply the unpredictable elements which affect public demand for the grocer's wares.² But such dealers are, in general, poorly informed as to the sources of profit and loss in their business and extremely timid about throwing over this department even if they believe it to be a losing venture, lest they thereby elimi-

¹ Such dealers have said to the writer: "I'd throw the whole business out tomorrow if I could. It is a constant nuisance and I am lucky if I come out even on it, so much goes to the garbage can. But if I didn't have this stuff, my customers would go to a store that did." This applies particularly to the store which is small and yet aspires to be high-grade and complete. Smaller shops carry a smaller line and the family can eat all the wilted vegetables and specked fruit. Many of the larger stores profess to do as well on their produce lines of goods as on other stock.

² The regular retailer frequently has left on his hands goods which he had put in stock judiciously enough, but the demand for which has been unexpectedly eliminated as a result of the activities of special peddlers. The featuring of particular goods by the fruit and vegetable store would naturally have much the same effect.

nate buyers of shelf groceries and meats. Nothing but concerted action could effect their emancipation and pave the way for specialized efficiency in the form of retail produce stores.¹

Peddlers

Passing now from the various classes of retail stores which we have been discussing, we note that the other principal outlet of trade from the wholesale market to the consumer is furnished by peddlers. They are of three grades: the wagon huckster, the pushcart peddler, and the "basket man," each named according to his transportation system. The huckster with a wagon aspires to establish himself as a regular merchant—albeit of an itinerant sort. He seeks to build up a regular trade, and claims a vested interest in certain alleys along which he makes regular trips. The common practice is to spend one day in purchasing and making up his load of fruit and vegetables² and the following day disposing of it. When trade is slack or the weather bad, he makes his rounds less frequently, but during rush periods he goes to the market daily, secures his stock between daybreak and breakfast time and then hastens away to the residence district.

The pushcart peddler deals largely in fruit, bananas being the most important article. A few of these peddlers have a settled beat and cover the same streets or alleys every day or at regular intervals. Others wander wherever trade seems to offer. The pushcart business has not flourished in Chicago as it has in some other cities, notably New York. There is here but a single pushcart market—the Maxwell Street market already referred to. Some of the peddlers who make up the extra numbers in this market on Sunday and other busy days ply their trade over widely scattered fields of enterprise on other days.

Basket peddlers occupy the humblest rank in the organization of petty trade. While their whole stock represents a value of but \$5 or \$10, they are close buyers and shrewd sellers; they work hard and save patiently and soon acquire sufficient funds to enlarge the scope of their business. Indeed, the same may be said of pushcart and wagon peddlers. Practically all of them are foreigners possessed of considerable thrift and a large measure of ability at petty bargaining. Their profits are often handsome according to their standards, and an ambition to get on in the world is almost universal. The pushcart and basket peddlers hoard their profits in order that they may capitalize

¹ The writer does not wish to be understood at this point as condemning the grocer's methods or as drawing invidious distinctions between different systems of retailing. It is his purpose merely to appraise the chances which the newer type of store has of establishing itself.

² Sometimes the peddler also carries eggs, and, occasionally, other articles.

their enterprise on a broader basis and expand their plant to the dimensions of a one-horse wagon. But ambition does not stop here, for many a wagon peddler has graduated into the commission or jobbing business.

The Importance of the Peddler

Taken together, these several classes of peddlers make up quite an army,¹ and their influence in the retail market is by no means inconsiderable. Their operating expenses are low;² they are careful, and many of them expert, buyers; and the small capital necessary to enter the business makes competition keen and keeps prices closely in line with wholesale figures. The peddler is a hard bargainer, however, and takes full advantage of the local price situation of any locality in which he happens to be dealing. Regardless of what his costs are, he does not intend to undersell the grocer by a cent more than is necessary to dispose of his goods, and is not above appealing to the sympathy or friendship of his patron as a means of getting his price. But, being face to face with his customer, he can make his price policy so flexible as to assure his finding out the highest price which the buyer can be induced to pay and also the largest amount of goods which she can be induced to buy. The peddler system enables the housewife to inspect her purchases in advance—an opportunity which she does not have when she orders supplies from the grocer by telephone. This display of the wares also makes an appeal to the eye which may lead to the purchase of things which would not have been thought of if they had not been seen. And the vendor's loving praise of his "nice-a grepfruit" "nice-a tomat," has no little effect in stimulating demand.

In general it may be said that the ability of peddlers to find or create additional demand causes them to become a highly important factor in the marketing of perishable products. It is quite essential that there be a group of traders who are ready to "take up the slack" when the permanent and better-priced parts of the market are relatively oversupplied. When trade grows lethargic and a glut is imminent, then it is that the humble peddler becomes the hero of the day as the bringer of reinforcements—of reserve demand. Regular peddlers stock their wagons or baskets more heavily upon such occasions with goods which they can purchase at a lowered price and offer to their trade at a reduced rate. But the presence in the market of a supply of overripe fruit or the piling-up of stocks of perishables at the

¹ Seventy-nine hundred and fourteen peddlers' licenses were taken out in 1915. Probably not over one-third of this total are in effect at any one time.

² The wagon peddlers pay a license of \$12.50 quarterly to the city, the pushcarts, \$6.25 quarterly, and the basket men, \$10 a year, payable monthly.

week end or before a holiday calls out a whole flock of extra peddlers eager to hawk these wares about if a profit appears to be obtainable. They represent largely a cheap class of demand, and, expecting to sell at a low price, they must buy at the very bottom figure. But even this saves the producer or jobber the loss of goods which would otherwise be unmarketable, and brings fruit and vegetables at low prices to people who would otherwise go without or buy much less at the higher prices obtaining in regular channels.

In conclusion, we should mention the fact that a limited amount of house-to-house retailing is done by near-by producers of eggs and a few other commodities. Likewise several of the great dairy companies have found it profitable to have butter and eggs carried on their delivery wagons or distributed by their drivers in response to orders previously secured. In all these cases the product is of a fancy, or at least of a rather superior, grade, and such competition as it offers to the retail store is more likely to be on the basis of quality than of price.

6. VARYING MARGINS OF PROFIT IN THE RETAIL DISTRIBUTION OF GROCERIES¹

Merely as an indicator, we might here make reference to the percentage of average gross expense, which was found [in this investigation] to be 14.1 per cent. This figure is larger than the average gross profit for any one of the five items making up the larger half of the total volume of trading. [See Table 10.] By featuring the percentage in this connection we do not mean to imply that butter, eggs, bread, milk, and sugar are necessarily sold at a loss. These commodities are in many instances used as leaders to attract trade and to help sell other articles in which the main profits are made. To answer, therefore, the question of whether or not the sale of these products constitutes a real loss to the business, one must first apply not the average cost of doing business for all commodities, but the actual cost of doing business for each particular commodity, and secondly, the economic criterion whether the net profits of the business as a whole would increase or diminish if the volume of trading in these items were respectively increased or diminished at the expense of the volume of trading in other items. The significance of the percentage 14.1, therefore, lies only in its warning to the grocer of the importance of analyzing his profits and his

¹ Adapted from *Retail Grocery Stores* (1923), pp. 10, 11, 13-14. New York State, Department of Farms and Markets, Circular 240. (This investigation was carried on in coöperation with the New York Food Commission and the U. S. Food Administration.)

costs and in its appeal to the consumer for a fair understanding of the grocer's problems before preferring blind charges of increasingly high prices and willful profiteering.

TABLE 10.—RELATIVE VOLUME OF TRADING AND PERCENTAGE OF GROSS PROFITS FOR CERTAIN COMMODITIES, TOTALING 65 PER CENT OF THE GROCER'S VOLUME OF PURCHASING¹

Commodity	Percentage of Total Trading (Per Cent)	Average Cost per Unit Purchase (Cents)	Average Selling Price per Unit (Cents)	Average Gross Profit per Unit (Cents)	Percentage of Gross Profit Based on Selling Price
Butter.....	13.80	70.50	76.50	6.00	7.84
Eggs.....	12.20	65.50	72.50	7.00	9.65
Bread.....	9.50	7.50	8.62	1.12	12.99
Milk.....	8.20	12.46	14.23	1.77	12.44
Sugar.....	7.90	9.35	10.35	1.00	9.66
Potatoes.....	2.90	3.25	4.25	1.00	23.53
Flour.....	2.30	6.37	7.37	1.00	13.56
Canned fish.....	1.60	18.25	22.75	4.50	19.78
Canned tomatoes..	1.30	12.75	16.00	3.25	20.31
Cheese.....	1.20	39.50	46.50	7.00	15.05
Rice.....	.90	11.50	13.50	2.00	14.81
Onions.....	.90	2.25	3.75	1.50	40.00
Canned peas.....	.80	14.75	18.25	3.50	19.18
Beans.....	.70	13.33	16.33	3.00	18.37
Canned corn.....	.40	15.50	19.00	3.50	18.42
Raisins.....	.30	13.00	15.50	2.50	16.16
Cornmeal.....	.10	5.00	6.62	1.62	24.16
Subtotal.....	65.00				
Other products....	35.00				
Total.....	100.00				

¹ Prices prevailing in April, 1918.

If the percentages of gross profit based on selling price are considered further, it will be observed that certain percentages of profit seem relatively high. Onions, for example, show a per-unit-quart profit of 40 per cent, yet their 0.9 per cent volume of trading entry must be considered in estimating their relative importance as an item of business. Potatoes show a profit of 23.53, while their volume of purchase is 2.9 per cent—less than one-thirtieth of the total volume of business. Cornmeal, the last item listed and the least by volume (0.1 per cent, or 1/1000 of the total volume of trading), gives what considered independently would seem to be a substantial gross profit—

24.16 per cent per unit pound, but a gain of only $1\frac{1}{2}$ cents for each pound weighed and wrapped.

Referring to Table 10 and comparing one product with another, it will be observed that butter makes about one-half the percentage of gross profit that is made on cheese and involves the expenditure of somewhat less than twice the capital per unit pound. On the other hand, it is apparent that more than ten times the quantity of butter was sold as compared with cheese, and butter proves a leader to attract trade.

Again, sugar seems to make about half the percentage of gross profit as compared with that made on canned goods. Moreover, each pound of sugar has in most cases to be weighed and wrapped and tied. On the other hand, rather less capital is required for an investment in sugar, and seven to ten times the quantity is sold as compared with canned goods of various kinds.

Rice and onions, which show the same percentage of volume of trading exhibit a rather spectacular contrast in profit—14.81 per cent and 40 per cent respectively. Each would seem to require an approximately equivalent degree of labor in the way of weighing or measuring and wrapping.

7. SELF-SERVICE IN RETAILING FOOD PRODUCTS¹

Self-service stores owe their existence to the fact that by eliminating a large part of the salary expense as compared with ordinary service stores the cost of operation can be reduced under favorable conditions, making it possible to sell goods of a given quality at lower prices.

Where economic conditions justify the existence of a self-service store, its advantages over ordinary service stores are:

- Relatively low operating expense.
- Smaller investment in proportion to size of business.
- Greater ease of filling employment needs.
- Greater satisfaction to the average customer.
- Possibility of educating customers through display.

The disadvantages of self-service are:

It is not applicable to all consumers but only to those willing to dispense with certain service for the sake of lower prices.

Certain goods cannot be "pushed" as when salesmen are employed.

¹Adapted from F. E. Chaffee and McFall Kerbey, *Self-service in the Retailing of Food Products* (April 19, 1922) pp. 3-12, 49-50. (U. S. Department of Agriculture, Bul. No. 1044.)

The possibilities of thievery are greater, though the investigations of the Bureau of Markets indicate that thievery is not responsible for any considerable losses.

The important general considerations in the establishment and operation of self-service stores are:

Proper location.

Convenient arrangement of the store and display of goods.

Intelligent buying, grading, and pricing.

Careful accounting is necessary in the operation of a store under self-service. This is true not only because of the methods of merchandising peculiar to self-service, but also because self-service usually implies operation on a very narrow margin of profit, and where margins are narrow under any system it is important that managers be able to follow costs of operations, volume of business, and rapidity of turnover very closely.

There is a common belief among the retail grocers of the country and the general public, especially in the East, that the term self-service is used only in connection with a certain corporation operating a number of self-service stores. This is no more true than that the expression "chain-store method of distribution" means a certain company operating a chain of stores. Neither is the idea correct that permission must be secured from any corporation to operate a self-service store. The corporation referred to does hold certain patents covering floor plans and certain interior arrangement of their stores, but principles of self-service can not be patented, being nearly as old as distribution itself. Particular floor plans and arrangements apparently are not vital to the operation of a self-service store.

ADVANTAGES OF SELF-SERVICE

Low Operating Expense

Low operating expense is the greatest advantage and the feature which gives self-service its claim to a prominent place in the system of distribution. If it were not for this feature, self-service would be unknown, since the fact that it involves a decrease in service on the part of the distributor can hardly be considered an advantage in itself.

Under the service plan an added volume of business necessitates more clerks to wait on the additional customers. This is not necessary under the self-service plan. An increase in volume necessitates only additional stockmen and cashiers, which, of course, are necessary in a store of any magnitude under any plan. For example, let

it be assumed that there are two stores doing a business of \$500 a day, one operating under the self-service plan and one under the cash-and-carry plan with salesmen. Studies of stores of both types indicate that under the former plan it would require, at the outside, about two stockmen, one cashier, and one checker, while under the latter it would probably require five clerks to wait on the customers, one stockman, and one cashier. This includes only those employees who handle the merchandise or come in contact with the customers. The saving in number of employees by self-service would be 43 per cent. Now, let it be assumed that these stores are doing a business of \$1,000 a day. A survey of grocery establishments of both types indicates that the \$1,000 a day self-service would probably require two cashiers, two checkers, and three stockmen, while under cash-and-carry ten clerks, two cashiers, and two stockmen would be needed. This would be a saving of 50 per cent in the number of employees under self-service. Obviously, stores of the two types doing exactly the same amount of business and operating under conditions exactly comparable in every respect can not be found; but the studies of existing stores under closely comparable conditions indicate the correctness of these deductions.

If the saving is translated to money value, it is even more apparent because of the different rates of wages paid for different classes of work. If a good sales clerk is paid \$25 per week, a stockman or checker \$20 per week, and a cashier \$15, which fairly represents the difference in wages paid these classes, the weekly wage expense, with the store doing \$500 per day, would be \$75 under self-service and \$160 under cash-and-carry, or a saving of 53 per cent by self-service. If the stores were doing a business of \$1,000 a day, the wage cost under self-service would be \$130 and under cash-and-carry \$320, or a saving of 68 per cent in favor of self-service.

The average expense for wages of salesmen in the cash-and-carry store referred to, doing a business of \$6,000 a week, would be, therefore, between 5 and 6 per cent of the total sales. The self-service store with a like volume of business and the weekly wages referred to would operate on a wage expense of between 2 and 3 per cent of total sales.

There are other savings in expense under the self-service plan which, although not so marked as those of wages, are of considerable importance in the aggregate. These are largely attributable to the greater volume evidently possible under self-service than under the cash-and-carry plan, even though both utilize the same floor space.

Such "fixed charges," as for rent, heat, light, insurance, depreciation, and perhaps telephone, would remain the same, no matter how much business was done in any particular store. Such expenses as advertising, management, buying, and miscellaneous expense would be slightly higher in doing a \$1,000 business instead of a \$500 business, but they would not be twice as much. It would require a doubling of the actual expense mentioned in order that its percentage of the sales remain the same. Since such expense would be increased only slightly when sales were doubled, the percentage of sales would therefore probably be between 1.5 per cent and 2 per cent, as against 3 per cent for the \$500 cash-and-carry business. The wrapping expense in terms of percentage would remain about the same, as it is directly proportional to the amount of merchandise sold.

Up to this point, under the conditions assumed, a saving of about 5 per cent in expense would be effected. The figures used have been more or less arbitrary, but are representative enough for this demonstration.

SMALL INVESTMENT

As previously stated, the principle of operating on a small margin of profit, rapid turnover, and large volume should go hand in hand with self-service.

As perhaps twice the amount of business can be done under self-service with practically the same capital investment and floor space, the same percentage of net profit on sales is not necessary under this plan as compared with the cash-and-carry or credit-and-delivery plans in order to return to the operator a reasonable profit on his investment.

So many factors, such as location, type of trade, trend of business conditions, enter into the volume of trade of a given store that definite proof cannot be obtained as to the increased amount of business which can be done with the same floor space, but all of the studies made of properly managed stores tended to support the statement as given above.

Employment Advantages

One of the most important and difficult problems with which the average business man has to deal is that of help. This is especially true of those who have to employ sales persons, since their personality and appearance, as well as their technical ability, must be carefully considered. The sales person is the direct representative of the business, and a great deal depends on him. Next to the merchandise

carried and its selling price, the sales person is chiefly responsible for the attitude of the customer toward the business. It is his attitude toward the purchaser, to a large extent, that gains or loses the customer trade. If one asks the average housewife why she does not now trade with a certain store, she is as likely to say that she did not like the clerk as she is to say that the prices or merchandise were not right.

To make sure that the sales people will properly represent the employer requires considerable time and expense in training and the payment of high wages. Under the self-service plan this problem is largely eliminated. It is still present to a certain extent, but it is much less complicated, as the employees can be chosen mainly with one requirement in mind—their mechanical ability, for the customer does not come in contact with the employees, except at the cashier's desk.

Greater Satisfaction to Customers

Possibly one of the most annoying conditions that has arisen in connection with the development of cash-and-carry stores is the inability to take care of customers during the rush hours. The system is rather inelastic in that respect. In order to handle the customers properly during the busiest hours, a larger number of clerks is necessary than can be efficiently employed through the remainder of the day.

Some of the chain-store companies have given up trying to supply adequate service to the customers during rush periods because it was found to be too expensive. As a result, the customers lose much time, grow impatient, and are harder to please. The overworked clerks are likely to hurry the customers in their selection of goods and to become discourteous at times.

One of the most satisfying features of the self-service plan is the ability to take care of the customers during the rush hours with a minimum of inconvenience to the dealer and the customer. It requires only from one to two persons (depending upon the system of checking used) to double the capacity under the self-service plan, and these can be drawn from work which is not usually pressing at that time. This elasticity of the self-service plan is a very economical feature. It eliminates, to a large extent, the extra-help problem, which is a rather difficult and unsatisfactory one to both the employer and the customers. Persons working odd hours are usually more or less inexperienced and unreliable, and generally present more of a management problem than does the regular help.

A psychological advantage is also derived from this elasticity. The average person is so constituted that time spent in action, either

mental or physical, is more satisfying than the same amount of time spent in inaction and waiting.

Under actual conditions, the time spent in the self-service store is considerably less on the average than in the service store; therefore there is a physical as well as a psychological advantage.

Display Advantage

The fact that the accessibility of the merchandise appeals to most women is recognized by many of the large department stores and by the 10-cent chain-store organizations. A woman likes to be free to take time in the examination and selection of her purchases. She seldom feels perfectly at ease in doing this when attended by a sales person. Under self-service this disadvantage is done away with. A purchaser coming into the store has free access to every article for sale. She is her own saleswoman, and in making careful examination of the merchandise she is using no time but her own, and therefore is entirely at ease. If she wishes to ask any questions about the goods, there is some one on the floor to answer them, but he is merely an information aid and not a salesman. This advantage is more marked in the selling of larger articles (clothing, furniture, etc.), where the cost per article is greater; but it is evident in the sale of groceries.

LIMITATIONS OF SELF-SERVICE

There is probably no one method of distribution which from some angle does not fall short in supplying fully and to the best possible advantage all the demands that are made by customers. Self-service is no exception. It can not reach nor satisfy all classes of people, nor is it intended to do so.

There is, and doubtless always will be, a large group, perhaps even a majority, who will demand service of some kind.

The Absence of "Service"

Both consumers and dealers have expressed an objection to self-service, as they feel that a salesman is an essential connecting link between the buyer and the merchandise and that the elimination of the salesman causes much confusion on the dealer's as well as the customer's part. They feel that the consumer has no way of ascertaining the quality or grade of any particular article with which he was not familiar, especially with canned goods; that the dealer is limited largely to nationally advertised goods and is unable to call

the attention of the customer to new products or special bargains. These objections are usually made by persons who have only a slight knowledge of the results of operating under self-service. While the objections are true to a certain extent, nevertheless, when compared with the advantages derived from this same lack of salesmanship, they seem to lose a large part of their significance. Also, these disadvantages can be partially eliminated through proper coördination of advertising methods and the backing up of the advertising by the display of merchandise.

Under the self-service plan customers are forced to rely upon themselves in locating their purchases. While they have the opportunity to obtain any information desired, it is surprising in actual practice what few inquiries are made. This would seem to show that customers have a considerable knowledge of grades and brands which they do not use under the service plan.

Some purchasers object to self-service stores because they sometimes make it necessary for the purchasers themselves to handle vegetables to which earth adheres or articles that may be dusty.

Theft

The question of theft in connection with self-service has probably had more widespread publicity than any other feature. It is a question on which strong opposing views are held. Some operators say that the loss through theft is less in the self-service store than in a service store, others that it is no more in the former than in the latter, and some dealers believe that it exists in self-service to such an extent as to make the plan entirely impracticable. It is almost impossible to determine the exact percentage of loss from this cause in any store. Therefore the views held are practically the result of supposition and incomplete observation.

The actual extent of losses specifically from petty theft has been variously estimated from almost nothing to 4 or 5 per cent of the total sales. A more common estimate is around 1 per cent.

8. THE SIGNIFICANCE OF STOCK TURNOVER TO RETAILER, JOBBER, AND MANUFACTURER¹

The policy of low investments, frequent but small purchases and quick reinvestment, known as the "quick turnover" policy, has a different significance at each stage in the distributive process, and for

¹ Adapted from C. S. Duncan, *Stock Turnover* (1921), pp. 13-16. (American Wholesale Grocers Association, Inc., Bureau of Business Research, *Business Studies*, Pamphlet No. V.)

different commodities. Along with specialization in modern industrial society has come an indirect or "round-about" method of production. The time between the producing of an article and its consumption has been greatly lengthened. This fact is one of the most important ones in modern business. It has affected all forms of merchandising.

Goods cannot be turned so quickly in a "round-about" process of production as in a direct production-consumption method. Where there has been accumulated a reserve of goods, turnover for someone between producer and consumer must be slow. An examination of the turnover problem from the view point of producer or manufacturer, of jobber and of retailer becomes necessary.

STOCK TURNOVER AND THE RETAILER—THE NEED FOR THE JOBBER

The independent retailer, that is, one doing a retailing business only, has greatly changed his methods in recent years. There are retail merchants still in the business who remember the time when they bought goods in larger quantities and but a few times during the year. They had to carry a large amount of goods in stock in order that lines should not run short before a new consignment arrived. In those days, too, the retailer went to the wholesaler to make his purchases. Now the jobbers send salesmen to the retailer, perhaps daily in the city, and weekly in the country. He can have deliveries almost as frequently as he demands them.

At the same time that the above change was taking place there came another. The number of different articles carried in the retail grocery store vastly multiplied, both by new commodities being developed and by the rise of competing brands. As a consequence retailers may be carrying on their shelves a larger inventory both in physical amount and in value of goods for a given volume of trade than formerly in the effort to maintain at all times a complete stock.

The retailer, under these circumstances, faces the quick turnover policy. Separated by distance from the producer or manufacturer and desirous of keeping on hand a complete stock of goods that have a brief season of supply, he must either build a huge warehouse, fill it with goods, tie his money up in them, and reject the quick turnover policy; or he must call upon some one else to develop a warehouse storage system and keep supplies at his beck and call. The retailer cannot hold a large reserve stock and practice the policy of rapid turnover. Today on the average, grocery retailers turn their stock between 8 and 9 times annually, and the total interest item runs about 1 per cent of net sales.

If the retailer stores his own reserves, he becomes a jobber as well as retailer. Goods in his retail department may now turn like a squirrel in a cage, but in his business as a whole they move slowly or his supplies become depleted. If seasonal goods turn too quickly all along the line, from producer to consumer, there is sure to be an inter-season period of want. This coalescence of retailing and jobbing is one of the marked distinctions between the independent, single-unit retail grocery store and chain stores, mail-order houses, department stores and buying syndicates.

STOCK TURNOVER AND THE JOBBER

The assembling and storing of goods have ever been two primary duties of the jobber. He has therefore been called by the writer "the guardian of the nation's food reserves." It is he who has sent traveling salesmen to retailers, who has inaugurated a delivery system "on call." His service has made it possible for the retailer to practice the policy of quick turnover.

How can goods keep flowing rapidly through the jobber's warehouse? It becomes manifest that the only way for him to keep all of his goods moving all of the time, is for him to cease carrying the reserve stock. As the retailer has passed the storage function back to the jobber, that jobber can now try to pass it on back to manufacturer or producer. If he does so, he is shirking one of the duties that called him into being. Furthermore, the manufacturer or producer will then be compelled to take over or to duplicate the warehouse and storage system which the jobber now operates. With a national warehouse system the manufacturer is in a position to sell direct to the retailer.

It follows, therefore, that the holding of a reserve stock is directly contrary to the quick turnover policy for the jobber. This service is not on this account less important or essential. Nor does this fact make less fundamental the need for careful buying, for the handling only of those goods for which there is a present or coming market, for clear and detailed accounts, and for a vigorous selling policy. The point is that a jobber cannot at one and the same time practice two contradictory policies any more than one can "eat his cake and have it too."

The grocery jobber turns his stock on the average about 6 times in the year, and his total interest item averages around 1.5 per cent of net sales. This is an important item, next in importance, as a matter of fact, only to sales-force expense. Whatever policy will materially reduce it should engage the attention of every jobber. Cleaner, more

salable stock, a close watching of merchandise movements through stock records will no doubt enable a jobber to carry a lower average inventory and still maintain its volume of sales. If he does so, he will find his stock increasing in number of turnovers. No efficient merchant will have more salesmen or executives or clerks than his business needs. Neither should he carry more goods than necessary. This is the essence of the turnover problem for the jobber.

STOCK TURNOVER AND THE MANUFACTURER

The manufacturer likewise has his turnover problem. There is his raw material stock room and his finished product stock room. There is his investment and his heavy overhead. If he must carry a reserve stock of finished products as he is compelled to carry a reserve of raw materials, his burden is doubled. In the past, he has depended upon the jobber to level out the seasons by holding the surplus. This situation has enabled him to devote his energy to the process of manufacturing. He did not have to become a warehouseman and merchant also.

If he must carry a reserve stock, the manufacturer takes on a new function, namely, that of the wholesaler. Then he will find himself faced with the same dilemma as the jobber; one cannot carry reserves and practice quick turnover. Rather than do this, he should concentrate on the problem of making goods that will sell. The difficulty of keeping goods moving is greatly increased through lack of more intelligent production. Here is the field for the producer's utmost endeavor.

This brief discussion of the stock turnover problem as related to the retailer, the jobber, and the manufacturer, discloses the fact that it is the jobbing service of assembling and storing goods which makes possible a realization of the quick turnover problem for the retailer and the manufacturer. It reveals also the contradiction between the carrying of reserves and rapid turnover of goods. The essential character of food reserves probably needs no emphasis.

"The problem of caring for the commercial surplus of the annual output of industry and of keeping in custody that reserve of storable utilities not required at any given time by the community has, within the last decade (1893-1903), become an increasingly important feature of business in the United States."

Nevertheless, a realization of this fact does not lessen the weight of responsibility for intelligent buying, careful accounting and vigorous selling. Nothing can take the place of a thorough knowledge of your stock and your market.

9. SOME RESULTS FROM A SLOW TURNOVER OF MERCHANDISE¹

Clearly as the importance of the turnover appears and universally as its truth is accepted, there are frequent violations of its most fundamental principle—not to overbuy—even among comparatively progressive merchants. An addition to the cash discount or an attractive price concession sometimes will induce the purchase of considerably more goods than can be sold within a reasonable turnover period. This entails the likelihood that a season will pass leaving a costly lot of goods in stock and the resultant mark-downs and sacrifice sales as the only way of moving them.

It is, of course, possible to be too conservative and to buy less than could be sold. This is not really a serious condition because, unless transportation facilities are very poor or the distance from supplies is very great, a shortage usually can be made up in a few days and often in a few hours. Average conditions only can be discussed here. Special cases demand special methods.

When the various expenses and wastes involved in slow turnovers are stated separately the subject becomes even more easily understood. What are the elements in which losses due to slow turnovers may be found?

- (a) Investment
- (b) Interest
- (c) Mark-down
- (d) Salaries and wages
- (e) Shelf or storage room
- (f) Prestige-Reputation
- (g) Inefficiency

An examination of these elements shows their relation to each other.

(a) Invested money is the source of profit which in turn depends upon the amount of goods in stock and upon the length of time which these goods are carried. It is evident that to double the turnover comes to the same thing as doubling the amount of stock without increasing the investment. Or, vice versa, one-half as many turnovers results in doubling the amount of money invested for the same quantity of goods.

¹ Adapted from Chamber of Commerce of the United States of America, *Merchandise Turnover and Stock Control* (1921), pp. 3-6.

(b) Interest must be paid upon all borrowed money and most merchants are borrowers. If the turnover is reduced from a period of six months to one of three months the interest on a given loan is reduced in the same proportion.

(c) Mark-downs are required for three principal reasons:

1. The goods have proved unsalable at the original mark-up.
2. Too many were bought and a change in the style or season has left some of them on the shelves—
3. With the result that they have been soiled, chipped, bent or defaced otherwise by frequent handling.

(d) Salaries and wages must be included because every operation in every establishment costs something. When an unprofitable operation is performed it represents a loss. Roughly these losses are due to:

1. Waste of time by management in reaching decisions as to when and what mark-downs are to take place.
2. Waste of time by sales force.
3. Rewriting tickets.
4. Rearranging goods for mark-down sales.

(e) Shelf or storage room is a definite part of the expense of doing business; and that portion which is devoted to slow-selling merchandise is wasted.

(f) Prestige-Reputation—for the high character or timeliness of merchandise is sought by most stores. There is a distinct waste measurable in dollars and cents when the reputation of an establishment is lowered by unstylish or shopworn goods.

(g) Inefficiency always results in waste. The buyer whose judgment often is wrong usually makes the mistakes from lack of knowledge as to the stock and the speed or slowness with which it is moving. Frequent mistakes cause uncertainty in the mind of the one who makes them and tend to worse errors as time goes on unless some measures are taken to make them improbable.

More losses which take the form of waste may be thought of, such as insurance on marked-down merchandise and other overhead items, but these cannot be divided conveniently and only need be mentioned.

There is just one method of reducing this waste to a minimum. That is through records of purchases and sales which can be consulted at any moment; which will give a complete picture of the situation as it changes from week to week, from day to day, even from hour to hour if that be desirable; and which will supply the knowledge for immediate additional purchases, for mark-downs or for any other change in handling the stock.

10. SIGNIFICANCE OF STOCK-TURN IN RETAIL AND WHOLESALE MERCHANDISING¹

Accompanying the numerous valuable suggestions on stock-turn that have been made to merchants since the business cycle entered its downward swing and the desirability was perceived of utilizing stock investments as efficiently as possible, there have been some more or less contradictory statements and some slipshod thinking arising from the renewed interest in this subject. On the one hand, merchants have been told that doubling the rate of stock-turn will double the rate of profit, and on the other hand they have been informed that neither profits nor losses are determined by the number of stock-turns and that the rate at which merchandise moves from the shelves during a given period is, in fact, a deceptive index of the efficiency of the business.

WHAT IS STOCK-TURN?

Some of the confusion that has been evident in regard to what stock-turn is and what it does results from failure to define terms clearly. Stock-turn is the actual disposal and replacement of a given stock of merchandise, and the rate of stock-turn is the number of times during a given period that a merchant's average stock on hand during that period is sold and replaced. The use of actual physical units in ascertaining the rate of stock-turn is the ideal method, but unfortunately is of limited application. To employ such a method requires a system of stock records to preserve the complete history of the movement of stocks by physical units, and it appears that in most businesses, both wholesale and retail, such stock records are not kept, especially in those businesses or departments where the average unit of sale is small. In the absence of data permitting the computation of the rate of stock-turn in physical units of merchandise, it becomes necessary, for practical purposes, to figure stock-turn by units of value.

The rate of stock-turn when computed in dollars and cents of cost values (cost of merchandise sold divided by average net inventory at cost) amounts to the rate of stock investment turnover and may exhibit some discrepancy from the rate of stock-turn figured in physical units because of price changes and variations in the value of units, especially in case of a mixed stock. In a stock of jewelry, for instance, including diamonds, silverware, and clocks, the rate of stock-turn as ascertained by the use of cost values conceivably might bear little relation to the

¹ Adapted from Malcolm P. McNair, "Significance of Stock-turn in Retail and Wholesale Merchandising," in *Harvard Business Review*, October, 1922, pp. 87-96.

rate at which the physical units were sold and replaced. If, as is the case in businesses employing the "retail method of inventory," selling price figures rather than cost figures are used to determine the rate of stock-turn (net sales divided by average net inventory at selling price) the figure obtained will correspond closely to that obtained by the use of cost price figures. The result, however, can not be called the rate of stock investment turnover, because the element of gross profit has been added to each increment of stock investment. Neither is it equivalent to the rate of turnover of working capital, since that is affected by the promptness with which customers settle their accounts. The virtual necessity of using units of value to measure the rapidity of stock-turn apparently has led to a prevalent error in method; i. e., that of dividing net sales by average inventory at cost. Frequently, when a merchant buys goods worth \$5,000 at cost price he assumes, thinking in figures of dollars and cents, that when he has sold goods worth \$5,000 at selling prices he has made one full turn of his stock investment and therefore of his physical stock of merchandise, but this is not the case.

For all practical purposes the rate of stock-turn as determined by dividing the cost of merchandise sold during a given period by the average net inventory at cost during the period is sufficiently accurate. Of course, the greater the number of inventories from which the average inventory is determined, the more accurate will be the stock-turn figure obtained. The data available, however, as found by the Harvard Bureau of Business Research in its studies of the cost of doing business in various trades, ordinarily include only two inventories a year—those at the beginning and end of the fiscal year. Although the average inventory as determined from these two figures may not in some cases be thoroughly representative, since stocks are likely to be low at those periods, nevertheless, since all the figures are on the same basis, their usefulness for purposes of comparison does not suffer.

MEASURING THE SIGNIFICANCE OF STOCK-TURN

In any discussion of stock-turn, there are clearly two things to consider which must be sharply differentiated. The first is the rate of stock turn as an *index* of business efficiency, and the second is the rate of stock-turn as a possible direct *cause* of business efficiency. It is necessary first to determine whether a high rate of stock-turn usually accompanies low operating expenses and high net profits. Even if this is found to be the case it does not mean necessarily that the high rate of stock-turn is the cause of the low operating expense and the

high net profit. Both may be the result of some other factors, such as the position in the business cycle, the foresight and trading ability of executives, the efficiency of methods of management and control, or any number of local conditions. It is further necessary, therefore, to determine how far changes in the rate of stock-turn in themselves are the *cause* of variations in operating expenses and net profits.

By what evidence is the significance of stock-turn to be judged? Is a high rate of stock-turn either a customary accompaniment or a necessary cause of (1) large volume of sales, (2) high or low gross profit, (3) high net profit, (4) low expenses?

None of these criteria taken by itself appears to be wholly satisfactory. Volume of sales and expenses are affected by the general price level; net profit is affected by gross profit as well as by expenses; and gross profit may be subject to competitive conditions.

Since it is customary in most progressive businesses to figure all percentages on the basis of volume of net sales, this basis may be preferred to the cost basis. Therefore, in the comparisons that follow, percentages based on the volume of net sales as 100 per cent are used rather than percentages based on cost of merchandise sold, net worth, or average stock investment.

For the purpose of making comparisons between firms with high and low rates of stock-turn, the data in the accompanying tables were compiled from profit and loss statements submitted to the Harvard Bureau of Business Research for the years 1919, 1920, and 1921, in the retail shoe, retail jewelry, and wholesale grocery trades [omitted here]. Complete tabulations of reports in these three trades submitted by identical firms for each of the three years was not undertaken, since careful tests indicated that owing to changing business conditions, comparisons between different years for the same firms were not so significant as comparisons between different firms for the same year. For each year in each trade the statements selected were those from the fifteen firms with the highest rates of stock-turn, and the fifteen firms with the lowest rates of stock-turn. Aside from variations appearing from year to year in rapidity of stock turn, it should be borne in mind that the commonly attained rates of stock-turn in these three trades are quite different. From such data as are available it appears that whereas the average rate of stock-turn in jewelry stores is about once a year, in retail shoe stores it is nearer twice a year, and in wholesale grocery firms it is from five to six times a year.

The item Net Sales in the tables is Gross Sales less merchandise returned by customers and less allowances made to customers on

TABLE 11.—RETAIL SHOE TRADE: 1919, 1920, AND 1921

	1919			1920			1921		
	Highest Stock- turn Group 15 Firms	All Firms Report- ing: 197	Lowest Stock- turn Group 15 Firms	Highest Stock- turn Group 15 Firms	All Firms Report- ing: 397	Lowest Stock- turn Group 15 Firms	Highest Stock- turn Group 15 Firms	All Firms Report- ing: 407	Lowest Stock- turn Group 15 Firms
	Average Figures	Common Figures	Average Figures	Average Figures	Common Figures	Average Figures	Average Figures	Common Figures	Average Figures
Stock-turn	3.6 times (Range 2.8-5.5) \$349,894	1.8 times	1.0 times (Range 0.7-1.2) \$32,757	4.5 times (Range 3.7-7.6) \$530,804	2.0 times	1.0 times (Range 0.7-1.1) \$138,120	4.7 times (Range 3.9-7.9) \$363,519	1.9 times	0.9 times (Range 0.5-1.0) \$40,928
Net Sales									
Wages of Sales Force	8.2% 10.6	8.8% 10.3	8.1% 9.7	8.3% 11.7	10.2% 12.3	11.5% 14.1	9.2% 12.6	10.8% 13.4	12.4% 13.7
Total Selling									
Buying, Manage- ment, and Of- fice Salaries	4.5	4.2	3.6	4.1	3.9	5.2	4.6	3.5	4.1
Total Buying and Management	4.8	4.5	3.8	4.5	4.2	5.6	5.5	3.9	4.3
Rent	2.1	2.3	3.1	2.5	2.6	3.5	2.7	3.0	3.2
Total Interest	1.8	2.9	3.9	1.7	3.0	4.5	2.2	3.1	5.8
Total Fixed Charges and Upkeep	5.4	7.4	9.6	5.4	7.6	10.3	7.1	8.5	11.9
Total Expense	22.6	24.0	25.0	23.3	26.0	31.6	26.8	27.8	32.0
Gross Profit	32.0	33.1	35.0	26.8	27.2	32.4	28.1	25.9	30.6
Net Profit (or Loss)	9.4	9.0	10.0	3.5	1.2	0.8	1.3	1.9	1.4

The common figures for all firms reporting are taken from the Harvard Bureau's bulletins for the respective years. The percentage figures given for the high and low stock-turn groups are arithmetical averages. Such average figures theoretically are not strictly comparable with common figures, but in these cases the discrepancies are too small to be of any importance. The fifteen firms in the high and low groups are not the same for all three years; that is, the firms having the highest and lowest rates of stock-turn each year were selected irrespective of whether they had been in those categories the previous year.

merchandise not returned. So far as this item is concerned, in all cases firms in the high stock-turn group had a larger average volume of net sales than those in the low stock-turn group, the variation being greater in some instances than in others. Differences in volume of net sales from year to year in these tables are due partly to the inclusion of different firms each year in the high and low stock-turn groups, as well as to changes in the general price level and numerous other factors affecting individual businesses.¹

The association of a high rate of stock-turn with a large volume of net sales does not indicate necessarily the existence of any causal connection. In the bulletins of the Bureau where comparisons have been made between firms in different volume groups this same association between large volume of net sales and a rapid rate of stock-turn appears in a majority of instances.

In all but one case Wages of Sales Force (wages of regular and extra sales force, commissions, bonuses, and premiums, and part of the salary of proprietor, partner, or manager proportionate to the time spent in selling) was lower in the high stock-turn group than in the low stock-turn group. The one exception was in the retail shoe trade in 1919. In some instances, however, the common figure for all stores reporting was lower than the average for either the high or the low stock-turn group. In the shoe and jewelry trades the difference between the average percentages for this item in the high and low stock-turn groups was greater in 1920 and 1921 than in 1919. In the wholesale grocery business the greatest difference was in 1921, the discrepancy in 1919 being greater than that in 1920. Although there was some tendency for a low percentage of sales force expense to accompany a rapid rate of stock-turn, the fact that the greatest differences were in the wholesale grocery and retail jewelry trades in 1921, where the average falling off in net sales volume was conspicuous, suggests that a low percentage of sales force expense may be related fully as closely to a large volume of net sales as to a rapid rate of stock-turn.

Total Selling expense (which includes advertising, boxes, wrappings, and other selling expense, in addition to wages of sales force) showed practically the same tendencies as Wages of Sales Force, except that in 1919 in the retail shoe and jewelry trades the fifteen firms with the lowest rates of stock-turn showed lower total selling expense than the fifteen firms with the highest rates of stock-turn.

¹ According to the data of the Harvard Bureau, the most notable change in sales volume from one year to another for the same firms was in the wholesale grocery trade, where 229 identical firms submitting fully comparable statements for both 1920 and 1921 showed a decline of 30 per cent in aggregate volume of net sales in the latter year. In the retail jewelry trade 119 firms furnishing reports for both 1920 and 1921 showed an average falling off in net sales of 15 per cent in 1921.

TABLE 12.—RETAIL JEWELRY TRADE: 1919, 1920, AND 1921

	1919			1920			1921		
	Highest Stock- turn Group 15 Firms	All Firms Report- ing: 100	Lowest Stock- turn Group 15 Firms	Highest Stock- turn Group 15 Firms	All Firms Report- ing: 182	Lowest Stock- turn Group 15 Firms	Highest Stock- turn Group 15 Firms	All Firms Report- ing: 197	Lowest Stock- turn Group 15 Firms
	Average Figures	Common Figures	Average Figures	Average Figures	Common Figures	Average Figures	Average Figures	Common Figures	Average Figures
Stock-turn.....	1.6 times (Range 1.3-4.5) \$205,065	1.1 times	0.6 times (Range 0.3-0.8) \$138,484	2.0 times (Range 1.7-3.0) \$106,600	0.9 times	0.5 times (Range 0.3-0.7) \$96,419	1.8 times (Range 1.5-2.8) \$79,324	0.8 times	0.4 times (Range 0.2-0.6) \$29,694
Net Sales.....	8.3%	8.5%	8.4%	8.0%	9.8%	12.1%	11.0%	12.8%	17.3%
Wages of Sales Force.....	11.9	11.6	11.7	11.9	13.0	15.8	14.8	16.8	21.7
Total Selling....									
Buying, Manage- ment, and Of- fice Salaries....	5.4	4.9	4.7	6.1	4.9	5.1	6.3	6.2	7.4
Total Buying and Management..	6.0	5.6	5.3	6.7	5.6	5.6	7.4	7.0	8.3
Rent.....	3.9	4.0	4.4	3.4	3.9	4.5	3.8	5.4	8.3
Total Interest...	3.5	4.6	7.2	4.1	5.1	8.6	3.4	7.0	11.7
Total Fixed Charges and Upkeep.....	9.7	11.6	15.3	10.3	11.8	16.8	9.8	16.8	25.8
Total Expense..	30.4	32.3	34.3	30.7	32.7	40.0	34.2	43.5	58.1
Gross Profit.....	37.1	40.1	41.9	32.9	39.1	43.7	33.8	36.9	46.2
Net Profit (or Loss).....	6.7	7.6	7.6	2.2	6.4	3.7	0.4	6.6	11.9

In 1919 and 1920 in the retail jewelry trade the high stock-turn groups showed higher Buying, Management, and Office Salaries (including part of salary of proprietor, partner, or manager proportionate to time devoted to buying merchandise and to managing the business) than the low stock-turn groups, and the same was true in the retail shoe trade in 1919 and 1921. In 1921 in jewelry, 1920 in shoes, and all three years in the wholesale grocery business, the high stock-turn groups had lower average percentage figures for this item than the low stock-turn groups. Again, in some instances the common figure for all stores reporting was lower than the figure appearing in either stock-turn group. The evidence here is conflicting. It might be reasoned, of course, that more expensive management was necessary to secure a rapid rate of stock-turn, but the data fails to lend much support to this argument. It may be of some importance that Harvard Bureau comparisons of expense percentages between stores grouped according to volume of net sales have indicated a tendency for high percentages of management expense to accompany large sales volume.

CONCLUSION¹

It appears then that a rapid rate of stock-turn is likely to be accompanied by a larger volume of net sales and lower percentages of selling expense, fixed charges, total expense, and gross profit (except possibly under conditions of severe competition on a rapidly declining market) than are found with a slow rate of stock-turn. Whether higher or lower management expenses are to be expected with a fast turnover of merchandise is a point that is not clear. As regards net profit, it is not apparent that stores with a high rate of stock-turn invariably make a better showing than stores that turn their stock more slowly. In fact quite the reverse may be true in a rising market. Nevertheless, it is indicated that a rapid stock-turn rate in a falling market may accompany a readjustment of operating expenses to net sales that results in a better net profit showing. It should be borne in mind, however, that a high stock-turn figure during a period of falling prices may indicate merely a high degree of inventory depreciation, close adherence to a policy of hand-to-mouth buying, or even a serious depletion of inventories.

Mere volume of sales is not a criterion of an efficiently conducted business; neither is the percentage of gross profit, and the same is true of net profit so far as it depends on gross profit. The surest test lies in the ratio of expense to sales. Rapidity of stock-turn is thus

¹ Much of the discussion which leads up to these conclusions has been omitted here.—**EDITOR.**

chiefly significant as accompanying a relatively low percentage of total expense.

The association of a rapid rate of stock-turn with a relatively large volume of sales in no way proves that either is the cause of the other; both may be due primarily to good management. Theoretically, a speedier turnover of merchandise might be supposed to bring about a larger volume of net sales because of less depreciation and fewer mark-downs, but the factors affecting different firms during the same year or the same firms during different years are so numerous and complex that proof of this theory is difficult. Also, though a greater number of stock-turns during a period apparently permits a lower percentage of gross profit, competitive conditions may operate to prevent this result, and the immediate cause in any case is lower operating expenses. Likewise the effects of the rate of stock-turn on the percentage of net profit are similarly indirect, this item being determined by the relation between gross profit and total expense. It remains to consider how far a rapid rate of stock-turn is directly responsible for a relatively low total expense percentage.

Although a lower percentage of selling expense apparently tends to be associated with a rapid turnover of merchandise, it is difficult to prove a direct connection. It seems likely that a large volume of sales permits a more effective utilization of salesforce and therefore is more directly responsible for a lower percentage of salesforce expense than a rapid rate of stock-turn. In the case of buying and management expense, low percentage figures seemingly are not always found associated with a rapid rate of stock-turn, and the possibility of establishing a direct connection probably is even more remote than in the case of selling expense. There remain the items of fixed charges and upkeep expense. As regards rent, in spite of the exception noted in the case of department stores, there is at least a probability that in the long run a relatively low percentage of rent expense usually accompanies a rapid rate of merchandise turnover. Since the size of the average physical inventory bears some relation to rent expense, the rate of stock-turn, even when measured in terms of value rather than by physical units, presumably has some direct effect on this item. The most direct results, however, are in the case of interest expense, because interest on the average inventory of merchandise usually constitutes a material part of the total interest charge on the net worth of the business. There is also a direct relation between the value of the inventory and such expense items as taxes and insurance on merchandise. Whether volume of sales remains the same or increases, a faster

rate of merchandise turnover reduces the ratio of the average inventory to sales and makes any expense that is governed directly by size of inventory a smaller percentage of net sales.

Although the rate of stock-turn thus directly affects the percentage of total fixed charges and upkeep expense, it does not follow that a policy of increasing the rapidity of stock-turn can be followed without any limitations. In the first place the desire to achieve a rapid rate of stock-turn should not be permitted to interfere with careful buying; that is, a saving in expenses that might be achieved through increasing the rate of stock-turn must sometimes be balanced against the higher cost of merchandise purchased in smaller quantities. Furthermore, a merchant cannot pin his faith so exclusively to stock-turn that he neglects to maintain an ample range of selection in the merchandise carried. Frequently, also, a store must have seasonal goods, popular style merchandise, or other goods demanded by its clientele, even though these sometimes interfere with planned stocks or planned rates of stock-turn. And certainly a rapid rate of stock-turn cannot take the place of an accurate knowledge of costs and a corresponding adjustment of the margin of gross profit.

The effect of stock-turn on fixed charges alone usually is not great enough to account entirely for the lower total expense percentage that ordinarily accompanies a rapid rate of stock-turn. It is therefore indicated that a rapid rate of stock-turn is more significant as an index of all-round efficient management leading to lower expenses than as a factor that will in itself produce lower expenses and higher profits.

11. TURNOVER, GROSS SALES, AND NET PROFIT IN DIFFERENT CLASSES OF RETAIL GROCERY STORES¹

The study here presented has been deduced from data obtained through the questionnaire circulated by agents of the Federal Food Board and covering the fiscal year ending September 30, 1918. The analysis was made of the records of 128 representative grocery stores located in various parts of New York City, and the classification of these stores as serving poor, middle, or wealthy class neighborhoods was based on the proprietor's own estimate of the type of trade served. For example, if, in reply to the agent's question, "What type of customers give you their patronage?" the grocer replied, "Average,"

¹ Adapted from *Retail Grocery Stores* (1923), pp. 15-17. (New York State, Department of Farms and Markets, Circular 240. This investigation was carried on in cooperation with the New York Food Commission and the U. S. Food Administration.)

the grocery was recorded in the middle class. If the grocer said, "Our patrons are mostly well-to-do," his grocery was recorded in the wealthy class.

Briefly summarized, certain outstanding data compiled from the 128 questionnaires may be presented as follows:

	Poor	Middle	Wealthy	For All *
Number of stores...	45	70	13	128
Total gross sales....	\$1,079,103	\$3,051,491	\$758,057	\$4,889,051
Average sales per grocery.....	23,980	43,592	58,342	38,195
Rate of turnover on investment.....	9.2	8.7	6.6	8.3
Average amount of capital invested..	2,616	5,059	8,882	4,588
Average amount of credit outstanding	110	596	3,125	682
Average amount of stock carried.....	1,776	3,326	5,500	3,685

* In the fourth column, all averages are weighted.

A cursory examination of the statistics set forth indicates that average sales and gross margins increase from the poor to the middle, and from the middle to the wealthy classes. Turnover on investment, on the contrary, varies in the reverse order. The *mean* in each case is found in the so-called middle class. This is exactly the situation one would expect, since the more elaborate the service demanded, the greater the amount of capital needed and the larger the quantity of stock to be carried. The just and logical conclusion, in the light of these facts, therefore, would be that gross profit and net return should respectively increase for the successive classes in the order of poor, middle, and wealthy. Let us see how the facts in the case work themselves out.

In the remainder of the study all statistics are shown in percentages of gross sales; that is, in each case total gross sales is regarded as 100 per cent, while all other items are expressed in terms of percentage of total gross sales. Thus, for Table 13 it may be deduced that 100 per cent, or gross sales, in the poor neighborhood has reference to the "Average sales per grocery" entry shown in column 1 of the foregoing data, or \$23,980. Cost of merchandise averaged 84.8 per cent of \$23,980; gross profit, 15.2 per cent of the same figure. Again, 100 per cent, in the middle-class neighborhood has reference to the

\$43,592 set forth in column 2 above; in the wealthy neighborhood, to \$58,342 in column 3, and for all classes to the weighted average, \$38,195.

In Table 13 is shown in percentages according to each class of trade served a summary of relative operating expenses and profits for service as it was found actually existing, that is, cash-and-carry and credit-and-delivery systems in combination. The percentage relations set forth in this table were obtained as follows:

1. *Total gross sales* were allowed to equal 100 per cent.
2. *The cost of merchandise* percentage was secured by dividing total annual purchases by total annual gross sales.
3. *Gross profit* represents the difference between the percentage cost of merchandise and total sales, which is considered 100 per cent.
4. Each item included in *Expenses* was expressed in percentage by dividing the sum expended for that item by gross sales, the sum of items of expense being expressed collectively as expenses.
5. *Net return* percentage was found by subtracting the percentage for expenses from the percentage for gross profits.

TABLE 13.—RELATIVE OPERATING EXPENSES AND PROFITS FOR ACTUAL SERVICE EXPRESSED IN PERCENTAGES OF GROSS SALES

	Poor (Per Cent)	Middle (Per Cent)	Wealthy (Per Cent)	For All* (Per Cent)
Gross sales.....	100	100	100	100
Cost of merchandise.....	84.8	83.8	81.1	83.6
Gross profit.....	15.2	16.2	18.9	16.4
Expenses.....	12.7	14.1	17.0	14.1
Net return.....	2.5	2.1	1.9	2.3
<i>Details of expenses</i>				
Salaries and wages.....	6.6	6.6	6.6	6.6
Rent.....	2.2	2.3	2.8	2.4
Delivery cost inward.....	.1	.4	.6	.3
Delivery cost outward.....	.6	1.7	3.7	1.7
Wrapping supplies.....	.9	.8	.7	.8
Light, heat, and power.....	.3	.2	.2	.2
Ice.....	.5	.4	.4	.4
Interest on investment.....	.5	.6	.8	.6
Loss from bad debts.....	.3	.3	.3	.3
Other expenses.....	.7	.8	.9	.8
Total expenses.....	12.7	14.1	17.0	14.1

* In the fourth column, all averages are weighted.

12. OPEN TYPES OF PUBLIC MARKETS¹

The term "open markets" will be used as including "curb markets" and "shed-protected markets," and as practically synonymous with "farmers' markets" and "producers' markets."

A public market differs radically from a store, shop, or group of shops under one ownership. In such stores and shops the person owning or controlling the agency also owns and controls the goods sold. In public markets, on the other hand, the agency—that is, the market—and the actual selling of the goods are in different hands.

FUNCTION OF PUBLIC MARKETS

From what has been said in regard to the economic justification of public markets it is apparent that their function is not to replace all other agencies in the distribution of fresh produce but only to supplement them where conditions are such as to make supplemental agencies desirable and their operation practicable. Diverse conditions are encountered in the production of food products, and a variety of forces and factors make up the demand for such supplies. It is natural, therefore, that in the machinery of distribution, which exists to meet the needs of both producers and consumers, there are various agencies. Public markets constitute merely one type of agency. Originally under simpler conditions of production and demand they were of great general importance; at present, under more complex conditions they are of relatively less importance; but they are of considerable importance, nevertheless, to large groups of producers and consumers in many localities, and under such circumstances may well be maintained to meet the needs of such groups.

Where the establishment of public markets is proposed, retail grocers often oppose the plan with the statement that an effort is being made to displace them as distributors of farm produce. As a matter of fact, the establishment of public markets seldom injures grocers and often builds up their trade in supplies bringing greater profit than farm products. If grocers realized that public markets are merely supplemental distribution agencies, and that because of the demand of many consumers for service, markets cannot monopolize the trade in farm produce, much futile opposition to markets would be avoided.

¹ Adapted from McFall Kerbey, *Open Types of Public Markets* (1921), pp. 1, 3-4, 7-10. (U. S. Department of Agriculture, Bulletin No. 1002.)

From the point of view of the producer the function of public markets is to furnish an easily accessible place where there is a considerable demand for his goods and where at relatively slight expense he can personally conduct sales. A properly operated public market makes possible the free interaction of the forces of supply and demand and places the operation of such forces more or less under the observation of the producer, and so furnishes one of the best possible opportunities for arrival at a fair "market price." When producers peddle their wares from house to house or store to store their opportunities to judge the fairness of prices offered are obviously poorer than when they sell on a properly operated public market.

From the point of view of consumers who wish to patronize public markets their function, when properly operated, is to make available for choice larger quantities of fresher produce than can be found at ordinary stores, at lower prices, and in some cases under more satisfactory sanitary conditions. In addition to looking to markets to furnish lower prices themselves, consumers also see in such agencies a force which tends to bring about an indirect reduction of prices throughout the community by furnishing an active competition.

From the point of view of the community, properly operated public markets perform more fundamental functions in addition to those mentioned. By furnishing trustworthy outlets for miscellaneous food products they tend to encourage the farmers of the vicinity to produce more; they tend to help solve the city's problem of making available an adequate food supply at reasonable cost, so as to keep at home a greater proportion of the money spent by the citizens for food; and in general they tend to increase prosperity and improve living conditions, both in the city and in its immediate trade territory.

ESSENTIAL CONDITIONS FOR SUCCESSFUL OPEN MARKETS

Open public markets, especially the simpler kinds, are capable of more general establishment than inclosed markets. It cannot be emphasized too strongly, however, that even the simplest type of market cannot be established successfully in a haphazard way under chance circumstances. There are certain essential conditions, mostly economic, that must exist before a public market can be a success, and enthusiasm alone or a mere desire, however laudable and earnest, to reduce living costs will not take the place of such necessary con-

ditions. Numerous communities have learned this lesson by bitter experience. Wherever successful public markets exist they have, consciously or unconsciously, been established and maintained in accordance with the essential conditions referred to.

Size of the City

In the first place the size of the city or town must be taken into consideration in relation to the type and kind of market proposed. Villages may be too small and cities too large for open public markets. In the former case the community is likely to be in close touch with the surrounding farming country, so that much produce is sold directly from farm to home. Many residents of villages also own neighboring farms and obtain supplies from them, and the custom of maintaining commodious home gardens is much commoner in villages than in larger towns. There is, therefore, in most small villages an insufficient demand to support even the simplest type of open market.

In very large cities, on the other hand, an active demand for open markets may exist in the congested sections, but the furnishing of the necessary supplies to such sections may be impracticable. Open farmers' markets are thus out of the question in certain sections of very large cities, because the areas of production are so far from those sections that it is unremunerative for farmers to haul their wares there. If such sections are to be provided with open markets, they must be markets of hucksters and pushcart vendors. It may be mentioned in passing that such congested sections of cities as those referred to above are often admirable locations for inclosed middleman markets.

Exceptions will exist, but in general even the simplest type of open retail market along a street curb cannot be expected to succeed in towns of less than 10,000 to 12,000 population. It will usually be unwise to establish a substantial open retail market on a market tract in cities of less than 25,000 or 30,000 population unless the signal success of a curb market demonstrates that the situation is exceptionally favorable. Wholesale markets, even when combined with retail markets, are seldom found in cities of less than 40,000 population unless they are maintained largely for sales to outside buyers for shipment. The best developed wholesale markets are found in cities of well over 50,000 population, and it is also in the cities from this size upward that the most thriving open retail markets are found.

Potential Customers and Available Supplies

The size of a city alone, however, is only a rough indication of the practicability of establishing a certain type of market. A more accurate index is the probable number of people who can be depended upon to patronize the market. The proportion of a population which represents potential market customers will vary with nationality, local customs and prejudices, climatic conditions, and the like. It often happens, therefore, that a public market in one city receives heavier patronage than a similar market in a somewhat larger city. In estimating the number of potential customers of a public market consideration must be given also to existing agencies such as "green-groceries," hucksters, and other agencies concerned in the distribution of farm products, and to what extent such agencies meet the needs of consumers.

Of equally fundamental importance with the subject of demand in determining the practicability of a public market is the matter of the supply and potential supply of products to be handled in the market. Obviously these two essential factors—demand and supply—must be in proper relationship before a successful market can be created. Open markets have to do primarily with supplies of produce originating within hauling distance. Where little or no good farming land exists near a city or where the neighboring lands have not been devoted to any great extent to the production of foodstuffs, conditions are unfavorable for the immediate establishment of an open public market of any considerable size. The concentration of available supplies, however, and the admission of hucksters selling shipped-in products will often make possible the creation of a small curb market. Such a market, if intelligently operated, will stimulate additional production by demonstrating that near-by production is remunerative; and the increased production will in turn make a larger market feasible.

Location and Management

A proper location for the market, determined with reference to economic conditions, is essential to its success. Errors of location are probably the most common errors made in establishing public markets. Ease of accessibility to the greatest possible number of producers and consumers is the central consideration in determining location. The essential truth of this principle is evidently not so easily grasped as might be supposed, however, and all too often markets are situated at a given point merely because a certain lot happens to be vacant or

because an available site is in a certain ward. A market located in such a haphazard fashion usually demonstrates the importance of location by becoming a hopeless failure.

In addition to the economic and physical conditions essential to the success of open public markets the matter of management and methods of operation is of great importance. Markets with practically all other conditions for success present are in many cases prevented from realizing more than a partial success because of the unintelligent manner in which they are operated and managed. A market, the existence of which is justified by economic conditions, is capable of being an institution of great importance to the community, and it should be placed in charge of a manager with ability to bring out its full possibilities. The placing of market establishments—often in effect business enterprises representing investments of hundreds of thousands of dollars—in the hands of poorly paid and incompetent managers can not be too strongly condemned as a shortsighted and wasteful policy.

CHAPTER XII

LARGE SCALE RETAILING

1. THE DEPARTMENT STORE AND MANUFACTURERS' BRANDS¹

The department stores are mainly responsible for the high tension in buying in the cities. Few of the big department stores spend less than \$100,000 yearly in newspaper advertising alone, and many spend that amount in a single paper. The tremendous force of daily pages and frequent double pages of department store newspaper advertising has reduced the effect upon the consumer of the manufacturer's advertising campaign very materially.

By eliminating the trade-marked name in their selling, the department stores have driven in a separating wedge that has made them independent of the manufacturer. Three women were given a list of twenty advertised articles to purchase at a department store in Chicago. Of that number they returned with only three; in place of the other seventeen they were all offered "our brand which we ourselves manufacture."

The buyer in the small town is thrown into an intimate contact with the store and its proprietor which is absent in our cities. The more or less uninterested clerks of the big stores are a barrier to anything but a similarly mechanical selling and buying method. This eliminates emotion from buying and makes it a cold reasoning process, and, consequently, a harder and longer process.

To stimulate selling in cities by means of inquiries from consumers in the manufacturer's national campaign is a farce. Inquiries and coupons presented to clerks in larger stores are usually met with a cold negative and seldom if ever reach the buying head of a department. As an experiment, I made twelve inquiries at one department store in accordance with the suggestions in twelve manufacturers' advertisements. I was told at each counter, "We don't carry it, but we have our own special brand." Eight of these special brands were traced down and found to be the manufacturers' goods that had been advertised.

¹ Adapted from George L. Louis, "The Dealer's Part in Distribution," *System*, (June, 1912), pp. 584 ff., quoted in Paul Terry Cherington, *Advertising as a Business Force* (1913), pp. 43-44.

2. A MANUFACTURER'S CHAIN¹

Browning, King & Co., of New York and fifteen other cities, are a simon-pure example of a growth of a chain from a single store. Nowhere along the line has development been attended by exclusive agencies. This company manufactures men's clothes and sells them through its own stores, making its argument to the public on the basis of a maker-to-user economy. One recent advertisement had a paragraph arguing that because the company was both a manufacturer and a retailer at once, it could furnish garments at a saving of from a quarter to a third. Consumers are also told of the buying ability of the house. With seventeen stores in fifteen cities it is able to secure good discounts on both materials and other items like insurance. It is roughly estimated that such discounts amount to a yearly total of \$75,000 to \$100,000—representing that much net margin within which to meet competition on an equal basis.

The chain-store proposition has a peculiar merit in a business like that of clothing. The manufacturer is able to control his output almost absolutely; that means that as a retailer he is able to avoid being "short" or "long" on any line. Trade demands are carefully calculated in advance and orders placed accordingly. If a line "goes" more quickly than expected a special order is hurried through the shops on a special schedule. With both the field of manufacturing and retailing under its eye the company is able to trim its sails quickly. In this case the manufacturer does not unload upon the retailer, as sometimes happens to an independent retailer whose judgment in buying is formed from meager facts in his narrow field.

3. THE UNITED CIGAR STORES COMPANY OF AMERICA²

The United Cigar Stores Company (now bearing the name of The United Cigar Stores Company of America) was established in October, 1901, by the opening of its first store at 84 Nassau Street, New York City. The founder of the enterprise was George J. Whelan, who in association with a group of men selected by him at once undertook its management and began the extension of the chain of stores, first in New York City and then later to other cities throughout the country.

¹ Adapted from "The Development of the Chain Store Idea," *Printers' Ink*, (June 23, 1910), p. 16, quoted in Paul T. Cherington, *Advertising as a Business Force* (1913), p. 186. I am indebted to Browning, King & Co. for reviewing this article to insure that it applies at the present time.—EDDROX.

² Statement by the Company.

In establishing the United Cigar Stores Company it was principally the object of the founders to keep the retail cigar business from going entirely into the hands of cigar stands, in hotels and news rooms as seemed to be the trend of the business about twenty years ago. In the opinion of the founders the retail cigar selling business was being to some extent injured by the fact that there were no stores widely distributed throughout the country where the same brands of cigars could be obtained on call. It was also true that to some extent the business had lost prestige through the inclination of hotel cigar stands, news rooms and smaller dealers everywhere to practice what was called "dumping" in those days, namely, the misuse of boxes bearing well-known labels by filling them when empty with goods of inferior grade.

One of the purposes in the establishment of United Cigar Stores was to make it possible for smokers to generally obtain cigars they preferred anywhere they happened to be. This was perhaps the underlying principle of the United Cigar Stores as it was viewed in the beginning of the enterprise and it has never receded from that policy. This policy led to the establishment by the United Cigar Stores Company of relations with large numbers of manufacturing concerns, which could deliver to it for distribution everywhere in its stores, cigars which were found to be in popular demand.

In its early stages the growth of the company was not rapid but as the years went by the field widened, in a very large number of instances as the outcome of requests direct from various cities for the establishment of United Cigar Stores in those particular communities.

THE REAL ESTATE DEPARTMENT

Obviously in its first stages the company was obliged to face the problem of picking locations not only in communities themselves but as well in neighborhoods or sections of cities in which it was decided to do business. These problems led to the establishment by the company of a real estate department which was called on continually to exercise great care in the choice of locations and to determine ways of testing out what might be profitable locations. As time went on, naturally, an expert corps of men was recruited on whose judgment the company found it could confidently rely for the very best information on the subject of locations. As a result of the experience which it had in the beginning the company found that it often had for long periods to remain out of a city which promised profitable business or out of good neighborhoods where good locations could not be obtained.

In consequence of this it often happened that the company made leases for locations long in advance of the dates when it would be possible to occupy them.

OTHER PROBLEMS

Inasmuch as the whole system of the company covered operations which were practically new in business it was confronted by scores of other problems which one by one had to be disposed of before it could proceed in good order. One of the most important innovations in business which the company introduced was its auditing system, designed to gather accurate records of the business done in the stores from day to day and to apply them in an enlightened way.

It was the opinion of the founders that it was positively necessary to have this information in hand in order to go forward under a plan that would safeguard its daily business and account for its daily receipts. In the development of such a system the United Cigar Stores Company is credited with having instituted something radically new in business and to have mastered most of the larger problems of auditing such a business.

The question as to how to select stock for stores which, as the United grew, extended throughout the whole country, and to solve the question of prompt and economical distribution of the stock was also constantly before the managers. In the end the selection of stock was made easy by a careful inspection of the kind of merchandise which was called for most generally in each section of the country and the establishment of distributing depots in cities like New York, Chicago, Boston, and San Francisco with subsidiary distributing points in various zones covering the whole United States.

It was always in mind in solving the distribution problems to stock all stores with what could be called standard brands not only of cigars, but of cigarettes, smoking tobaccos, pipes, etc., so as to standardize those brands in every part of the country where the company was doing business. To a very large extent cigarettes and smoking tobaccos, as well as pipes, are open brands sold generally throughout the country. The standardization of cigar brands was a more difficult problem because it is the history of the business that each section of the country is apt to favor brands put forward by manufacturers by persistent effort and intelligent advertising. The United Cigar Stores Company, however, has standardized its brands by general distribution and puts behind these brands claims for their quality which it was believed could go undisputed.

At no time in the history of the company was there any attempt made to establish United cigar stores as places where lower prices prevailed than could be offered by competitors dealing in merchandise of equal quality.

PREMIUM SYSTEMS

From the beginning of the company's business a strong feature of it was the distribution of certificates and coupons given with every purchase, these tokens being redeemable in valuable premiums distributed to its customers from regularly equipped premium stations. In this branch of the business the expenditure is at present (1924) practically five million dollars. Although the premium system is not an exclusive feature of the United Cigar Stores Company it has been strengthened by the fact that never since it was introduced has the company failed to insist that its customers should receive the benefits of the certificates and coupons. An employee behind the counter of the company who fails to hand out these tokens is regarded as not following out the policy of the company and could not therefore remain in its employ if continually refusing to do so. One of the elements which has made for success in the premium department of the company has been its long insistence on keeping up the high standard of the articles distributed as premiums. In a large part these premiums are selected from well-known and advertised trade-marked articles such as are in constant demand by reason of their popularity in every household in the country. Under no circumstances has the United Cigar Stores Company made use in its premium department of the ordinary run of "premium" articles such as are manufactured especially to be used as inducements to buy. The company has always disavowed the idea that its premiums were in any sense to be so considered a gratuity. They were allowed with all purchases in return for continuous patronage of the stores, which is invariably on the cash basis. No credit is allowed in any case.

CONTROL OF EMPLOYEES

It was also the opinion of the founders of the United Cigar Stores Company that nothing would count so much in its favor as a public utility as observance by its employees of the strictest courtesy in all transactions it had with the public. Following a system of training and education which is given the salesmen in the stores comes a never-ending effort on the part of the managers to keep courtesy and all it means at the very highest mark of efficiency. It is felt that to make

courtesy count as it should every store should rank equally, inasmuch as a failure to express its policy in any one store would do harm to all concerned no matter how far distant. It has always been aimed by the United Cigar Stores Company to carry out the slogan which appears conspicuously in its salesman's manual, "The customer is always right." Proceeding on this theory the company has always maintained and kept at its head an important officer who supervised the adjustment of every complaint, large or small, which came to it for adjustment. In following this course there has never been a thought of quibbling with the claim of a customer who could come to it with even a reasonable argument in his favor. In the adjustment of claims the question of money expended has always been of least consideration, it having been well established by the experience of the company that as a general rule the public may be depended upon not to exact other than fair claims.

INCREASING VARIETY OF STOCK CARRIED

Following the trend of modern business the character of merchandise carried in United Cigar Stores has changed to some extent almost in a radical degree. While the stores are distinctly cigar stores dealing in goods in most demand by users of tobacco, the stocks have been widened to include a considerable assortment of what is known as sundry merchandise, including such goods as razors and razor blades, package candies, playing cards, chewing gum, and a gradually widening line of smaller goods which are in equal demand generally from men customers. At the same time the company has never lost sight of the advantage of being in good repute with the women and has exercised every effort to give women attention in its stores and courtesies to which they are by common consent entitled.

Early in the history of the company most of the premium articles which were selected for redemption by its customers almost ignored women. As things went on, however, it was discovered that the women were the largest savers of certificates and coupons and therefore were to be most considered in the selection of articles which were placed in the premium list.

In many localities where the company found it advantageous to establish stores it was found that a combination cigar and drug store would serve a public usefulness that it was thought important to take into consideration. With this view point as a guide the company has established many stores of this character and been rewarded by what it is said is marked success. How far the business of stores like those

in this chain can widen under favorable circumstances is proven by the recent establishment of departments in some of its larger stores where radio sets and radio parts are sold. This business is a growing feature of its profits, and is regarded as a conspicuous example of what can be sold in a cigar store under circumstances which manifestly favor the public.

Incidentally to the interior management of the business of the company is its maintenance of a medical department under the operation of which all employees enjoy the privilege of free medical treatment even in cases where major operations are necessary.

Out of the success of the company has grown the establishment of a system permitting the proprietors of reputable stores in smaller cities to operate under the name of the United and with all its methods and its advantages at its disposal, by a simple form of contract covering what is known as the Agency plan. This places stores in these communities on the footing of United cigar stores under a plan which has increased their present number up to nearly 2,000. These agencies, especially in the communities in which they operate, are to be regarded as United cigar stores, the number of which, as so listed at present, is 2,500.

4. THE UNITED DRUG COMPANY¹

In the United Drug Company a large part of the stock of the manufacturing company is owned by the retailers, who serve as the outlet for the plant's products.

Impressed with a coöperative movement which in 1903 embraced less than forty dealers, but now includes close to 5,000 retailers, *Printers' Ink* asked William C. Neilly, Advertising Manager of the United Drug Company, of Boston, Mass., to relate what were, to his mind, the more important details in connection with the development of his firm's system of marketing its goods.

His recital of the facts goes to show how business practice in any given line of trade may be revolutionized when once consumers learn the inwardness of unjust practices of which misleading advertising is the outward sign.

HISTORY

"The heyday of patent medicine advertising," said Mr. Neilly, "was in 1903. The space used was extravagant, and colossal were the

¹ Adapted from "Welding the Manufacturer-Retailer Bond," *Printers' Ink*, Mar. 21, 1912, pp. 86 ff., quoted in Paul T. Cherington, *Advertising as a Business Force* (1913) pp. 197-201. I am indebted to the United Drug Company for reviewing this article to insure that it applies at the present time.—EDITOR.

claims which practically proposed to take dead bodies and put life into them!

"There was no check on the word 'cure.' Every preparation was heralded as a 'cure.' The people paid their money and frequently got nothing or worse than nothing.

"The demand for advertised nostrums was enormous. Druggists had no choice. They were forced to stock them and to sell them, or lose a big part of their business. It was a riot of fake advertising, but it carried the germ of opportunity. Keen eyes and ears perceived the inevitable reaction and the opening for a big business which might be built up by square dealing.

"Soon the tide turned; resentment against nostrums set in so quickly and grew so rapidly that some manufacturers were forced into exceedingly critical positions.

"The United Drug Company's policy matured at this juncture. The projectors realized the great demand for *prepared* medicines, but it also recognized danger in the fact that standard preparations might be confused in the minds of the public with the tottering 'patent' medicines. The two classes were similar in their appeal to a large and legitimate field, but very dissimilar in intent, purpose, and effect.

"The word 'patent' implied secrecy and the buyer knew little or nothing concerning ingredients. The purchaser expected to buy on faith, was not expected to ask questions.

"The first plank in our platform was 'no secrets.'

"From the start the composition of our preparations was made an open book. The published formulary tells every ingredient. The text is in plain English and big type, so that the layman can know exactly what he is putting into his system. Step into one of our stores and ask the druggist what any Rexall preparation contains. He will hand you the printed formulary.

"The United Drug Company was one of the few concerns which did not have to revolutionize its formulas and its literature when the Pure Food and Drugs Act went into effect. Once an edition of several hundred thousand booklets was destroyed because a preparation had been advertised by the phrase 'Prevents colds.' One of our physicians caught this phrase and blue penciled it. The edition was burned up and a new one run off with the statement, 'tends to relieve colds.'

"Painstaking in regard to our preparations became a real asset to us. It impressed customers and led to popularity.

"The coöperation of druggists, however, was required for our success. Something was needed to enlist the dealer's vital interest.

THE PLAN OF ORGANIZATION

"To attain this vital interest and secure the successful carrying out of our plan, Louis K. Liggett, President of the United Drug Company, organized the campaign along lines which have been continued to the present day.

"He insisted upon the idea of confining the sale of our product to one druggist in a community. In each town we selected a reliable druggist and outlined the possibilities for a give-the-public-a-square-deal drug store in his section and told him what we hoped to accomplish through his coöperation. As a further inducement and to secure his permanent interest we offered him a stock interest in our company and a participation in its profits. At our first meeting forty druggists subscribed to the proposition.

"The features chiefly responsible for our success were the then radical policy of non-secret prescriptions in place of the frequently bogus patent nostrums.

"Next in importance was the feature of having one exclusive druggist in a community. He could stand behind the goods with his own reputation. He could recommend them as the product of a company and one which he personally backed up with a money investment. He could guarantee our products to customers as we guaranteed them to him, and print on every label this guarantee:

The United Drug Company and the Rexall Stores selling this preparation guarantee it to give satisfaction; if it does not, go back to the store where you bought it and get your money. It belongs to you and we want you to have it.

"The confidence of the druggist was further strengthened by an agreement we made to close his agency and repurchase his stock at par value with interest any time our dealings were not satisfactory to him or his to us. If we should have good reason to retire a druggist from our organization, we could not act arbitrarily in the matter. Each state has a grievance committee composed of fifteen of our dealers. If we wanted a druggist to withdraw we would present our case to a committee which would hear both sides before acting. Cases like this are rare. Not a case was submitted last year.

"The self-government of our organization might be further illustrated. Our officers and directors are elected by the retail druggists and may be deposed at any time the stockholders shall elect to do so.

"We have no quantity discounts. Under this policy druggists are not tempted to overstock on our goods. It insures frequent turnovers

and freshness of the preparation—a most important feature in our class of merchandise.

“The druggist gets behind the goods with spirit and determination, and the sales increase not only the profits of his store but the dividends on his investment. From this simple plan has sprung a spirit of co-operation greater than we hoped for at the start. The 5,000 dealers are not competitors in any sense, consequently they feel free to tell everything in an annual stockholders’ convention. They discuss, among special sales features, window displays, newspaper and booklet advertising, and all that makes for a better business. They go over the questions of handling of clerks, giving of special commissions, store arrangement, store fixtures.

“We advertise prominently about ten products. The factory charges my department with them. The sales department adds its expenses. The general overhead for executive, administration, and accounting is charged to me. On top of all, I add my advertising expenses. It is up to me to sell this product and make the sales and profits cover all costs and expense, and leave something for dividends. There is no shifting of responsibility. Whatever does not go right with the ten advertised products becomes my fault and mine alone. The advertising manager is in full charge and control of the annual appropriation. Last year this amounted to \$600,000.

“We keep close tab on every community and increase or decrease our advertising in each in proportion to the results. A record is kept of each town. It is charged with the cost of the goods shipped there and shows the profit involved. A substantial portion of the profit, usually all of it, in the first year, is applied for promoting sales in each community.

“Although our appropriation is planned a year in advance, it is revised every three months in harmony with the business done in each town and increased or decreased as each case may require. Our first year in any new field is a gamble. The first advertising campaign is gauged by our experience in similar towns in the same state, and usually our estimate is close. The ten products are now being advertised in about 3,700 newspapers.

“Beyond the ten advertised products, we have a large list of so-called ‘tailers,’ and special merchandise to take advantage of the business created by the advertised articles. Usually our advertising in national mediums is confined to a single product over a comparatively long time. Just now hair tonic is the thing hammered in the big weeklies and magazines.

"The wisdom of the unique features of our plan has been demonstrated, I think, and is a strong illustration of what the coöperative principles can achieve."

5. LINE-YARD OPERATIONS AND ORGANIZATION IN THE RETAIL LUMBER TRADE¹

The parts of the Middle West outside of the large cities which were canvassed personally are predominantly line-yard territories in the states of Minnesota, North and South Dakota, Iowa, Nebraska, Kansas, Oklahoma, and Missouri. The proportion of line-yards in parts of these states is as high as 85 per cent. In Oklahoma and North and South Dakota they form approximately 75 per cent of the total number.

In rural trade, unlike city trade, delivery is not an important factor of cost, since relatively few country yards maintain delivery service. In towns of less than 1,000 population it was found that yards rarely deliver lumber, and it is not common in towns of less than 2,500 inhabitants. While the larger line-yard companies often have several yards in the larger towns, 90 per cent or more of the yards studied were in towns of less than 2,500 population. These points serve primarily the country demand for lumber, and this is the trade upon which the line-yards largely depend.

GENERAL ORGANIZATION OF LINE-YARD CONCERNS

The more highly specialized line-yard offices have purchasing, sales, auditing, credit, traffic, and architectural departments reporting directly to the general manager.

The functions of some of these staff departments are as follows:

Purchasing and Sales Departments

All purchases of lumber, cement, etc., are made through this department, either under long- or short-term contracts or emergency orders. The department keeps in close touch with the wholesale lumber market and seeks to anticipate fluctuations in price, thereby being in a position to take advantage not only of price movements but often of special conditions at the mills. The saving that may be effected by a margin of even 1 per cent in purchases is important in concerns having a yearly business of \$1,000,000. The majority of the larger

Adapted from Ovid M. Butler, *The Distribution of Softwood Lumber in the Middle West: Retail Distribution* (1918), pp. 28-31, 39. (U. S. Department of Agriculture, Report No. 116, *Studies of the Lumber Industry*, Pt. IX.)

concerns believe that their savings in purchasing lumber and its products through well-organized departments amount to 4 or 5 per cent. The advantage of purchasing millwork in carload lots and re-shipping it to their yards on favorable local freight rates is another distinct gain, as millwork often comes to the smaller individual yards at a high freight rate.

The sales or retail department is vested with entire control of the retail business, directing its policy, prices, location of yards, etc., and

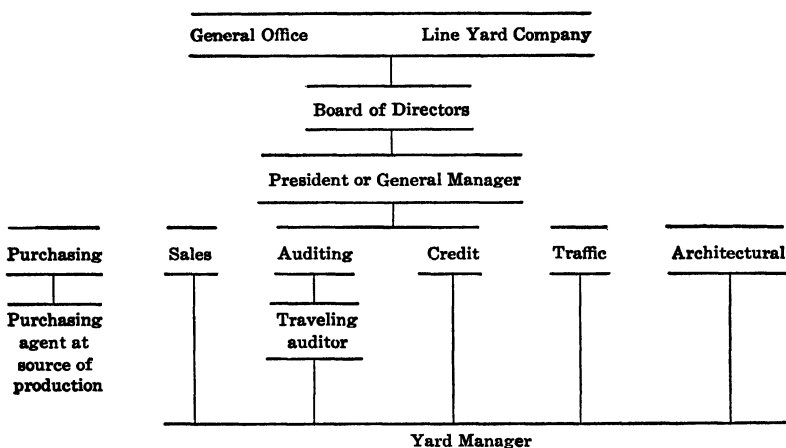


Diagram 8.—Line-Yard Organization

is responsible for the net results. This department is closely allied with the purchasing department, the latter acting on its requisitions or advice. The sales department in turn instructs the auditing department to rebill the purchases to individual yards either at going market prices, a flat rate per car, a price which in their judgment an individual dealer would be obliged to pay, or an amount which will carry the pro rata expense of the general office. At the end of the year the cost of the general office is thus borne by rebilling charges and the gain from discounts. Local yards do not receive the benefit of cash payments, this amount being absorbed by the general office.

Credit Department

This department is one of comparatively recent installation and is closely allied with the auditing department in that the field agents or traveling auditors perform its duties. The heavy burden of outstanding accounts represents 30 per cent of the investment and 22 per

cent of current sales, with a general upward trend. The development of highly specialized credit departments and credit systems has resulted. In some instances every person in the region, whether a customer or not, is listed, with his visible assets, his standing in the community, and the amount to which credit may reasonably be extended. This is a most intensive system but is said to have been worth the expenditure, as it has materially decreased outstanding accounts and largely eliminated losses from bad accounts. This advantage may be more definitely expressed by referring to the average costs of merchandising where losses from bad accounts have averaged 10 cents per thousand feet. The decrease in investment accomplished by a proper credit organization is also apparent.

Architectural Department

This is the most recent department in line-yard concerns and aims to advance the sale of building supplies by aiding builders to erect attractive homes and farm buildings and improvements. These departments handle advertising and the circulating of plans. They aim to create a demand for standard articles and sizes. Such a department is the most effective means of meeting mail-order competition.

The foregoing indicates the organization of the most highly specialized line-yard concerns. In the less intensively organized companies and those which have not the volume of business for such specialization the duties of the central staff are less specific and credit and architectural departments are usually lacking.

LINE-YARDS VS. INDEPENDENT YARDS

While the individual dealers in large towns are ordinarily close buyers, those in the smaller and more remote towns who cannot keep in close touch with mill and market prices do not, as a rule, buy to as great advantage as the line-yards, whose stock is purchased in large quantities by expert buyers thoroughly familiar with market conditions. Furthermore, line-yards effect every possible economy in discounting bills, obtaining low insurance rates, close adjustment of claims, etc., for which they have a strong and efficient organization. The line-yards, as a rule, by buying in large amounts, escape the customary extra charge of 50 cents per thousand feet for mixed cars.

On the other hand, the individual dealer in a small town does not carry the overhead expense of a general office, which amounts to approximately 3 per cent of the sales, or 90 cents per thousand feet on the lumber handled. Whether or not economies effected by the

general office of a line of yards more than offset its cost of maintenance and the salaries of its executives, it is impossible to say. All conditions being equal, there appears to be no reason why the individual dealer who allows himself a salary comparable to that of a line-yard manager cannot operate as cheaply or even more cheaply if the same ability is applied to his business.

As between the two types of organization, the indefinite personal factor is in favor of the individual dealer. This is generally admitted by line-yard men and is evidenced by the policy followed by some companies of giving their local manager part interest in the yard. The direct effect of this factor upon costs lies in the interest and attention given the yard business and the increased volume of trade which the independent business man is often able to obtain over the man hired by an outside corporation. The extent to which this advantage is utilized, of course, depends upon the personality and business ability of the individual dealer.

6. MANUFACTURERS FIND IT DIFFICULT TO KEEP TO "LEGITIMATE" CHANNELS¹

There is something more than usually interesting in the decision of the Sun-Maid Raisin Growers to sell Pacific Coast and western chain stores direct. Every specialty manufacturer, face to face with the problems the Sun-Maid people encountered, will watch it with more than usual concern.

Like most manufacturers of specialties, the Sun-Maid people have held out against the importunities of the chain stores of the West for a long time and have stood loyally by the jobbers. Once upon a time they did the same in the East, but long since they yielded to the manifest value of the chain outlets and placed the chains on a jobbing basis; save in the West, where till now they have been neither very aggressive nor controlling.

But now, the chains have developed in the West, in many sections to so great an extent as to represent a very important and vital outlet—an outlet that few manufacturers can afford to sacrifice in justice to themselves. Most of them have wanted to stick to the jobbers, but the chains simply would not buy through jobbers and pushed competing brands rather than those they had to take at second hand. In the end, the chains developed for themselves or displaced enough of the "old line" retailers to become serious.

¹Adapted from an article in the *Journal of Commerce and Commercial Bulletin* (New York), July 25, 1923.

Just how far can a manufacturer be expected to make sacrifices to protect the jobber? The history of trade shows the same experience in many places—of disposition to stick to the wholesaler (which means also the bulk of the retailers), but in the end finding that the jobber did not hold the trade sufficiently to repay the sacrifice.

Reluctantly the manufacturer had to yield. Sun-Maid is no different from the others. The anti-trust laws do not permit jobbers to fight the battles of the loyal manufacturer through an alliance offensive and defensive. In some territories—Philadelphia, for instance—manufacturers lost from a third to half the distribution of the district before yielding, but in the end, in justice to themselves they decided to sell chain stores.

This is serious alike to jobber and manufacturer. To the one it means the loss of retail trade; for the other it creates animosity from the jobbers. In the East, jobbers have long since ceased to feel that they could fairly ask such sacrifices from a manufacturer but in the West they are understood to be "sore" at the decision of one manufacturer after another to take on chain outlets.

How far they will undertake to retaliate remains to be seen. In the case of the California jobbers there are considerations of loyalty to the state industry which they may not wholly overlook, and they know very well that if the Sun-Maid did not sell the chains, the "independents" would. Wherefore they can hardly protest very vigorously.

And after all, manufacturers who have taken this step elsewhere apparently found satisfactory ground of justification in the fact that they are not wholly inconsistent in selling chain stores. While the individual chain store is clearly a retailer, its central warehouse is plainly and incontrovertibly a wholesaler; measuring up to virtually every function the wholesaler performs and some that he does not. Therefore a sale to such a warehouse is not clearly a "direct sale to retailers" and not open to all the objections commonly raised.

7. HOW MANY LINES WILL A CUSTOMER BUY BY MAIL?¹

With the recent rapid recovery of the mail-order business, its possibilities to the manufacturer or store hungry for business look more tantalizing than ever. Where the local store's growth is limited to the population within a fifty-mile radius, the mail-order house

¹Adapted from Ralph K. Wadsworth, "How Many Lines Will a Customer Buy by Mail?" in *Printers' Ink*, Oct. 26, 1922, pp. 121-22.

reaches across a continent to its millions. Then, too, the mail-order company usually has the added advantage of receiving cash with order.

To these evident advantages popular opinion seems to add that you can sell mail-order customers pretty nearly everything by mail. In fact, the writer recently had several business men express themselves to that effect. To do a successful business by mail they seemed to think you had to carry several lines of merchandise—"sell everything"—as they put it.

It is curious why this general impression that mail-order buyers are a definite class who will buy everything by mail should be abroad. No doubt it is due to the outstanding successes of the two big Chicago houses whose range of merchandise is so wide as to make it possible for a woman to write in, "Please send me your grocery catalogue and also your tombstone catalogue."

Nothing is so misleading as surface indications, and particularly is this true of the mail-order business. Merchandising and advertising and selling problems are linked together in a way that probably never occurs in any other business activity. Of course, there are certain fundamental principles that apply to mail-order merchandising and selling generally, but apart from these it will be found that each line of merchandise has its own special problems, special price ranges and mark-ups, peculiar requirements in selling, and varying seasonable demands and tastes. To obtain any adequate conception of the problems involved requires years of experience in the business and constant access to the inside figures of one of the larger mail-order institutions.

It is often said, "If you sell a woman her shoes by mail, you can sell her her groceries or her clothes," and in support of this the example of Sears Roebuck or Montgomery Ward is usually cited. While this general statement has an element of truth behind it, it is not nearly so general as is supposed.

Let us take the case of one of the country's large mail-order houses, for example, an institution whose catalogue includes practically everything the average family can use—whether a spool of thread, a woman's dress, a kitchen range or a bath tub. That house has on its lists 4,100,000 actual customers who receive twice a year their large catalogue containing among other lines their women's fashion department.

Most of these 4,100,000 names represent homes that include one or more women in the family, and yet out of this large number only

700,000 buy their dresses and other fashions from this house. It is not because these customers are not accustomed to buy by mail. Their mothers and grandmothers before them have been doing it, and from this same house.

The answer is largely that people who buy one class of merchandise by mail will not necessarily purchase another line in the same way, even from the same house. That this is the case with all the other lines handled by this same catalogue house, you will readily understand when you learn that their average sale per large catalogue is only about \$12.50.

That catalogue contains practically every line of general merchandise carried by any store. It does not take many pairs of shoes from a family to make \$12.50, or suits of clothes, or boxes of groceries or pails of paint; and yet in six months that is all the average customer buys from that general catalogue.

In drawing these conclusions I do not pretend to overlook the fact that perhaps this house's customers may prefer to order their women's fashions or other lines from some other mail-order company, and that not every catalogue that goes out brings in a sale. Allowing for these discrepancies, you will still find the above observation the only explanation for the situation.

That the big mail-order houses recognize this, is seen in the fact that they issue so many special catalogues besides their big edition. Montgomery Ward and Sears Roebuck, for example, send out grocery, auto accessory, wall paper, paint, radio, and other special catalogues, each of which goes to a special class of customers.

Just how far their customers will go in purchasing other lines of goods is a question that is puzzling many mail-order houses now selling a special class of merchandise. Recently one old established jewelry catalogue house in the East with many thousands of names on its books thought it saw an opportunity to increase its business by selling those same customers wearing apparel by mail. "Certainly, these customers," they argued, "have been dealing with us for years and have faith in our fair dealing and ability to serve them, and they are people accustomed to buy by mail. Why shouldn't they buy their wearing apparel of us in the same way?"

So at considerable expense a wearing-apparel department was installed and a fashion catalogue issued. The experiment proved a flat failure and cost many thousands of dollars.

Of course, this does not mean that that firm could not have successfully sold customers some other line, but it happened that

wearing apparel was not the merchandise that should have been selected. In making a decision of this kind past performance is the only thing a house can go on.

How to convert their one-line purchasers into buyers of other classes of goods, is one of the big problems of the general catalogue houses. It would not require much success in that direction to double or triple their sales.

In conclusion, it might be said that people who shop by mail tend to confine their purchases to certain classes of merchandise. Some women, for example, might be entirely willing to order their jewelry by mail, but wouldn't think of buying their clothing in that way, as they feel they wouldn't receive a good fit. Or, a man who would turn up his nose at the idea of buying his furniture from a catalogue house, might be among the first to send in his order for a new encyclopedia set.

This bias on the part of buyers is just one of the many things that make mail-order selling the interesting and strenuous game that it is.

CHAPTER XIII

DISTRIBUTIVE COÖPERATION

1. AN APPRAISAL OF THE FARMERS' GRAIN ELEVATOR MOVEMENT IN IOWA¹

HOW SHOULD SUCCESS BE MEASURED?

It is to qualitative rather than quantitative considerations that we must look for the best measures of success and value of the farmers' elevator movement. It is not merely a question of how much business is handled by the farmers' elevators, but rather a matter of how well this business is being handled. For it is evident that the direct gains or losses to the company itself are by no means the only measure of its efficiency and success. A well-managed elevator might show a book loss simply because it had paid its members a higher price for their grain than the market actually justified later during the course of the selling period, whereas another elevator might show a profit to the company without having rendered any very high type of selling service to its members. The final measure of the success of the farmers' elevator movement, therefore, is to be found not in the balance sheets of the companies, important though they are, but in the net returns which the farmer received for grain sold through the farmer company as compared with that marketed through other agencies.

We know very definitely that the margins taken at country stations by line and independent houses in the period which gave rise to the present farmers' elevator movement, were much wider than necessary to pay ordinary operating returns. An abundance of trustworthy evidence is available to show that such margins were reduced by the advent of the farmers' elevators and that they are being held down by the continuance of that competition. An excellent case could undoubtedly be made out by many independent elevators over the state to show that the farmer patron is today getting as much on grain marketing through them as is secured by those who sell to a farmer company. As between the well-managed independent elevator which meets a good lively competition, either from farmer or other companies at its own or near-by shipping points, and the small or

¹ Adapted from E. G. Nourse, *Fifty Years of Farmers' Elevators in Iowa* (March, 1923), pp. 256-59. (Iowa State College of Agriculture and Mechanic Arts, Agricultural Experiment Station, Bul. 211.)

poorly managed farmer elevator, it may be conceded at once that the producer will net more from the private company. If, on the other hand, we compare the strongest and best of the farmer companies with certain private elevators which do not have to meet a very keen competition, a rather spectacular margin of advantage for the farmer company could be clearly demonstrated.

PRESENT STATUS

It might be conceded, for the sake of argument, that at the present moment the differences between returns received through all the farmers' companies, good and bad, and all the independent or line companies, good and bad, over the whole state and on the basis of several years' averages, might not be very great. Even if such a case could be proved, however, one's estimate of the value of the farmer elevator company would not be at all lessened, since it is primarily their presence which has established the plane of competition which necessitates the payment of such satisfactory prices by other companies. Indeed, it is a well-known fact that the line elevator companies have disposed of a large number of their houses in the state and are more than willing to dispose of some of those they still have, because they find there is no money for them in country houses dealing on the basis of present handling margins. This admission on their part is strong evidence of the value and achievement of the farmer company, and that its continuance in business is the only insurance the farmer has that the necessary competition will be continued.

Another strong evidence of the value of the movement is to be found in its steady growth and in the high degree of permanency which has been attained by such companies as have been established during the last twenty years. Of 531 elevators established from 1904 to 1921, inclusive, only 50 have passed out of existence. Even this figure is somewhat of an exaggeration in view of the fact that at some ten of these points a new farmer company has come into existence after a few years without a farmers' company.

The present time, following several difficult and rather disastrous years in the grain trade, offers an opportunity for unfriendly critics of the movement to point out the shortcomings of certain farmers' elevators and to parade the misfortunes of such companies as have actually failed during this period. It should be borne in mind, however, that these times have been difficult for the independent elevators as well, and that one rather large line company operating in the state went into the hands of receivers.

The same acceptance of the farmers' elevator as an established business institution is to be found in most of the towns where such companies are located as well as in the terminal markets. Grain commission companies solicit the business of farmer companies as eagerly as that of any others and find it handled, on the average, in about as business-like and efficient a manner. Local banks recognize their needs as one of the important lines of local business and serve them, in most cases, to the best of their ability. Railroad discrimination has practically been done away with and it can now be said that in the main the farmers' elevator is accepted on the same terms as any other business enterprise.

Of 390 elevators reporting on this point, 360 reported no opposition among local business men, and only 15 reported specific opposition to their company; of 453 elevators, 403 reported no railroad discrimination, while only 50 felt that they were discriminated against; and of 398 reports, there were only 23 references to an unsatisfactory attitude on the part of the local bank. Forty-nine out of 443 managers felt that there was unfair competition on the part of other local elevators at their station. The competitive position of the farmer elevator is made easy at many points by reason of the fact that they have absorbed the whole business. Out of 499 towns from which we have reports, there is no competitor at 217 points, one at 226, two at 53, and three at 4. It should be added that in five cases the competitor is another farmer elevator.

2. COÖPERATIVE GRAIN MARKETING IN CANADA¹

Instead of the locally owned and operated form of farmers' elevators found in the Middle Western states of the United States the Canadians found it desirable to establish centrally controlled elevators of the line-house type. While there are a number of the single-unit type of farmers' elevators in Canada, it is the rather conspicuous success of the line-house type which has attracted attention in this country, and it is these which are usually meant when reference is made to the Canadian plan. The Canadian plan, in the above sense, is typified in two large companies: The United Grain Growers, Ltd., with headquarters at Winnipeg, Manitoba, and the Saskatchewan Coöperative Elevator Company, Ltd., of Regina, Saskatchewan. These two companies own and operate over 600 country elevators in

¹ Adapted from J. M. Mehl, *Coöperative Grain Marketing* (1921), pp. 1-2, 8-9. (U. S. Department of Agriculture, Bureau of Agricultural Economics, Bul. No. 937.)

the three Provinces of Alberta, Saskatchewan, and Manitoba, in addition to other activities, which will be more specifically referred to in another part of this bulletin.

REASONS BEHIND THE "CANADIAN PLAN"

Just why the grain growers in western Canada should begin their actual marketing activities in the terminal markets, while in the United States the farmers' elevator movement originated with the establishment of country elevators, may not at first appear clear. However, it must be remembered that in Canada the efforts of the grain growers to market coöperatively began while the country was still new and sparsely settled. Capital with which to erect elevators at the country points was not readily available. Most of the growers had scarcely enough capital to carry on the business of growing wheat, and in that thinly populated section a capital subscription sufficient to erect a modern grain elevator at each shipping point would have amounted to a considerable per capita cost. The wheat farms were large; farm storage was not so adequately provided as it was in Iowa, Illinois, and other middle western states when the movement started there, and consequently the establishment of loading platforms, and the possibility of shipping grain direct, without having it pass through the hands of the country dealers, seemed to the growers the most logical way out of their difficulties.

The Saskatchewan Coöperative Elevator Co., Ltd., was formed as the direct result of recommendations made by a commission appointed by the Saskatchewan provincial government in 1910 to investigate and report upon the entire grain situation in western Canada. Prior to the appointment of this commission the grain growers' associations had been pressing the provincial government of Saskatchewan to acquire and operate as public utilities the country elevators in Saskatchewan. The recommendations of the commission were opposed to the proposition to own and operate the country elevators; instead it recommended the incorporation of a farmers' elevator company for that purpose, to be assisted by the government in the matter of financing. Although the recommendation of the commission was not what the farmers of Saskatchewan had hoped for, it proved to be the best course, for about the same time the provincial government of Manitoba was persuaded by the Manitoba Grain Growers' Association (now the United Farmers of Manitoba) to purchase a large number of country elevators and attempt to operate them. The venture was unsuccessful after two seasons and the 170 or more

government-owned country elevators in Manitoba were subsequently leased to the Grain Growers' Grain Co. They are under lease to the United Grain Growers, Ltd., at the present time.

THE SASKATCHEWAN COÖPERATIVE ELEVATOR COMPANY

The Saskatchewan Coöperative Elevator Co. is incorporated under a special act of the Saskatchewan Legislature. During the first years of its life it established over forty country elevators and handled more than 3,000,000 bushels of grain. Since that time the number of country elevators operated by it has grown to over 300 and in one year it is said to have handled as much as 43,000,000 bushels of grain. The financial statement of this company for the season 1918-19 shows it to have a paid-up capital stock of \$1,122,312.50 and a surplus of \$1,969,591.36. Its stockholders number over 21,000. The average number of shares held by a stockholder is slightly more than three. Par value of shares is \$50. During the season 1918-19, which was a short crop year, 20,823,138 bushels were handled through 308 of its country elevators. Grain handled for farmers direct, that is, platform-loaded cars, amounted to 1,018,418 bushels. The company conducts a commission business on the Winnipeg Grain Exchange and operates two terminal elevators at Port Arthur, Ontario. One has a capacity of 650,000 bushels and is suitable for mixing and conditioning purposes; the other has a capacity of 2,500,000 bushels and is being enlarged to practically double its original capacity. This is used exclusively for public storage purposes.

Organization

The affairs of the Saskatchewan Coöperative Elevator Co. are administered by a board of nine directors, each of whom holds office for three years. In the election of these directors the stockholders do not have a direct vote, but each local at least thirty days prior to the annual meeting, elects a delegate to represent all of the stockholders within such local. This delegate has one vote only, regardless of the number of stockholders in a given local.

The locals are established in this manner: Whenever a group of farmers desire an elevator at their shipping point, to be operated as a unit of the Saskatchewan Coöperative Elevator Co.'s system, they may petition the company to establish a local. Under the provisions of the Saskatchewan Coöperative Elevator Act the directors may not, without the consent of the Lieutenant Governor in Council, establish any local unless it appears to their satisfaction that the amount of

shares held by the supporters of the proposed local is at least equal to the value of the proposed elevator, that 15 per cent of the amount of such shares has been paid up, and that the aggregate annual crop acreage of the said shareholders represents a proportion of not less than 2,000 acres for each 10,000 bushels of elevator capacity asked for. Upon the establishment of a local the supporting shareholders meet and elect a local board of management consisting of five members, who hold office until their successors are appointed. Each stockholder may own not more than twenty shares of the stock of the company (\$1,000) and has only one vote, regardless of the number of shares owned. At this meeting of the supporters of a local there is elected the delegate who represents all of the stockholders in that local at all the general meetings of the company.

While the local board of management has no powers or authority not delegated to it by the general board of directors of the company, it does, nevertheless, perform a valuable service in advising the general directors with respect to matters of local concern. The directors in the local do not actually control even the manager or agent of their own local elevator, but their recommendations relative to such matters are necessarily given weighty consideration by the general board. They also are able to bring to the attention of the general board any dissatisfaction existing among the local members and to suggest improvement in the service. The price to be paid for grain at a local elevator, of course, is determined exclusively by the central office, and all matters of business policy are dictated from this office. The duties of the local agent are confined mainly to carrying out the instructions of the central office and reporting to it regularly and in detail the business transacted by him.¹

3. FORMS OF COÖPERATIVE ORGANIZATION²

Farmers' coöperative marketing associations may be grouped according to their form of organization into two general classes, one including those formed with capital stock; the other, those formed on the nonstock plan. Membership in organizations belonging to the former class is represented by the ownership of one or more shares of stock, while in the latter, the members pay a membership fee and receive a membership certificate.

¹ The same bulletin, on pp. 17-18, mentions three small companies of this type operating in our Northern states.—EDITOR.

² Adapted from O. B. Jesness, *Coöperative Marketing* (1920), p. 16-17. (U. S. Department of Agriculture, Farmers' Bul. No. 1144.)

CAPITAL STOCK FORM

The capital-stock form has been adopted by many farmers' marketing associations. It is the form commonly employed by farmers' elevator companies, and also for the most part by coöperative creameries. The capital-stock form is better known on account of the fact that most noncoöperative business corporations are organized with capital stock. State legislation has also been a factor in encouraging the use of the capital-stock plan, as more states have coöperative laws providing for the incorporation of coöperative associations with capital stock than have coöperative laws making provisions for nonstock organizations.

While the capital-stock form is the most suitable for certain lines of coöperative business, it has some disadvantages. It is frequently difficult to restrict the transfer of shares of stock, so that it may be possible for persons antagonistic to the organization to gain membership through the purchase of stock. While coöperative organizations with capital stock allow only one vote to each member, and not a vote for each share, control over the organization may still fall into the hands of a few persons as a result of all the capital stock being bought up by them. There is also present a temptation to change the organization from a coöperative to a profit-making enterprise, especially if the control passes into the hands of persons who are not patrons.

NONSTOCK FORM

While the nonstock form has not been so widely known as the one with capital stock, it is gaining in popularity with lines of business for which it is adapted. Livestock shipping associations for the most part are formed without capital stock. Many fruit and vegetable associations, milk producers' organizations, egg circles, and other coöperative organizations have adopted the nonstock form of organization. Among the larger coöperative enterprises which have found the nonstock plan suitable may be mentioned the Michigan Potato Growers' Exchange, the Florida Citrus Exchange, the California Fruit Growers' Exchange, and the New England Milk Producers' Association. The membership of a nonstock organization is controlled more easily than in the case of organizations with capital stock, because membership certificates usually are not transferable. A nonstock organization operated on the nonprofit plan is less likely to depart from the coöperative plan than a capital-stock organization.

4. HOW A COÖPERATIVE LIVESTOCK SHIPPING ASSOCIATION OPERATES¹

First, the livestock farmers in a community meet and decide to ship their stock together, and to form an organization for that purpose. Each man should agree to market his stock through this association, as in so doing he will help to protect himself as well as his neighbor against attempts to break up the association. The members elect a board of directors to have general charge of the business. The directors in turn select a manager to attend to all shipments. He is the main gear wheel in the whole machine and what he does or does not do will in a large measure determine whether the association is a success or a failure. The operations of a shipping association are as follows:

1. The manager keeps in touch with the farmers having stock to ship and knows approximately when this stock will be ready for shipment. Each farmer notifies the manager when his stock will be ready to ship, the number of head and approximate weight on shipping day, so a list of the stock ready for shipment can be made.

2. When sufficient stock is listed to fill a car the manager orders a stock car through the local railroad agent, and notifies all farmers having stock listed as ready for shipment, to deliver this stock at the local shipping point on a certain day.

3. The manager is at the shipping point on the day of shipment to receive the stock as it is delivered. Each man's stock is weighed separately and marked, usually by clipping the hair, so they may be distinguished from the other stock in the car. In some cases hogs are graded, which eliminates the necessity of marking each animal separately. The manager must use every precaution possible to prevent unnecessary losses and should inspect all animals carefully and refuse to ship cripples or animals in an unhealthy condition. This precaution saves money for the association because weak or diseased animals are often seriously injured or killed when loaded in cars with other stock.

4. After weighing and marking each man's stock the manager makes out a slip showing the owner's name, the number and kind of stock delivered and how they have been marked. He keeps a copy of this and gives one copy to the owner as a receipt.

5. When all stock has been weighed and marked and is ready for the car, the manager makes out a list, or manifest as it is called, of all

¹ Adapted from O. B. Jesness and Dana G. Card, *Coöperative Livestock Shipping Associations* (1921), pp. 5-6, 8-9. (University of Kentucky, College of Agriculture, Extension Division, Circular No. 104.)

the men having stock in the shipment, the number of head and kind each man delivered and how they were marked. Three copies of the manifest are made, one is tacked on the inside of the car with the stock, one copy is sent to the commission firm chosen to sell the stock, and one copy is kept by the manager as a record.

6. After the car has been properly prepared the stock is loaded and the manager ships or "bills out" the car with the local freight agent and directs it to be sent to the market and commission firm which have previously been chosen.

7. The manager accompanies at least part of the shipments to market in order that he may become personally acquainted with the commission firm with which the organization is dealing and that he may be familiar with the methods of handling stock in the stockyards.

8. After the stock has been sold in the yards, the commission firm sends a statement, or "account sales," to the manager. This account sales shows the weight of each man's stock when sold, and the price received for each. From the total of this amount the commission firm subtracts charges for freight, yardage, feed, commission, and sometimes insurance. Thus, when the manager receives the returns from each shipment he must distribute these charges among the various shippers in proportion to the amount of stock shipped by each. Some associations are following the practice of having the commission firm prorate these charges among the shippers, but it is usually found more satisfactory to have the manager do this as he is in a better position to adjust unusual losses or shrinkage.

From the foregoing statements it will be seen that each individual shipment is a separate and distinct business transaction, meeting its own expenses, and for this reason, a livestock shipping association needs no capital and requires only a very simple form of organization. The financing is taken care of by each man waiting for his money until returns are made, which usually takes about a week.

The manager is usually paid a stated amount per hundred pounds of stock shipped through the association, which is an incentive for him to encourage coöperative shipping as much as possible. While most associations pay a specific amount per hundred pounds of stock shipped, some pay a percentage of gross receipts, and others pay a stated amount per carload. The usual amounts paid under these various methods are from 5 to 12 cents per hundred pounds of stock, 1 to 1½ per cent of gross receipts, or from \$12 to \$18 per car handled.

A small insurance or protection fund is often created by holding in reserve a specific amount per hundred pounds home weight, to be

used in reimbursing members who may suffer loss through injury or death of animals in transit. This amount varies from 1 to 4 cents, frequently being 1 or 2 cents higher for hogs than for cattle. Some associations take out livestock policies with insurance companies; in which case the actual cost of insurance is deducted from the returns.

5. SELLING LIVESTOCK AND PRORATING EXPENSES¹

SALE BY OWNERSHIP

There are two general methods of selling stock in coöperative shipments on the terminal markets; according to individual ownership and according to grade. The principle advantage claimed for the first system of selling is that it insures each shipper, whether he contributes one head of stock or half a carload, just what his stock is worth on the day it is marketed. Also, when stock is weighed according to ownership, on the terminal market, each lot of stock is credited with the exact amount of shrinkage suffered between shipping point and terminal markets. There are conditions under which the manager is justified in having livestock sold and weighed according to ownership. Cattle from different farms, subject to different systems of feeding before shipment, will not shrink with any great degree of uniformity, and therefore should be weighed separately. Hogs in coöperative shipments, which the manager has reason to believe were given a big fill before weighing at shipping point, should be cut out and weighed separately at the market. A shipper who is tempted to give his hogs a heavy feed before delivery to the manager, is discouraged from following such practice, knowing that his stock may be cut out and weighed according to marks. Sheep that are wet when received by the manager may also be weighed separately at the markets.

SALE BY GRADE

The disadvantages of selling stock by ownership constitute the advantages of selling by grade. Stock that must be sorted for ownership before weighing shrinks more than that weighed in larger lots. Early in 1921 four one-car coöperative shipments of hogs were weighed at the Kansas City stockyards under the supervision of the United States Bureau of Markets. From three to fourteen owners were represented in each shipment, with an average of seven owners.

¹Adapted from S. W. Doty, T. Wright, O. B. Jesness, F. S. Ruggles, R. Loomis, C. A. Burmeister, and L. B. Burk, *Organization and Management of Coöperative Livestock Shipping Associations*, (1923) pp. 10-11. (U. S. Department of Agriculture, Farmers' Bul. No. 1292.)

The hogs were first weighed in car lots and then sorted and reweighed according to ownership. The shrinkage per car obtained caused by sorting and reweighing ranged from 40 to 150 pounds, with an average of 92½ pounds per car. The average price received from these hogs was \$8.52 per 100 pounds. The loss per car from sorting and reweighing was \$7.95. Figured on a 100-pound basis, the following of this practice amounted to deducting nearly 5 cents per 100 pounds from the sale price. In most cases four men did the sorting, completing their work with an average of four and one-half minutes per draft. Counting delays in waiting turn at scales, the average time required was seven minutes per draft.

It is generally recognized that stock sold in small lots is at a disadvantage as compared with stock sold in car lots. This disadvantage may not appear when the market is strong but becomes very apparent when the market has a downward trend. Buyers cannot be blamed for preferring to buy in large lots. On several markets, particularly in the Middle West, a large number of hogs are bought by order buyers for shipment to eastern killers. These buyers will often pay a marked premium for hogs that can be weighed without sorting in order that they may get their stock loaded by noon for shipment East. It is easier to find the loss through shrinkage on coöperative shipment, incurred through sorting, than to estimate the loss in price similarly incurred. Doubtless in many cases the loss in price paid on stock held for sorting greatly exceeds the loss through sorting for individual owners.

On most markets an extra commission charge of from \$2 to \$3.50, depending on the number of owners represented, is made where extra work on account of individual ownership is required. By following the efficient practice of selling stock on grade the extra work and expense of sorting is avoided. A better price to the individual shippers may be expected. Recognition of the quality of each shipper's stock in making up the accounts of sale insures justice to the individual shipper.

6. MEMBERSHIP CONTRACTS AND POOLS¹

Contracts between the members and the organization whereby they agree to market certain products through it are vitally important in many instances, and especially in the case of associations engaged in the handling of perishable products. Specific agreements of this

¹ Adapted from O. B. Jesness, *Coöperative Marketing* (1920), pp. 12, 14. (U. S. Department of Agriculture, Farmers' Bul. No. 1144.) See also H. H. Maynard, *Marketing Northwestern Apples*, pp. 56-62.

kind make it possible for the organization to plan intelligently for the handling of the business, because its management knows what products it will be called upon to market. Interests with which a coöperative marketing organization is competing sometimes offer temptations to the members in the form of higher prices for the purpose of breaking up the association and thereby eliminating this competition. Contracts which keep the members from yielding to temptations of this nature help the organization to survive these attacks.

The Michigan Potato Growers' Exchange, which was formed in 1918, has definite agreements with its members governing the sale of their potatoes. The California Fruit Growers' Exchange follows the same plan in its operations. Many other successful coöperative marketing organizations have demonstrated the value of members' contracts.

POOLING SALES

The pooling of products sold through coöperative organizations is an important feature. By pooling is meant averaging the returns received for products sold during a certain period, or for certain shipments, so that each grower having products of the same grade receives the same price. This method of operation protects the individual member from loss because of unfavorable market conditions of a temporary nature. The following instance shows how failure to adopt a pooling system may result in an injustice to some members. A potato association shipped out two cars of potatoes on the same day. One car found a ready market, while the other one was sold at a considerably lower price, with the result that the growers having potatoes in the second car received less than the others through no fault of their own. Dissatisfaction naturally arose, and the manager experienced a great deal of difficulty in explaining the matter to the satisfaction of the growers. The success of a pooling system is dependent upon the observance of uniform and effective grading of the products.

Some farmers' marketing organizations, especially grain elevator companies, purchase the members' products outright. Conditions and practices in grain marketing make such a plan feasible, but organizations handling other products usually find it to their advantage to pool shipments and await returns before making payments to the growers. This method relieves the association of speculative risks, the avoidance of which is highly desirable. Coöperative creameries, which prorate to the patrons monthly, in accordance with the amount of butter fat each has delivered the preceding month, the returns

received for products sold less operating expenses, are good examples of pooling.

The length of the pooling periods varies with the products handled and the local conditions. Thus there are car-lot, daily, weekly, semi-monthly, monthly, and seasonal pools.

7. MARKETING AGREEMENT USED BY COTTON GROWERS¹

The associations are organized on a commodity basis by cotton-producing states.² The contract which the growers enter into with the associations constitutes the marketing agreement. In order to insure the success of the coöperative movement, a sufficient volume of business is necessary, and it must extend over a number of years. The growers, therefore, are bound by the terms of the agreement to deliver to the associations all of their cotton produced in five years with the exception of the Oklahoma Cotton Growers Association which has a seven-year contract with its members. The principal clauses of marketing contracts used by all the associations with their members are summarized briefly as follows:

1. The grower agrees to become a member of the association for the purpose of marketing his cotton coöperatively.

2. The association agrees to buy and the grower agrees to sell and deliver to the association all cotton produced for a given number of years.

3. The cotton is to be delivered to the association at a designated place. The association has the cotton inspected, graded, and classified.

4. The association agrees to resell the cotton of each grower, together with cotton of like quality, grade, and staple of other growers

¹ Adapted from W. J. Carson, "Cotton Financing, Pt. V, Coöperative Marketing of Cotton," *Federal Reserve Bulletin*, June, 1923, p. 678-681.

² The names of associations now in operation and the dates of their organization are given in the following table:

Name	When Organized
Oklahoma Cotton Growers Association.....	1921
Arizona Pima Cotton Growers.....	1921
Texas Farm Bureau Cotton Association.....	1921
Staple Cotton Coöperative Association (Mississippi).....	1921
Arkansas Cotton Growers Coöperative Association.....	1922
Georgia Cotton Growers Coöperative Association.....	1922
North Carolina Cotton Growers Coöperative Association.....	1922
South Carolina Cotton Growers Association.....	1922
Alabama Farm Bureau Cotton Association.....	1922
Mississippi Farm Bureau Cotton Association.....	1923
Louisiana Farm Bureau Cotton Growers Association.....	1923
Tennessee Cotton Growers Association.....	1923

and, after deducting the expenses of selling, remit the proceeds to the growers in proportion to the amount of cotton contributed by each.

5. The association is given the power to pool or mingle the cotton of each grower with the cotton of a like variety and staple delivered by other growers.

6. The association is given the power to handle cotton at its discretion, but the net proceeds are distributed among the growers in proportion to their contributions to each pool.

7. The association is given power to sell the cotton at any time, at any place, and through any agency it deems profitable, fair, and advantageous to the growers.

8. The grower agrees that the association may borrow money in its name in any manner it desires and pledge as collateral the warehouse receipts covering the cotton. The association agrees under certain specified conditions to advance funds to growers when cotton is delivered to the association.

9. The grower authorizes the association to deliver to any warehousing corporation organized for coöperation with the association, his cotton for handling, processing, or storing, and to charge against his cotton the prorated costs of such services.

10. The grower agrees to pay as liquidated damages a stated price per pound for all cotton which he sells to outside agencies.

8. COÖPERATIVE MARKETING IN CALIFORNIA BASED ON SOUND BUSINESS PRINCIPLES¹

Coöperative farm associations are not new, nor are they confined to California. They exist in various forms in every state in the Union. In California, however, their activities have been developed to a wider extent and on a more substantial basis than in any other state.

Last year, according to an estimate of the State Market Director's office, farm products worth more than \$250,000,000 were marketed through the coöperative associations of farmers who grew them. Roughly this was about half the total market value of the state's output of farm products. It exceeded by many millions of dollars the value of products in any other state marketed by farm organizations.

The California farm marketing coöperatives are neither altruistic nor revolutionary. They are based on plain, common sense in business.

¹Adapted from an article in the *Monthly Review* (Mercantile Trust Company of California), April, 1922, pp. 3-8.

The principal cause for their progress, perhaps, is that they have sought to prosper by improved business practices rather than by political devices.

Ten years ago, according to the State Market Director's office, there were fewer than six important coöperative farm marketing agencies in the state and today there are nearly fifty principal ones, many of which include dozens of smaller, local units of producers.

The farmers who make up their membership have not attempted to wreck existing institutions and agencies but to utilize them to better ends, and gradually to improve them. They have not attempted to consolidate the voting power of their wide membership for political power to force through class legislation, or to subsidize their own undertakings at the expense of the state as a whole. They have asked no special privilege as farmers.

In California one doesn't hear it argued that the banks should be run by "dirt farmers." Membership in a coöperative is limited to actual growers of the crop about which the organization is formed. But for sales managers, and other employees in the financial departments of the business, experienced business men are hired. And they aren't paid the wages of ordinary field hands. Salaries of managers, who are business specialists and not necessarily farmers, run to \$20,000 and \$30,000, and in one instance as high as \$50,000 a year, according to the Market Director's office.

The California coöperatives are not all cut on the same pattern. They are alike in some respects and different in others. In general, however, each organization is formed about a single farm product. The almond growers have one organization, the walnut growers another. A few are grouped about more than one product, such as the Prune and Apricot Association, or the Peach and Fig Growers' Association.

A WIDE DIFFERENCE IN SELLING METHODS

There is a wide difference in their selling methods. The raisin growers, for instance, after marketing through brokers for years, are now trying out a system by which they maintain their own sales force in the principal marketing districts of the United States and Canada. This force deals directly with the wholesaler and at the same time provides for the retailer a free service of advice and coöperation in display advertising and scientific selling methods. The growers hope by this method to cut down the necessary margin of distribution cost between producer and consumer and to broaden the market for raisins.

Other coöperatives sell through brokers, consign their products to commission houses, or sell through auction companies. Each seeks the method that seems most practical, most economical, and best suited to its particular needs. Changes are made from time to time. Mistakes have been made but the coöperatives seek to profit by experience.

At first they were generally of loose organization, and in times of stress their enemies sometimes succeeded in stampeding part of the members from the fold when a united stand was most needed for the success of the organization. Now the growers are held to the organization by business contracts, carefully drawn by attorneys, and at times enforced by recourse to the courts. The contract system has given the organizations a firmer financial footing and a better credit rating in the business world than the more idealistic, but less practical way of simply taking a man's promise that he would market his crop through the association. Upon good will, fair dealing and confidence, however, they depend more than upon the legal force of the contract.

SUN-MAID RAISIN GROWERS

One of the strongest coöperatives is the Sun-Maid Raisin Growers, with a membership of 13,000, marketing a crop that runs to more than \$50,000,000 a year. It controls about 90 per cent of the state's total raisin acreage. Charges were made that some of the business methods of this organization were contrary to the "anti-trust" law. It was charged that growers were held unwillingly by unfair contracts. When this charge was made the organization voluntarily canceled all contracts and asked the growers to sign new ones with the criticised features eliminated. The result of this action was that more growers than ever before enlisted in the support of the organization.

The president of the Raisin Growers said: "The very life of an organization like this depends on the good will of the community in which it operates. An organization that depends on the contract rather than on the good will of the growers is bound to fail. If the time ever comes when the growers of raisins believe that as an industry we will be better off without an organization than we are with it, the organization must cease to function as a coöperative institution."

Probably no coöperative in California has greater problems to solve than the raisin growers. They estimate from the new acreage of vineyards planted in recent years, that in about six years the state's annual production of raisins will be doubled. And competition

from foreign raisin-producing districts, which fell off in recent years because of the war, now gives promise of renewed growth.

Meeting the Problems of Increased Production

The California raisin growers are meeting these problems not by shouting for radical legislation, or for government subsidies, nor by trying to keep down production by restricting acreage, but by united, constructive effort to build larger markets. Last year they spent more than \$1,250,000 for advertising to widen the markets for their ever-increasing output. Their advertising appropriation for the same purpose this year is \$1,500,000. They have established their own sales agency in London and have appropriated \$100,000 to be spent for advertising in England. They consistently seek by strict systems of grading and inspection to keep their product up to a standard so high that it will be beyond the reach of foreign competition.

They have also adopted new sales methods to market their product. One of these was the introduction of a 5-cent package of raisins as a confection. Thousands of tons of raisins were sold in these 5-cent packages in a few months, and the sales manager of the association has estimated that if a sufficient amount of the varieties used for this trade is available, 60,000 tons of raisins can be sold this year in 5-cent packages. Less than ten years ago 60,000 tons was an average crop for all varieties grown in the state.

Similar methods have been adopted by the walnut growers to make markets for their ever-increasing output. In former days the market for walnuts was a seasonal one around Thanksgiving and Christmas time. Not much of the crop moved at other seasons of the year. Walnuts held over for summer trade sometimes turned rancid. After extensive study and experiments the walnut growers discovered that by shelling the nuts and marketing them in vacuum-packed containers of glass or tin the walnut meats could be kept in perfect condition indefinitely.

In this manner they built up an all-year demand for their crop. They made their walnuts a staple food product instead of a seasonal luxury.

With the California coöperatives reform legislation begins at home. They have made and enforced among themselves strict regulations for the standardization, grading, sanitary packing, honest measuring, and truthful labeling of the products they send to market. You will not find defective or undersized fruit concealed in the box that bears the brand of a California coöperative association. They have used

their influence for state legislation to the same ends. They ask no credit for this as altruists. They simply figure it sound business policy that will pay best in the long run.

THE FRUIT GROWERS EXCHANGE

The Fruit Growers Exchange, with more than 10,000 members in a score of local organizations, was the pioneer of collective farm marketing as developed today in California. It controls the greater part of the orange and lemon crop. It also does collective purchasing for its members. A few days ago it bought for \$3,300,000 a billion feet of standing timber. It operates sawmills and provides packing boxes and other supplies to its members.

The exchange maintains an elaborate market information service. It conducts a research laboratory to develop by-products from the fruit of inferior grades. It carries on scientific campaigns for pest control and for improvement in agricultural practices. To widen the market for its ever-increasing output it maintains a highly specialized advertising and sales promotion force. Most of its fruit is marketed by the auction method.

According to statistics compiled by the exchange the total citrus fruit crop of the state last year brought more than \$83,000,000 to the growers, freight and refrigeration charges amounted to nearly \$45,000,000 more, the retail dealers paid more than \$145,000,000 for the crop and the consumers more than \$203,000,000. Seventy-five per cent of the crop was handled through the Exchange.

The raisin growers, instead of being formed in local units like the orange growers, have individual membership in the one big organization. The Prune and Apricot Growers Association has 11,000 members, and for marketing its product has about 150 brokers stationed in all the important market centers of the United States. It controls 75 per cent of the apricot crop and 83 per cent of the prune crop. It handles only dried fruit.

VOLUME OF BUSINESS

In general, each coöperative organization controls the production and marketing of more than half the crop in the state or in the particular territory of its organization. The Sebastopol Apple Growers Union controls the greater part of the Gravenstein apple business with an annual pack of about 500,000 boxes. This business is all situated in a limited district. The Walnut Growers Association controls the principal part of the walnut crop, and the Almond

Growers Exchange, now being reorganized, had control through its twenty-four local associations of the greater part of the almond crop.

The Poultry Producers of Central California control about 54 per cent of the business in their territory, and the Poultry Producers of Southern California control about 45 per cent of the business there. Producers of dairy products are united as the Associated Dairymen of California, and have marketed more than \$20,000,000 worth of dairy products in a year.

9. COÖPERATIVE MARKETING OF BUTTER AT CENTRAL MARKETS: THE MINNESOTA COÖPERATIVE CREAMERIES ASSOCIATION, INC.¹

The most important recent development in the coöperative creamery movement in Minnesota is the Minnesota Coöperative Creameries

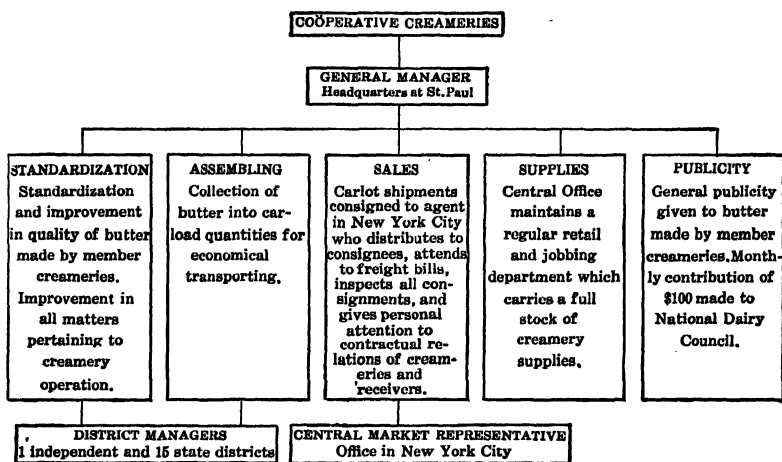


Figure 5

Association, Inc. This is an organization incorporated under the coöperative laws of Minnesota and having authorized capital stock of \$51,000. The stockholders are 375 of the 645 coöperative creameries in the state.

ORGANIZATION FEATURES

This is a non-profit service organization. The net profits of the corporation are prorated among patrons on the basis of the fees contributed to the support of the central organization, after a small

¹ Adapted from H. Bruce Price, *Farmers' Coöperation in Minnesota, 1917-22* (1923), pp. 18-20. (University of Minnesota, Agricultural Experiment Station, Bul. No. 202.)

amount has been set aside as surplus. Its functional organization is shown in Figure 5. The central office is located in St. Paul. From there a manager and assistant manager direct the activities of the organization. A sales agency located in New York City, the chief market for Minnesota creamery butter, gives the only sales service at the present time. The work of this agency is to inspect all butter consigned to it, to audit and check the freight bills, to check the price received against the market quotations, and to give personal attention to the contractual relations of creameries and wholesale butter receivers. It differs from a commission firm in that it sells butter only rarely. The management has encouraged the creameries to establish their own contacts with wholesale buyers and to treat the agency set up by the Minnesota Coöperative Creameries Association, Inc., as the personal representative of the creamery at the central market.

In order to facilitate the assembling and shipping of butter in carload quantities, the state is divided into fifteen districts, each district comprising those creameries that can conveniently coöperate to ship in carload quantities. Each district has a manager who is a specialist in butter production and creamery management. His duties are to assist with the assembling of butter, to maintain friendly relations between the creameries and the central organization, and to advise with the creamery operators in standardizing and improving the quality of butter.

Purchasing Department

The central office maintains a purchasing department through which members may buy creamery supplies and equipment at prices arranged for by the association. These are approximately the prices at which jobbers buy. The manager states that they are from 20 to 30 per cent lower than the prices paid by creameries when purchasing through the regular marketing channel. Dealers in creamery supplies frequently object to handling small orders on these terms, so it is not uncommon for the central office to assemble small orders and to place them with a manufacturer or jobber. As this bulletin goes to press (February, 1923) the manager announces that the association has established a regular retail and jobbing department with a full line of creamery supplies.

This organization has a membership contract with the member creameries whereby they agree to market their products through the central association. This is uncommon among the most important types of coöperative associations in Minnesota.

10. COÖPERATIVE LIVESTOCK MARKETING AT CENTRAL MARKETS¹

MINNESOTA CENTRAL COÖPERATIVE LIVESTOCK SHIPPING ASSOCIATION

This is an association of the coöperative livestock shipping associations in Minnesota. Organized in 1915, its membership has gradually increased with the growth in the coöperative livestock shipping movement until it includes 225 of the 655 livestock shipping associations.

The activities of this association are confined to the general interests of its members. It attends to their transportation problems, such as freight claims, train service, and rates; it has adopted an accounting system adapted to the business practice of its members; it distributes a monthly publication which keeps the coöperative associations informed of the progress of the coöperative movement and the condition of the livestock market; lastly, it looks after legislative matters relating to the livestock industry.

Since the Central Coöperative Livestock Shipping Association is not organized to conduct a business, the demand of its members for a livestock sales agency was satisfied by creating a new organization, the Central Coöperative Livestock Commission Association.

CENTRAL COÖPERATIVE LIVESTOCK COMMISSION ASSOCIATION

This organization of 383 coöperative livestock shipping associations was incorporated in 1921 under the Minnesota coöperative law. It has an authorized capital stock of \$25,000, divided into 1,000 shares of a par value of \$25 each. The stockholders are limited to the directors of the corporation and to the coöperative livestock shipping associations in the South St. Paul market area. Each stockholder has one vote. Net earnings, after not more than 8 per cent per annum is paid on capital stock, are distributed to members and non-members on the basis of commissions paid by them; the dividends of non-members are held in trust until a sufficient amount is accumulated to pay for one share of stock.

The percentage of total receipts handled seems to indicate that from 20 to 25 per cent of the monthly receipts is its present share of the livestock commission business in South St. Paul. Its proportion of the receipts of the market was lower than this during the first few months, partly because the association had just entered the commission business and partly because at this season a larger proportion

¹ Adapted from H. Bruce Price, *op. cit.*, pp. 51-53.

of the livestock receipts originate outside the territory served by livestock shipping associations (Montana, western North and South Dakota, and Canada). This also explains a decline in percentage of total receipts during the summer and fall months of 1922.

An important reason for the success of the Central is the low cost of selling that is made possible by its large volume of business. The average receipts of all commission firms were 1,663 carloads for the year ending August 1, 1922, whereas the receipts of the Central were 12,712. The principal reason for the Central's large volume of business is its relation to the coöperative livestock shipping movement in the Northwest. Being owned and controlled by the livestock shipping associations which market 61.4 per cent of the livestock produced in Minnesota, it has naturally profited by the success of the local movement.

11. NATIONAL LIVESTOCK PRODUCERS' ASSOCIATION¹

The most recent and most important development in coöperative livestock marketing is the organization of the National Livestock Producers' Association and its affiliated commission associations under the auspices of the American Farm Bureau Federation. This movement began in 1920 and reached a climax in a national livestock marketing conference in Chicago on October 8, 1920. This conference recommended the appointment by the American Farm Bureau Federation of a Committee of Fifteen² to develop plans for coöperative marketing of livestock. The Committee of Fifteen plan was approved by a national conference of livestock organizations in Chicago on November 11, 1921. It was based on these chief points:

1. Formation of coöperative commission associations at each of the principal terminal livestock markets, each with subsidiary stocker and feeder companies; these associations to be based both on individual memberships of producers and on memberships of shipping associations.

2. General development of coöperative livestock shipping associations along lines approved by the chief farm organization in each state.

3. Organization of the National Livestock Producers' Association as an overhead supervising agency, charged with the duty of perfecting an orderly flow of livestock to market.

¹ Adapted from Herman Steen, *Coöperative Marketing* (1923), pp. 112-14. (Doubleday, Page and Company.)

² The Committee was headed by C. H. Gustafson of Nebraska, chairman; A. Sykes of Iowa, vice-chairman; Herbert W. Mumford of Illinois, secretary.

During its first year the association was chiefly concerned with the organization of commission associations. The first was the Producers' Livestock Commission Association, which opened January 2, 1922, at East St. Louis. In eight weeks it was leading the forty-five firms on that market, after which it alternated between first and second places all summer and handled 10 per cent of the receipts. The second was the Producers' Commission Association, which opened May 15, 1922, at Indianapolis and by August was leading the twenty firms there and handling 20 per cent of the receipts. The Chicago Producers' Commission Association was christened on June 19, 1922. It was twelfth among the 120 firms on the great Chicago market the first week, and in eight weeks was in second place. Three days after the Chicago opening, the Peoria Producers' Commission Association began receiving livestock and was soon handling 20 per cent of the Peoria receipts. On November 1, 1922, similar associations were opened at the Buffalo and Fort Worth markets, and others are contemplated. All of the six associations stood first on their respective markets early in 1923.

PLAN OF ORGANIZATION

These commission associations are organized according to the uniform plan of the Committee of Fifteen. They are non-stock and non-profit in form. Membership fees of \$50 for each livestock shipping association are required, the fee being proportionately larger for locals shipping more than fifty cars annually. The fee may be paid from profits that accrue to the member, if desired. These fees are returned after a time, as the commission associations need little capital. The affiliation of a shipping association automatically makes each individual farmer a member of the commission association and the national association without additional fees. Any other producer may join by paying \$10. There is no contract, though it is assumed that no shipping association will join unless it expects to consign most or all of its stock to the commission association. The commission associations handle non-members' stock the same as members', except that no patronage dividends can be paid. They operate on the cost basis and plan to prorate all profits annually to members in proportion to shipments made.

The stocker and feeder subsidiary is an important feature of this group of commission associations. Each commission association has a subsidiary which makes purchases of stockers and feeders on order, buying wherever it can to best advantage. In practice it amounts to

the employment of a stocker and feeder man by the commission association, though the stocker and feeder company is separately organized. No commission is charged for this service. Expenses of operation are paid by the commission association. This feature has been violently attacked by the exchange firms on the ground that one agency should not represent both buyer and seller, but it has nevertheless rendered good service.¹

Each commission association has a board of seven or more directors which supervises its activities. The national association has a board of nine to which is added a representative from each terminal association as it is organized. John G. Brown of Indiana is president and F. M. Simpson of Illinois is general manager. General headquarters are in Chicago.

The plan under which the National Livestock Producers' Associations is operating seems to be well adapted to its purpose. Its commission agencies are largely based on shipping associations, thus practically insuring a supply of stock, they are controlled by the members, they have the backing of the American Farm Bureau Federation, they are accumulating substantial surplus funds, and their salesmen are experienced in the ways of the yards. The only weakness that has appeared thus far is the same as in Minnesota—the lack of a contract, which gives the associations no effective weapon to use in striking at the snipers for the exchanges.

12. FINANCING THE GROWERS: A PROBLEM FOR COÖPERATIVE ASSOCIATIONS²

Commercial organizations quite commonly have one feature that is usually lacking in a strictly coöperative organization of growers, and which appeals with great force to growers whose capital is limited. This is the custom of paying the growers in cash upon delivery of the product at the packing house or car, or even advancing money during the season, while the crop is being grown. This latter method is of fully as much advantage to the dealer as to the grower, since it insures him absolute control of the crop. The delay in securing returns through a coöperative organization, and the need of money at harvest time, or even before have kept many growers out of coöperative

¹ It should not be understood that the National Livestock Producers' Association originated the stocker and feeder service. It was successfully used before by the three commission agencies of the Nebraska Farmers' Union and by the Central Coöperative Commission Association.

² Adapted from John William Lloyd, *Coöperative and Other Organized Methods of Marketing California Horticultural Products* (1919), pp. 110-11. (University of Illinois, *Studies in the Social Sciences*, Vol. VIII, No. 1.)

organizations. Some organizations are trying to meet this situation either by incorporating with sufficient paid-up capital stock to enable them to pay the grower a large percentage of his proceeds upon delivery of his product; accumulating a surplus fund from savings in the costs of marketing, to be used in financing the growers who need help; borrowing at the local banks in order to pay the growers a large part of the value of their products upon delivery; or arranging for the growers to make personal loans at the local banks, on the strength of their crop contracts with the organization.

Without some such arrangement as this there will always be growers who will be compelled by force of circumstances to continue to have their products handled by commercial dealers, no matter how fully in sympathy with the principles of coöperative marketing they may be, nor how much they are in need of the additional saving in marketing cost that would accrue to their benefit if they were affiliated with a successful coöperative marketing organization. Sometimes those most in need of the benefits of coöperation are least able to avail themselves of them. Unless coöperative organizations are able to afford as immediate relief in financial stress as are commercial dealers, even though the toll exacted by the latter may be enormous, the growers most in need of assistance must continue to turn for relief not to their fellow growers, but to the independent buyers or commercial corporations. In some localities, the most serious practical defect in the coöperative organizations is their failure to provide for the financial needs of their numbers at or prior to the harvesting of their crops. The ideal plan for overcoming such a situation is the gradual accumulation of a surplus fund that will be available at the beginning of each harvest season for making such advances as the various growers may require. Of course, this method would be possible only after an organization had become established, and had been operating a sufficient length of time to have accumulated a surplus of reserve funds. A new organization, if it wished to make cash advances, would be obliged to elicit the coöperation of its local bank; and unless a local coöperative association of growers has the moral and financial support of the bank in the locality, its chances of success are greatly impaired. It is not ordinarily feasible to secure from the growers themselves, on any equitable basis, sufficient paid-up capital, at the beginning of the organization, to pay for any considerable portion of the products as delivered; so that, even with a fairly large capital stock, if the policy of payment on delivery is adopted, resort to the bank for loans must be made.

13. WHY SOME COÖPERATIVES HAVE FAILED¹

Data relative to 243 farmers' buying and selling associations which have ceased to function since 1913, have been compiled by the United States Department of Agriculture. Reasons for failure were stated by 234 of these associations, several giving more than one cause. These reasons may be grouped under six main headings, as follows:

Cause of Failure	Number of Ass'ns	Percentage of Ass'ns. Reporting
Insufficient business	200	85.4
Inefficient management	148	63.2
Insufficient capital	73	31.1
Too liberal extension of credit	35	14.9
Dishonest management	29	12.3
Capital stock in hands of too few	12	5.1

14. REASONS FOR FAILURES AMONG LOCAL COÖPERATIVE POTATO MARKETING ASSOCIATIONS²

1. *Speculation.*—This means holding potatoes for a better price which never comes. This, of course, is usually associated with buying for cash. There have been several years when this procedure has been especially a cause of failure, notably 1917 and 1918. In years like these, an association can easily lose a few thousand dollars.

2. *Not enough reserve.*—This mistake is closely related to speculation and buying for cash as a cause of failure. Whatever methods are followed, there are risks enough involved in handling potatoes that a good margin should always be saved out of the gains of prosperous years. And if an association persists in buying for cash and playing the market, the reserves must be trebly large.

This, of course, is a common cause of failure for all coöperative organizations. The directors want to make as large a showing as possible, and hence pay out nearly their last cent as dividends or pool settlements. It is a shortsighted policy. When luck breaks the other way, they get far more discredit for poor management than they got credit for good management during the prosperous years. The desire for approval in the present weighs more heavily in most minds than the fear of disapproval in the future.

3. *Not enough capital.*—A number of associations have begun operating with too little capital paid in and have never caught up.

¹ Adapted from *Agricultural Coöperation*, Jan. 15, 1923, Vol. I, No. 2, p. 5. (Published by U. S. Department of Agriculture, Bureau of Agricultural Economics.)

² Adapted from J. D. Black, *Local Coöperative Potato Marketing in Minnesota* (1921), pp. 69-71. (University of Minnesota, Agricultural Experiment Station, Bul. No. 195.)

As a result, they have always had to restrict their operations and take no chances whatever. This has made it impossible for them to accumulate any reserves.

4. *Poor business organization.*—Many associations have a poor balance between volume of business and investment and expenses. Coöperative organizations are frequently careless in this particular. They are inclined to be too optimistic, to figure on more business and more prosperity than is reasonable. Perhaps every farmer in the community ought presently to bring his business to the association, perhaps the members ought to plant more acres of potatoes, and perhaps the members ought all to be very loyal; but actually things seldom work out this way. The result is that an association is left at the end of the year with heavy overhead and operating expenses and only a fair volume of business. This means that the margins taken on the farmer's business are likely to be larger than those taken by competing private buyers.

Occasionally, of course, the mistake is the other way; the association may need only to increase its investment in order to expand its business to more profitable proportions.

Many associations have had poor success not because of too much investment, but merely because they have had too small a volume of business. But this alone will not put them out of business unless they have rivals with a larger volume of business.

5. *Poor records and accounts.*—No coöperative managers in the past have kept such poor records as the managers of potato-shipping associations. In the aggregate, it is probably the largest reason for their failures. It has frequently been hard to distinguish between poor records and dishonesty. Several managers, probably entirely honest, have lost their reputations because of carelessness in keeping records.

6. *Taking on side lines.*—A number of associations have expanded their business in side lines until they have virtually become stores with potatoes as a side line. In a few cases, the association has lost heavily as a result. The old management was not capable of handling the new lines of business; business practices were not properly adjusted to meet the new conditions; and the system of records and accounts was not made over so as to show profits and losses by departments.

7. *Losses in shipment and storage.*—New associations in the northern cut-over counties have frequently suffered losses, severe for them, because of not knowing how to care for potatoes in storage, or to

prepare them for shipment. They have been especially careless about shipping frost-bitten potatoes.

Most associations that have stored for growers claim it was a mistake, the reasons given being: increased overhead cost due to low turnover of space; interference with handling regular business; risk too great, owing to shrinkage, decay, dirt, etc. Shrinkage, due mostly to decay, has been reported as high as 20 per cent. Even where the growers have borne the loss due to shrinkage and decay, the managers claim they have lost by storing because they have not enough bin room to keep the different varieties and grades separate.

8. *Mistakes in selling.*—Inexperienced managers of new associations have lost money on many of their sales or consignments. Selling a carload of potatoes is always something of an experiment; and it is especially so for new associations, or associations seeking out new markets.

9. *Unfair competition.*—A few associations claim that they were put out of business by unfair competition, their rivals using such old-fashioned devices as sending low-grade potatoes to the farmers' warehouse, making a few purchases at a high price in order to start the wagons rolling in their direction, making a few high bids to influential members to draw them away from the association, running up prices at stations where farmers have opened warehouses and making up the deficit at non-competing points.

10. *Promoters.*—Promoters of various sorts have taken advantage of the dissatisfaction among the farmers and in several communities have induced them to raise money and build and equip warehouses. Some of these enterprises have been sound, but others have not. One proved to be an outright swindle. In winding up its affairs, the farmers who took shares lost the entire amount subscribed. In another case a promoter organized a line of warehouse associations in which the farmers, although financing the warehouses, had no voice in their management. The money lost and the lawsuits started as a result of these schemes are a small part of the harm done. The loss of confidence in coöperation on the part of the farmers is much more serious.

11. *All-round poor management.*—The marketing of potatoes successfully calls for greater business ability than the marketing of wheat, because potatoes are perishable and difficult to grade closely, because the price fluctuates greatly, and because the prices must be watched in many markets instead of in a few as in the case of wheat. In the past, however, potato-marketing associations have had poorer mana-

gers than almost any other kind of coöperative organization. Managers have been changed frequently. One association had four different managers in four years, and another the same number in six years. In many cases not enough salary has been offered to attract a first-class manager. But even an inexperienced manager becomes more valuable if retained from year to year, provided he is otherwise qualified for the position. One association increased its volume of business nearly seven times from one season to the other, largely by replacing an incompetent manager by one who understood the business and knew how to get along with farmers as well as business men.

15. NINE TIMES AS MUCH COÖPERATIVE SELLING AS COÖPERATIVE BUYING¹

Collective buying is done by many farmers' marketing associations. Some associations conduct lumber yards, fuel yards, warehouses or stores, while other associations merely assemble orders for the purchase in car lots of fertilizers, seeds, spraying material, containers, and other supplies. In the course of a year coöperative purchasing amounts to many millions of dollars, yet it is but a small item compared with collective selling. According to information compiled by the Fourteenth Census, 624,527 farms reported coöperative selling or buying in 1919. The total amount of the sales and purchases was \$806,599,308. Of this amount \$721,983,369, or 89.5 per cent, represented sales and 10.5 per cent represented purchases.

Data collected by the Bureau of Agricultural Economics, U. S. Department of Agriculture, in 1921 from 4,133 farmers' business organizations in the twelve North Central states indicate the varieties of commodities purchased by the different types of associations. Over 40 per cent of the 4,133 associations purchased feeds of various kinds, more than 34 per cent purchased fuel, and 24 per cent purchased containers, including binder twine. The twelve states in the North Central group are: Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska and Kansas.

The number of associations purchasing the various lines of commodities and the percentage which each number is of the total number of associations, is given in Table 14.

¹Adapted from *Agricultural Coöperation*, April 9, 1923, p. 4. (Published by U. S. Department of Agriculture, Bureau of Agricultural Economics.)

TABLE 14.—NUMBER AND KIND OF ASSOCIATIONS PURCHASING DIFFERENT LINES OF COMMODITIES, 1921

Commodities Purchased	Dairy	Fruit and Vegetable	Grain	Livestock	Poultry Products	Wool Mohair	Miscellaneous	Total Reporting	Per Cent Reporting
Feeds.....	68	48	1,114	244	3	6	182	1,665	40.28
Fuel.....	84	6	1,169	79	0	3	83	1,424	34.45
Containers....	152	55	575	117	0	9	88	996	24.09
Seeds.....	32	25	374	89	1	1	84	606	14.66
Fencing.....	60	8	308	157	2	3	52	590	14.27
Implements and Machinery ..	100	13	324	71	1	1	53	563	13.62
Spray Material.	124	55	170	96	0	0	55	500	12.69
Fertilizers.....	79	23	240	85	0	4	63	494	11.95
Building Material	12	5	316	73	2	3	32	443	10.71
Hardware.....	99	6	130	130	2	3	41	411	9.94
General Merchandise....	4	3	49	7	0	0	18	81	1.95
Miscellaneous*.	144	36	314	58	1	0	112	665	16.09

* Associations failing to report commodities purchased.

It will be noted that the grain associations purchased largely fuel and feeds; the livestock shipping associations, feeds, fencing, and hardware; and the dairy associations, containers, machinery and spraying materials.

16. THE EXTENT OF CONSUMERS' COÖPERATION IN ENGLAND¹

We append two tables showing for each year from 1883 to 1919² the number of societies known to exist, with their aggregate membership, share and loan capital, and sales.³

We must examine more closely the distribution of this membership of more than four millions, which is still rapidly growing. The societies differ greatly in size and character. There is first the village store. More than half the societies have fewer than a thousand

¹ Adapted from Sidney and Beatrice Webb, *The Consumers' Coöperative Movement* (1921), pp. 17-18. (Longmans, Green and Company.)

² The second table has been prepared from the annual reports of the Coöperative Union since 1901. The table of figures for the earlier years, which do not exactly correspond with those for the later years (owing chiefly to the different dates up to which belated returns are included), is taken from *Industrial Coöperation*, by Catherine Webb (1904), p. 244.

³ Only seven of the years are included here.—EDITOR.

members each, and three-fourths of them have fewer than two thousand. If we extend our conception so as to include the stores in the smaller towns, we note that at the end of 1919 all but one of the 43 Irish societies making returns, all but 29 of the 257 Scottish societies,

Year	No. of Societies Making Returns	No. of Members in Societies Making Returns	CAPITAL		Amount of Sales
			Share	Loan	
			£	£	£
1883	1051	627,625	6,398,744	736,605	18,540,004
1890	1240	961,616	10,310,743	1,132,585	26,887,638
1900	1439	1,707,011	20,566,287	3,019,998	50,053,567

Year	Number	Membership	Share Capital	Loan Capital	Sales
			£	£	£
1905	1457	2,153,185	26,077,174	4,170,020	61,086,991
1910	1428	2,542,532	31,614,559	4,851,753	71,861,383
1915	1375	3,265,011	43,141,970	5,706,626	102,557,779
1919	1357	4,131,477	65,644,968	8,766,338	198,930,437

all but 7 of the 70 Welsh societies, and all but 156 of the 977 English societies—together 1154 out of 1352—had a membership of between a few dozen and five thousand. But these five-sixths of all the societies included among them little more than half the aggregate membership, whilst the 198 larger societies, from 5,000 to 100,000 in membership, themselves accounted for nearly as many as the 1154 smaller ones.

17. AN APPRAISAL OF COÖPERATIVE STORES¹

In the very nature of the two processes there is abundant explanation why coöperative selling has been more successful in the United States than coöperative buying. In the first place, if coöperative selling is restricted to a single group of products, it requires less intelligence in management and less confidence in the management on the part of the coöperators. Then, too, the management really follows well-established channels of sale, depending for its extra returns on higher standardizing of goods, lessening of risks, control of volume, etc. If it can cut through some of the former marketing process, so much the better, but just normal honesty and intelligence will make

¹ Adapted from W. D. Moriarty, *The Economics of Marketing and Advertising* (1923), pp. 530-40. (Harper & Brothers.)

coöperative selling reasonably efficient if there is enough demand for it to furnish the association with enough volume to get large-scale production efficiency.

Because the process is so simple, comparatively, the patron of coöperative selling has little reason for lack of confidence. In the primary form of coöperative selling the goods are his until they are sold, and he not only gets his money as soon as they are sold, but can borrow money on them as soon as they have left his hands. More ambitious selling coöperatives, especially those which attempt to manipulate the market, are apt to hold back a part of the selling price and sometimes insist on direct ownership of all products, borrowing money on them and advancing money to the producers before the goods are sold. Unless the management goes extensively into something beyond the selling process, however, such as canneries or condenseries, the selling process is reasonably simple. On the other hand, there are very many grounds for lack of confidence in coöperative buying, especially in those forms which include a store with a stock of goods constantly on hand. In the first place, almost every one knows that most of these stores fail, and that they often pass into the hands of private persons by some process which insures that most of the stockholders lose all they have put into the store. Sometimes the store goes through bankruptcy proceedings, and sometimes the fear of bankruptcy is used to make the stockholders sell their stock far below par or even sign it over for nothing. Indeed, so common is this process that almost any man with just a fair knowledge of merchandising and enough unscrupulousness can start a coöperative store, freeze out the stockholders, and have the store in his own name in less than three years.

This dishonesty on the part of advocates and managers of coöperative stores is a serious handicap to their success, for the mere fact that many stores fail through the incompetence of their management is a serious enough handicap on the confidence of stockholders without adding the burden of widely practiced dishonesty. Moreover, the average stockholder knows nothing about depreciation in the store, and unless the inventory is taken by outside parties the manager has his board completely at his mercy. Sooner or later coöperative stores will recognize that their only protection against such practices is to hire a reputable firm of public accountants to make a yearly survey for incompetence and graft. Indeed, for the protection of the public against swindlers of this type such a yearly scrutiny should be required by law, and specific penalties provided for any infringement on the rights of stockholders.

ADVANTAGES OF THE COÖPERATIVE STORE

Many stores which are advertised as coöperative are not really coöperative in the sense of either buying or selling. They are really single proprietorship, company, or corporation concerns doing business under the name coöperative because of a widespread popular belief that prices are cheaper in such establishments, and because some people as a matter of principle patronize anything called coöperative. In this chapter it will be assumed, however, that when we speak of coöperative stores we have in mind the store owned by a group and used to buy things primarily for their own consumption.

In this country such stores are established very largely as an emotional reaction against real or supposed high profits of the retailer, and one of their handicaps is that in starting the store such wild claims are made against the retailer that the stockholders expect advantages which are sheerly impossible. In view of their disadvantages, however, such stores must have some advantages or they could not hold out even as well as they do against the competition of more efficiently managed private enterprise. Let us consider their advantages as to credit, delivery, advertising, regular volume, simpler stock, and margin of profit.

It is the general policy of coöperative stores not to attempt to undersell other stores, but to promise to return the savings through coöperation by means of dividends. This is an advantage to the stockholders, since only stockholders get returns, and thus if the store is successful they add to the savings on their own purchases a profit on the purchases of all patrons of the store who do not own stock. As to credit and delivery, these savings of the coöperative store are the same as those of cash stores which do not deliver goods. It costs money to extend credit, not only to cover interest and losses, but for bookkeeping expenses, and of course delivery is an evident cost. If, therefore, delivery cost averaged even 1 per cent of the sale price and bookkeeping, and bad debts only one half of 1 per cent, the grocery which had ten turnovers a year (and it is a poorly managed grocery indeed which does not) would have 15 per cent for yearly dividends from this source alone.

As to advertising, the stockholders of such a store should be able, as a matter of personal interest, to give it advertising superior to anything which could be bought. Every non-stockholder brought in is a source of gain to the stockholders, and every stockholder added who brings his trade increases the volume of the business. This steady

volume, assured as long as the stockholders really buy steadily from their store instead of shopping around, is in itself a great source of advantage over the competitive store, which must fight to maintain and increase its volume; and to this in a well-managed coöperative store is added the fact that stockholders try to come in at hours when the clerks are usually unemployed, thus lessening clerk hire.

Finally, it is a great advantage that a very moderate dividend will normally satisfy the stockholder after his first period of great expectations has passed by. No business man can afford to remain in business for 6 per cent a year, as this is no more than he could get on good mortgages, but a 6 per cent dividend is higher than the rate in the savings bank, and stockholders are not apt to make trouble so long as they get that much. In fact, for the first year or two they are usually content if no dividends are declared, if the management assures them it is building up surplus. If, therefore, the coöperative store is not so much more inefficient than the private store that it pays no dividends at all, it is normally regarded as successful.

These are the normal advantages of the individual coöperative store, though others may be added by efficient management and the coöperation of the stockholders. If only two brands of tomatoes need be carried, it gives the store an advantage over stores which must carry three or four brands. If customers can be trained and trusted to help themselves, this also is an advantage; and it is a double advantage if a few of the better-posted members will help out whenever they are in the store and there is a rush of outside customers. In any evaluation of the coöperative store, moreover, it should be frankly admitted that there may be social advantages gained through the spirit of coöperation developed which may be much more important than the actual gains through dividends.

DISADVANTAGES OF THE INDIVIDUAL COÖPERATIVE STORE

The greatest sources of profit of the individual coöperative store are the services it does not supply while charging the same price as the stores which do supply those services. It has, of course, in addition to this, the rate of profit which would come to such a store under equally efficient private management. Management is, however, as crucial a matter in merchandising as in manufacturing, and the paid manager who holds his position by practical politics with stockholders and a board of directors, and whose gains are measured by salary raises, not by actual efficiency as made evident in real profits, will not in the very nature of human motivation be as efficient as the private

entrepreneur. This is indeed the great weakness of the coöperative movement in America; the men of marked ability feel that private enterprise offers them larger returns and coöperative movements secure the services chiefly of second-rate men. Only when whole communities go together in a big coöperative store is the efficient management of the larger private stores possible.

Other causes for the failure of individual coöperative stores (for most of them do fail) are the lack of guidance by jobbers' salesmen, the lack of loyalty of the stockholders, the constant shifts of population, and the fact that coöperative movements carry with them, as a rule, a theory of wages which results in paying the clerks more than they are worth, and does not result in supervision which secures efficient service. In times of rising prices these handicaps may be overcome by the extra source of profit resulting from a cash business with no delivery expense, and by the profit which comes from goods rising in value after they have been purchased and before they are sold. In times of falling prices, however, when the competition of private stores forces the coöperative stores to sell accumulated stock at a smaller margin of profit, the normal handicaps of the individual coöperative stores prove too much, and bankruptcy or private ownership is the normal result. Practically all individual coöperative stores in this country break down from inefficient management, the average life of the so-called successful stores being not over five years and probably much less.

COÖPERATIVE BUYING AS LARGE-SCALE PRODUCTION

In the formation of coöperative associations many misconceptions as to large-scale buying become evident. When a hundred people go together to establish a store they are not engaged in large-scale buying; in fact, they may be in much smaller scale buying than the average competing store. If twenty stores do their buying together, however, this changes matters entirely. Many private stores have coöperative buying associations, especially in such fields as drug stores, where the quantity discounts are great, and by joining such associations the individual store can get the large-quantity discount without buying more than it needs.

Coöperative Chain Stores

Chain stores under private management have the advantages of large-scale buying, and this is so considerable that it is a natural additional remedy for the handicaps of the individual coöperative

store. Most advocates of the coöperative local store will admit that it has no chance to succeed without identifying itself with a chain of coöperative stores as a means of getting the advantages of large-scale buying. As a rule the buying is done by a coöperative wholesale house, in theory owned by the individual stores and supplying to them the expert guidance which the jobber's salesman gives the privately owned store. In fact, it is the wholesale house which is the key to success of coöperative stores, for a wholesale house can really afford to hire men with brains, and these men usually come to their task with a pretty clear understanding of the reasons which have wrecked many coöperative enterprises.

If, then, the wholesale house can create efficiency in the local stores, there is hope for the coöperative situation but far less stress should be placed on savings from large-scale buying. The margin of net profit of the wholesaler is not large, and by the time the coöperative wholesaler has furnished to the individual stores the services of the ordinary wholesaler to the retailer, sales guidance, credit, steady supply, etc., there is little left to go to individual stores as dividends from the wholesaler profits. In fact, *it would be much better for the coöperative situations if the wholesale house devoted all such surplus to furnishing more guidance to the individual stores, sales guidance, stock-keeping guidance, and accounting guidance with reference to depreciation, cost of selling, etc.*

In short, the real advantages to the individual which he secures through even the Rochdale system of coöperative stores are not primarily the advantages which come to him "through saving two profits—the profits of the retailer and the profits of the wholesaler." These are the things which persuade people to take stock in coöperative stores, but such profits are generally swallowed up in the necessarily less efficient management of the local stores. The real savings (and it would be better for coöperative effort if this were to be acknowledged) come from the coöperators performing service which private enterprise must pay for—credit, advertising, delivery, simplification of stock, carefully estimated needs, etc.

COÖPERATIVE BUYING AND DIRECT DISTRIBUTION

The coöperative wholesale stores and the coöperative retail stores have, with the exceptions noted, the same items of expense as other stores; in fact, only exceptional efficiency can keep these items from running higher than in private enterprise. There is, however, one form of coöperative buying which needs little more intelligence than

coöperative selling—the buying together in carload lots and distributing direct from the car. In communities in which the merchants are wide awake to their opportunities this form of distribution is often made use of by the merchants themselves, especially in perishable goods; but very often the hope of larger savings will induce people to join for coöperative buying of this type when they would not buy in such large quantities from their local merchant.

The saving secured by this method is the difference between what the buyers would pay to their local merchants and what they do pay by the carload coöperative buying. Much of this same saving might have been achieved by inducing some local merchant to order by the car and offer special prices to those who took direct from the car on arrival, but if merchant and customer cannot get together, or if the merchant will not give a cut in price at least corresponding to drayage, storage, clerk hire, etc., the saving should be appreciable. In communities in which the local merchants can build up the carload-lot and car-delivery system the competition for this business and the market connections of merchants will give coöperative buying close competition on actual delivery price.

In a community with wholesale houses twenty or thirty people can generally get together and by combining their future needs for some considerable period make marked savings on normal retail prices. In such cases they have applied the principle of large-scale buying, but their chief gain is in avoiding the storage and clerk hire of the local store. They could often gain as much, *and with less trouble*, if they made out their lists and gave them to some local grocer, paying him spot cash as they would the wholesaler, and allowing him to deliver direct to their houses. In other words, the important part of this type of buying is not in assuming the retailer's risk, for which the retailer gets net profit, but in large-lot delivery and in avoiding the retailer's sales and storage expense.

COÖPERATIVE BUYING AS A TEST OF MIDDLEMAN EFFICIENCY

Every coöperative store that fails at least suggests that that store was less efficiently managed than the private store that withstood its competition and did not fail. It is not conclusive proof, as the other store may have had more capital or may have secured more credit, but the real economic test is success or failure under competition. In view of the number of coöperative efforts that establish stores only to fail, this is fairly conclusive evidence that our marketing system is not as inefficient or wasteful as many would have us believe.

On the other hand, it would not prove that our marketing system was perfect even if no chain coöperative store system could withstand its competition. Our present order is doubtless incomparably more efficient in production than any possible socialistic order, but that does not prove that it is not in many respects so wasteful that the Government should interfere with its wastefulness. In that phase of production which we call marketing, therefore, the assumption is that the process can be greatly improved—improved by better methods of sorting and grading, storing and shelving, credit and delivery, risk and depreciation. For this improvement coöperative efforts are just one of the stimulating forces, not as great as private competition or adequate Government investigation, perhaps, but a real stimulation of not inconsiderable importance. But as a probable successor to our present system or as at all likely to dominate in the field of retail merchandising, the coöperative store as a method of coöperative buying, even when organized by the Rochdale system, has no chance whatever, at least until an entire change takes place in the temper and buying habits of the people of the United States.

flourishing cities backed up by a prosperous farming country. MERCHANTS were necessary to give service to these communities. Could thousands of manufacturers with individual lines, working direct, make these MERCHANTS? The thought is absurd and preposterous. Jobbing centers have grown up in every part of the country. These centers are located geographically in such a manner as to best serve and distribute the goods in their local territories. These jobbers and their salesmen have served in finding and putting the small retail merchant in business. They have found him locations and the salesman in the majority of cases has selected the assortment of goods for this merchant and the merchant has learned his business while doing it. The commercial reports show that the great majority of these small merchants have prospered. To every man the sweetest thing in the world is independence. Every right-thinking clerk looks forward to the time when he will own his own business. The jobber of the country has served in helping these men with moderate capital get a start. How could the manufacturer have rendered such a tremendous service to the country? The United States could not have been developed as it has developed without this service of jobbing distribution.

It is a very human mistake to think in terms of concrete instances. We hear of this or of that concern cutting out the jobber and selling direct successfully. Without analyzing the circumstances we jump to the conclusion that it is better to sell direct, or that it won't be long before there won't be any jobbers. Goods will be distributed by chain stores, etc. Your investigators found several instances of where this reasoning had proved disastrous to a small but growing business. Before cutting adrift from the jobber get the facts and all the facts. You will very likely find that the jobber is not to be thrown aside lightly. Take the drug field as an example. See what the figures reveal:

The number of retail drug stores in the United States is 49,000.

There is one retail drug store to every 2,048 of the population.

Forty-four and a half per cent of these stores are rated at \$2,000 or less.

Of these 44½ per cent, 92 per cent are without rating in the commercial agencies.

Twenty-three and a half per cent are rated at \$2,000 to \$5,000.

Of these 23½ per cent, 67 per cent are without rating in the commercial agencies.

Seventeen per cent are rated over \$5,000 and less than \$10,000.

Eight per cent are rated at \$20,000 and over.

Thirty years ago the number of drug items on the market was 2,699.

The number of drug items now on the market is 45,900.

The patent medicine business of the average wholesale druggist is 54 per cent of their total sales.

Of these 54 per cent, 75 per cent are distributed in lots of $\frac{1}{4}$ dozen or less.

Of these 54 per cent, 12 per cent are distributed only in lots of 1 dozen or more.

Figures like these are now available, or can be secured, for nearly every line. They should be used in basing any contemplated action in preference to snap judgment.

Accepting, with reservations, the foregoing facts, it is clear that the best answer to the question of selling direct or through dealers lies between the two extremes. In other words, the most profitable course to follow is to utilize the vast jobbing organizations with their thousands of salesmen and facilities for reaching every cross-roads dealer, but at the same time put an anchor to windward in the form of a specialty organization, which will develop business for the jobber, or employ national advertising, or both. These last-mentioned auxiliary plans need not be added selling cost, for in many instances it has been found that the increased volume more than offsets the outlay.

Some concerns have even made the jobber stand a part of this creative selling expense by shading his discounts. Investigation shows that the average discount to jobbers when the line is nationally advertised is from 2 to 5 per cent lower than when the jobber must shoulder the promotion burden. The usual jobber's profit we find approximates 10 per cent in three out of five lines investigated. Of late there has been a tendency to increase this discount to 10 and 5—the extra five going for extra sales effort. Whether the extra commission is earned, however, seems to be a debated question.

Other concerns are meeting this issue by taking the additional discount and putting it into the maintenance of branch offices or residential salesmen in the strategic jobbing centers, whose duty it is to keep in personal touch with jobbers and use their influence to interest the jobber in pushing the company's line.

It is not surprising that the same tendency which is urging the manufacturer to do his own jobbing, is impelling the jobber to do his own manufacturing. Jobbing organizations are also exhibiting a marked tendency to conduct a nation-wide, rather than a semi-local business. Marshall Field & Co. are now operating on a national scale, and are steadily adding to their list of manufacturing establishments. The same is true of Butler Brothers, and Austin Nichols & Co. in the grocery field. Jobbers sense a tendency of the manufacturers to start out independently to protect their future output, and are meeting the challenge by doing their own manufacturing in so far as

practical. These tendencies are in marked contrast to the orthodox belief among jobbers that their function was purely that of a distributor. Carried to extremes this development would indicate that the functions of the jobber and the manufacturer are gradually merging, and that in time one organization will do both the producing and the distributing. There are, however, powerful influences at work against this development.

3. THE PACKERS USE WHOLESALE MIDDLEMEN¹

Historically, wholesale, commission, and brokerage houses were the agencies first employed to sell the products of the packing house when the process of centralization and shipment under refrigeration began to lengthen the radius of the market for such products. For the small packers and other manufacturers of foods they are still the main outlets to market; and, notwithstanding the elaborate system of distribution built up by each of the big packers, they, themselves, also continue to make extensive use of them.

While no extended study of sales through these channels has been made, a few details will illustrate their use. Armour & Co. reports consignment sales in 1916 amounting to \$15,498,494, of which \$9,716,736 represented edible products. A list of the company's consignees as far as ascertained is 22 in number. The list for Swift & Co. in 1918 shows 17 regular consignees, and Morris & Co. reports 7 such consignees in addition to those bearing the name of the company.

The packers also make use of the brokerage houses, though no information is available to show how extensive it is. The correspondence of Armour & Co. shows that in such dealings they expect and sometimes receive preferential treatment.

¹Adapted from Federal Trade Commission, *Report on Meat-Packing Industry*, Pt. IV, *The Five Larger Packers in Produce and Grocery Foods* (1919), p. 41.

CHAPTER XV

PHYSICAL DISTRIBUTION

1. HOW TRANSPORTATION RATES AFFECT THE MARKETING OF VARIOUS PRODUCTS

a. LUMBER¹

Railroad transportation is a major factor in the price the consumer pays for lumber. The country's annual freight on lumber is close to \$170,000,000 with a tonnage exceeding all other classes of freight except general manufactures and the products of mines.

The lumber rate fabric is a patchwork built up largely upon the principle of what the traffic will bear. The many thousand freight tariffs represent in most instances general commodity rates with practically no scientific classification based on the different kinds or values of lumber. Although there may be a difference of \$40 or \$50 per thousand feet in value, high-grade lumber usually takes the same rates as low-grade stock. This tends to waste low-grade material, but on the other hand facilitates refined manufacture at the source and promotes economy in distribution by mixed carloads.

Wholesale lumber prices are determined in large part by freight rates to the points of delivery, which are based entirely on weight. The freight borne by softwood lumber marketed in the Middle West lies between 25 and 30 per cent of the delivered wholesale price and between 20 and 25 per cent of the average retail price.

b. STEEL, CLAY, FACE BRICK, YELLOW PINE²

A. The cost of moving a car of steel of 30 tons at \$7 per ton from Pittsburgh to Philadelphia is \$210. At \$45 per ton the value of the steel transported is \$1,350. The transportation charges are 15½ per cent of the delivered price.

B. The cost of transporting a car of clay building tile of 30 tons, at \$5.20 a ton, from Canton, Ohio, to Philadelphia, Pa., an even 100 miles greater distance, is \$156. The value of the commodity

¹Adapted from Ovid M. Butler, *The Distribution of Softwood Lumber in the Middle West: Wholesale Distribution* (1918), pp. 7, 42. (U. S. Department of Agriculture, Report No. 115. *Studies of the Lumber Industry*, Pt. VIII.)

²Adapted from Joint Commission of Agricultural Inquiry, *Report*, Pt. III, *Transportation* (1921), p. 204.

transported at the average price prevailing today of \$5.40 per ton is \$162, the freight charges representing 49 per cent of the delivered price.

C. The cost of moving a car of face brick of 33 tons (11,000 brick) at a freight rate of \$4.30 from Kittanning, Pa., to Philadelphia, mileage practically the same as from Pittsburgh, is \$141.90. The value of the commodity transported at the prevailing average price of \$35 per thousand is \$385, and the transportation charges are, therefore, 32 per cent of the delivered price, equivalent to \$12.90 a thousand brick.

D. The cost of moving a car of yellow-pine lumber of 20,000 feet, approximately 25 tons, from the Mississippi yellow-pine center to Pittsburgh at 52½ cents per hundredweight, or \$10.50 a ton, is \$262.50. The value of the lumber at an average price of \$45 per thousand is \$900, so that the transportation cost represents 22½ per cent of the delivered price of the lumber.

c. BOOTS, SHOES, DRY GOODS¹

Higher freight rates are not infrequently urged as an excuse for increases in prices without justification. While freight rates are often a considerable factor in the cost of distribution of low-priced, heavy-tonnage commodities, and may restrict the radius of distribution thereof and sometimes even prevent shipment altogether, as a rule freight rates have not kept pace with increases in prices of such articles as dry goods, boots, shoes, and other highly fabricated articles usually purchased in less-than-carload quantities and do not restrict or diminish the movement of such commodities.

Men's shoes, packed 24 pair in a case, have a shipping weight of 79 pounds to the case. They are now transported from Lynn, Mass., to Chicago at a rate of \$1.57½ per hundred, which amounts to \$1.24 per case, or 5½ cents per pair. Children's shoes, packed 72 pairs to a case, weighing 107 pounds, are transported today from Lynn, Mass., to Lincoln, Nebr., at a rate of \$2.85½ per hundred, or \$3.05 per case, which is 4½ cents per pair. A similar shipment from St. Louis, Mo., to Lincoln, carries a charge of 3½ cents per pair.

The amount of freight in the average purchase of dry goods is so small that it is difficult to show it. The purchase of dry goods or cotton piece goods by the average housewife is in a quantity weighing but a few pounds, and with freight rates running in many cases less than \$1 per hundred on these commodities, it will be readily seen that the freight ingredient is a negligible quantity.

¹ Joint Commission of Agricultural Inquiry, *op. cit.*, pp. 204-206.

d. BUTTER¹

Since many of the Wisconsin creameries are located in the country, several miles from a railway station, it follows that the first charge for transporting butter is from the creamery to the railroad. No attempt has been made to arrive at the average distance of this haul. It varies from six or eight miles for the country creamery down to as many blocks for the creamery in town. From many country creameries the hauling is done by the farmers themselves, each patron taking his turn in proportion to the amount of his product. Nevertheless, the cost of haul is an appreciable item. For example, a charge of \$3.00 for hauling 3,000 pounds a distance of five miles is moderate. This means a tenth of a cent a pound.

The railway charges are easily obtained. The cost, in carload lots, from Wisconsin points to Chicago range from about a quarter to a half cent. In less-than-car lots from about .3 to .6 cents. To New York City or Boston the cost is 68.3 cents a hundred pounds regardless of the size of the shipment. Thus the cost of shipping from Wisconsin creameries to the Atlantic Seaboard is from 1 to 1.28 cents per pound. To New Orleans it is from 1 $\frac{1}{3}$ to 1.7 cents. Drayage is a small item and is included with the middleman charges at the wholesale receiving points.

e. EFFECT OF INCREASES IN RAIL RATES ON TONNAGE OF PETROLEUM HANDLED BY THE RAILROADS²

The effect of the large increases in freight rates upon the tonnage of petroleum and its products handled by the railroads has been very marked. During the first nine months of 1921 the railroads handled 26.2 per cent less crude oil than in the corresponding period of 1920, although the crude oil run by refineries increased 5 per cent in the same period of 1921 over 1920. The loss of tonnage of refined products was 8.5 per cent, although the output of the refineries was relatively the same. In the aggregate, taking crude oil and refined products together, the loss of tonnage to the railroads amounted to 104,109 carloads in the first nine months of 1921, as compared with the same period of 1920. The fact that there was no corresponding decrease in consumption indicates that the increased transportation costs forced petroleum into other channels of transportation and

¹Adapted from B. H. Hibbard and Asher Hobson, *The Marketing of Wisconsin Butter* (1916), pp. 33, 35. (Agriculture Experiment Station of the University of Wisconsin in coöperation with Office of Markets, U. S. Department of Agriculture, Bul. No. 270.)

²Adapted from Joint Commission of Agricultural Inquiry, *op. cit.*, p. 200.

placed a serious competitive handicap upon those refineries which are dependent upon the railroads for an outlet to the large consuming markets.

In this connection it is significant to note that the movement by railroads of refined petroleum products during the first nine months of 1921 was but 40.6 per cent of the output of refineries in that period.

The present high level of freight rates on petroleum and its products restricts the distribution of the product of refineries wholly dependent upon rail transportation and limits their ability to compete in the large consuming centers with the products of refineries having the advantage of pipe-line and water transportation. A reduction in freight rates on petroleum and its products would restore the equilibrium between producing districts and result in reduced prices to the consumer.

2. THE EFFECT OF THE RATE STRUCTURE ON FACTORY LOCATION: LUMBER INDUSTRY¹

Many significant features of the lumber industry grow out of the practice of levying a uniform freight rate upon all grades of lumber and planing-mill products. At the tariffs now prevailing, the utilization of timber of poor quality in the form either of inferior species or knotty, low-grade logs in localities at considerable distances from markets for such material is seriously handicapped. The large waste in lumber production in the Northwest, often amounting to 30 per cent of the material in the forest, is partly attributable to this condition. One phase of it is that, with a charge added to low-grade lumber by its transportation to market equal to or greater than that imposed upon high-quality products, the mill value of the former is depressed disproportionately in comparison with its intrinsic value and its going price at the point of delivery.

The economy of surfacing, finishing, and remanufacture in planing mills, box factories, etc., is related directly to the uniformity in freight tariffs on all mill products. Surfacing a thousand feet of lumber may reduce its weight as much as 700 pounds, at a cost of perhaps 60 cents. If no higher rate is paid on surfaced lumber, this obviously will be done at the shipping point to gain the advantage of reduced weight, except in the case of short hauls, where the cost of surfacing would not be repaid by the reduction in the freight charge.

¹ Adapted from Ovid M. Butler, *The Distribution of Softwood Lumber in the Middle West: Wholesale Distribution* (1917), p. 47. (U. S. Department of Agriculture, Report No. 115, *Studies of the Lumber Industry*, Pt. VIII.)

Similarly the present method of fixing tariffs encourages the remanufacture of lumber at the shipping point into boxes, doors, sash, and other products ready for final use, since the same rate is still obtained and a great saving in weight effected. In the class of boards, for example, from which clear cuttings are made for building doors, there is usually a waste of 30 per cent, consisting of knots and other material not usable for this purpose. Freight on this waste is saved by manufacturing doors at the sawmill.

3. THE EFFECT OF RATES ON A FURNITURE JOBBER'S BUSINESS¹

The Wichita Wholesale Furniture Company, located at Wichita, Kans., complains that carload rates on furniture maintained by defendants from and through Wichita to points in the states of Oklahoma, Texas, and New Mexico are unreasonable, unjustly discriminatory, and unduly prejudicial to it in favor of dealers in furniture located at Kansas City and St. Louis, Mo., Peoria and Chicago, Ill., and other points taking the same rates, in violation of sections 1, 2, and 3 of the act.

Complainant buys various kinds of furniture in carload lots at points on the Mississippi River, Chicago, and points east thereof, ships it to Wichita, there makes up carload mixtures, and forwards the same to various interstate destinations, including points in Oklahoma and Texas.

In making shipments to these latter points complainant encounters keen competition, primarily from Kansas City. Competition with Oklahoma City and Chickasha, Okla., Fort Smith, Ark., St. Louis, and Chicago is also encountered. Through carload charges to southern, southwestern, and western Oklahoma are from 7 to 30 cents per 100 pounds higher when the traffic moves to and from Wichita than when it moves through Kansas City. The higher charges to and from Wichita, it is alleged by complainant, cause a shrinkage in its profits of from \$14 to \$30 per car, amounting to from 2 to 3 per cent of the value of the furniture transported, which it is required to absorb out of its normal profit.

The question of rates to and from jobbing points has been and is continually being pressed upon our attention by complaining shippers.

¹From the decision of the Interstate Commerce Commission in the case of the Wichita Wholesale Furniture Company v. Atchison, Topeka & Santa Fe Railway Company et al. in the Interstate Commerce Commission, *Reports*, Vol. 44 (1917), pp. 339-40, 343-44. See also H. B. Vanderblue and K. F. Burgess, *Railroads: Rates—Service—Management*, Ch. IX, "The Equalization Principle."

The desire of jobbers located at various points is to have rates into and out of their particular points equalized, so that through rates to consuming territories shall be the same, no matter through which point the traffic moves. It is well settled that undue prejudice and disadvantage against a distributing point cannot be predicated merely upon the fact that the combination of inbound and outbound rates exceeds the combination available via a competitive distributing point.¹

The desire of this complainant, as before stated, is to secure an equalization of rates to points in Oklahoma and Texas with Kansas City. It is shown by this record that the Wichita furniture dealer has relatively a more favorable adjustment of outbound rates, distance considered, than has the Kansas City dealer. It is not practicable to have rates into and out of all jobbing points so constructed that the resulting through charges from the factory to ultimate destination are the same via all jobbing centers. Advantages of location, competitive conditions, the volume and flow of traffic, and numerous other considerations come into play, and must be given due weight in determining the adjustment of rates into and out of different jobbing points.

Upon all the facts and circumstances of record we are of opinion and find that the rates complained of have not been shown to be either unreasonable or unjustly discriminatory.

The complaint will therefore be dismissed.

4. THE EFFECT OF C.L. AND L.C.L. RATES ON JOBBERS²

The great bulk of manufactured articles consumed upon the Pacific Coast is produced in the East. Whether those commodities are wholesaled by the Pacific Coast jobber or by the Middle West jobber the shipment is ordinarily in carloads from the factory to the warehouse of the jobber and in less than carloads from thence to the retailer. Of rail shipments from eastern factories by Pacific Coast jobbers at least 90 per cent goes in carload lots and a considerable portion of the balance are emergency orders which require quick delivery. Upon the other hand, testimony showed that the eastern jobber could distribute to the retailer in carloads only to a very limited extent. When

¹ Rates on Knitting Factory Products, 25 I.C.C., 634, 639.

² From the decision of the Interstate Commerce Commission in the case of *The Business Men's League of St. Louis v. The Atchison, Topeka & Santa Fe Railway Company*, and other railroads, in the Interstate Commerce Commission, *Reports*, Vol. IX, pp. 327-34.

it is remembered that the warehouse of the Pacific Coast jobber is located at a terminal point, and that the rate from the East to the intermediate point is made by adding the local from this terminal point back to the intermediate point, it will be seen that the wholesaler upon the Pacific Coast has the advantage of the wholesaler in the East by the difference between the carload and less-than-carload rate. This advantage is important just in proportion as the value of the goods per hundred pounds, or more properly the margin of profit per hundred pounds, is greater or less.

A concrete illustration will make this clear, and for that purpose we may take bar iron. The rate on this commodity from the East to Pacific Coast terminals is C.L. 75 cents, L.C.L. \$1.25. Assume now some intermediate point to which the local rate from the terminal is 50 cents L.C.L. The Pacific Coast jobber pays in freight upon a hundred pounds of iron delivered to the retailer at that point: 75 cents to his warehouse and 50 cents local, in all, \$1.25; while his eastern competitor pays on the L.C.L. shipment from his warehouse \$1.75. This gives the Pacific Coast jobber a clear advantage of 50 cents in the freight rate at all points which base upon the terminal point. The testimony of the complainants tended to show, nor was it denied by the defendants, that the profit to the jobber in the handling of bar iron is less than 50 cents per hundred pounds. Unless, therefore, there be some compensating advantage to the eastern jobber he is by this differential prohibited from wholesaling this commodity to retailers upon the Pacific Coast when his shipment from the East is in less than carloads.

It should also be noticed that the eastern jobber must pay the freight on the carload shipment from the factory to his warehouse in the East.

It appeared that the eastern jobber was enabled to some extent to combine shipments, sending an entire carload to one consignee upon the Pacific Coast and there distributing to different purchasers; but it was said that this method of handling business was extremely unsatisfactory and but little resorted to.

What is true of bar iron is also true of most classes of heavy hardware, so called, which include most kinds of manufactured iron in its simpler forms, as sheet iron, corrugated iron, nails, pipe, horseshoes, and in general any form of hardware where the cost of manufacture has not added very materially to the price of the raw material. It also appeared that the same thing was true of some of the more bulky articles among drugs and medicines, paints and oils, stationery

supplies, wagon material, plumbers' supplies, and some other lines, with respect to which the differential often exceeded and generally approximated the profit per hundred pounds to the wholesaler. The testimony of retailers upon the Pacific Coast was to the effect that after the putting in of the tariff of June 25, 1898, they were unable to buy many of the heavier articles from eastern jobbers. We think it appears, and we find, that with respect to many of the more bulky articles above named the differential is prohibitive against the eastern wholesaler.

While, however, this is true of many heavier articles, it is not true of the greater number of commodities in which the eastern wholesaler deals. In case of the higher-priced commodities the profit per hundred pounds is much greater than the differential. When the tariff complained of took effect the Simmons Hardware Company determined to equalize the disadvantage which its customers incurred by making a freight allowance of 50 cents per hundred pounds. At first this allowance was paid upon all articles, but it soon became evident that there were certain articles which, including the freight allowance, were handled at actual loss, and that company very soon ceased to pay freight allowances upon these commodities. The vice-president testified that these commodities were the fifteen following: shot, bar-lead, grindstones, nails, wire, rope, anvils, sheet-zinc, sheet-steel, horseshoes, sheet-iron, staples, wire-staples, small chains. Except so far as these articles can be shipped in carloads, either straight or combined, they cannot be wholesaled from the East upon the Pacific Coast. It was claimed that these heavier articles were usually staple commodities, and that the inability to handle them was a serious handicap upon the eastern jobber, since the retailer preferred to patronize that concern which could supply all his wants. There is probably force in this claim, although it was denied by some of the defendants. It is manifestly impossible to find definitely to what extent the differentials, as applied to the entire volume of business, discriminate against the eastern merchant.

5. THE DISTRIBUTION OF CARS AMONG SHIPPERS¹

A common occurrence at country points equipped with a number of elevators are disputes over the distribution of cars to the various elevators. State and Federal laws and regulations now govern such

¹ Adapted from Federal Trade Commission, *Report on the Grain Trade*, Vol. I, *Country Grain Marketing* (1920), pp. 125-26. See also H. B. Vanderblue and K. F. Burgess, *Railroads: Rates—Service—Management* (1923), Ch. XVI, "Car Supply and Car Distribution."

distribution, and these laws have diminished greatly the discrimination in allotment formerly prevailing, although occasional cases of unfair distribution occur today. The laws of Minnesota may be taken as typical of such regulations.

Such cars as the company can furnish shall be divided among the applicants equally until each shipper has received at least one car, after which the balance shall be divided rateably in proportion to the amount of daily receipts of grain or other freight to each shipper or to the total amount of grain offered at such station or sidetrack.

When cars are scarce and frequent requests to the local railroad agent are without results, the elevator agents usually send word of their difficulty to the terminal markets. The line company agents report the facts to their head offices; the coöperative and independent agents, to the commission firms handling their business. The line companies and the commission firms then communicate with the railroad companies and endeavor to secure relief.

6. TRANSIT PRIVILEGES FOR LIVESTOCK SHIPPERS¹

Livestock in transit is accorded numerous privileges so that there can be a through movement at a single rate. Livestock is often stopped for from ten days to a year for grazing or fattening; sheep are also stopped for shearing or dipping. All kinds of livestock are stopped at the western markets to "try the market" and with the privilege of reshipment to another market.

When the shipments are consigned out of the Chicago market the ownership has usually changed. At the Missouri River markets and at St. Paul the owner has the privilege of stopping his car and offering the stock for sale. If he is not satisfied with the price offered, he may reload and ship to Chicago. At Chicago no specific transit privileges are published by the railroads, as there are no through rates on livestock from points west of Chicago to the East. Further, as a general rule, the owners from the West do not themselves take stock east of Chicago.

In cases where transit privileges are allowed, the through rates from point of origin to destination are applied. In addition in many cases a charge of from \$7 to \$15 or more is assessed by the railroads or charged by the Stock Yards Co. for feed, unloading, and loading, and other incidental service. Transit privileges are allowed only where the tariffs of the carrier specifically permit.

¹Adapted from the Joint Commission on Agricultural Inquiry, *Report*, Pt. III, *Transportation* (1921), pp. 110, 116.

MIXED CARLOADS

One of the recent developments in the transportation of livestock is the tremendous growth of mixed carload shipments. For 1918 out of the total of 1,813,306 cars reported 113,769, or more than 6 per cent of the total, were mixed cars. The first six months of 1919 the number had increased to over 7 per cent. At a hearing held in Chicago early in 1921 by the Interstate Commerce Commission it was shown that more than 24 per cent of the cars received at the Union Stock Yards during the first eight months in 1920 consisted of mixed shipments. As a general proposition, it may be stated that the farther east one goes the greater is the proportion of mixed carload shipments. In the West, however, the proportion is much less. Sioux City shows for 1920 only 5 per cent.

The development of the mixed carload shipment is the result of the growth of the coöperative associations and also the result of the operation of smaller farms. It is evident that a farmer must be operating a good-sized farm if he can finish off and have ready for market at the same time a straight carload of cattle consisting of from 20 to 25 head, a straight carload of hogs consisting of from 50 to 75 head, or of sheep consisting of from 130 to 270 head.

The mixed carload shipment unquestionably is of value to the producer in permitting him to put stock upon the market when it is ready, and also, if he can make two periods coincide, when the market is favorable.

Charges for mixed carload shipments are made at the highest rate applicable on any kind of stock in the car, subject to the highest minimum weight.

7. RECONSIGNMENT: THE SERVICE DESCRIBED¹

Strictly speaking, a change in the destination of a shipment, made en route, is termed a "diversion"; but for the purposes of this report the term "reconsignment" will be applied to a change in the destination of a shipment either before or after it reaches its originally billed destination.

The amount and character of the carrier service required in effecting a reconsignment vary greatly, depending upon the information accompanying the shipper's request, the degree of certainty as to the

¹From the Reconsignment Case, in the Interstate Commerce Commission, *Reports*, Vol. 47 (1917), pp. 593-97. See also Vanderblue and Burgess, *op. cit.*, Ch. XIX, "Special Privileges and Facilities."

location of the shipment, the means of communication, the accessibility of the car containing the shipment when found, and the amount of detention of the car at the point of reconsignment, necessitated by the shipper's requirements or by operating conditions. Ordinarily the shipper places his request for reconsignment with an authorized agent of the carrier which originated the shipment. The agent receiving the request, if not authorized or prepared to issue the necessary order, transmits the request to the proper official and the order is issued by him. If the car is to be reconsigned from its originally billed destination, or if its location is definitely known, it is necessary only to communicate the order to the agent at that location or destination. If, however, the shipment is to be stopped or diverted before it reaches its original destination, and especially if it be a long distance or inter-line shipment, it is frequently necessary to communicate with a number of points on the route, or, where the route of the shipment is unknown, to place stop orders at a number of junction points or gateways through which the shipment may move. In many cases the orders fail to reach the shipment before it arrives at its destination or passes off the rails of the initial carrier. In the latter case the attempt may be abandoned or may be taken up anew with the connecting line. An agent receiving an order to stop or reconsign a car which is billed to pass his station must watch the train lists and see that the car is intercepted and properly rebilled. If reconsigned to a point beyond and in the original line of shipment, the necessary change may possibly be effected in time to permit the car to continue its journey in the train in which it arrived. In most cases, however, it is necessary to set out the car and to forward it with a later train. The switching service here involved varies widely under different conditions. An agent receiving an order to reconsign a car which is billed to stop at his station must likewise exercise care to see that the order is promptly executed.

In practice, a great majority of the reconsignments are effected at principal junction points or "hold" points. At Chicago, for example, as an aid in stopping and segregating reconsigned cars, a so-called "reconsignment board" is provided, on which are listed the numbers of cars on which reconsignment orders have been received by the agent. The car list of each arriving train is compared with the board list, and instructions given the yard or train employees as to the reconsigned cars. New numbers are added as orders are received and old numbers erased as the reconsignments are accomplished. A representation of the reconsigning board of the Chicago & North

Western at its Proviso yard in Chicago, filed as an exhibit, shows the numbers of 731 cars. At the hearing much attention was given to the clerical and accounting services required by reconsignments. For the purpose of showing the clerical labor in the handling of reconsignment orders, the following enumeration was made:

(1) Agent receives request to reassign. (2) Agent writes message ordering the reconsignment. (3) Message is checked with request. (4) Message is sent to telegraph office. (5) If request was made by telephone, agent receives confirmation by letter. (6) Agent checks written confirmation with the telephone order and files them together. (7) Operator sends reconsignment message. (8) Operator at point of reconsignment receives the message. (9) Message is sent to yard clerk. (10) Yard clerk books the order. (11) Yard clerk examines record of cars previously passing station. (12) If record fails to show that car has already passed, yard clerk next checks record of cars in yard. (13) If car is not in the yard, yard clerk examines record of all trains arriving from direction in which the car originates until it is received. (14) Yard clerk finds waybill and makes necessary changes thereon. (15) Yard clerk makes memorandum against his order record. (16) Yard clerk writes message to agent from whom order was received advising that reconsignment has been effected. (17) Message is sent to telegraph office. (18) Operator sends message. (19) Operator at destination receives message. (20) Message is delivered to agent. (21) Agent checks message with original order. (22) Agent advises party who requested the reconsignment and files all papers.

Various circumstances serve to multiply the number of messages and letters necessary to effect many of the reconsignments. Exhibits were filed by various respondents giving examples, taken from their files at random, or by some process of selection said to be fair, showing the number and nature of the communications required. In reconsigning 216 cars in November, 1916, the Northern Pacific used 1,063 telegrams, 186 letters, and 186 telephone messages. The files of the traffic officials of the Pennsylvania lines west of Pittsburgh show that in accomplishing 2,936 reconsignments in the week ending April 21, 1917, there were used 2,637 telephone messages, 1,675 telegrams, and 2,586 mail communications. It is said that the list is incomplete. In executing 1,215 reconsigning orders, covering 1,621 cars, the Chicago & North Western, in the week ending April 22, 1917, received or sent 1,944 telegrams, 2,612 letters, and 1,519 telephone messages. Other respondents presented similar data.

8. FABRICATION-IN-TRANSIT¹

A clear distinction exists between the process by which structural steel is manufactured and the subsequent process by which it is adapted for use in bridges, buildings, and other structures. In connection with the latter, custom has established the use of the word "fabrication" to distinguish it from the previous one of manufacture. The manufacturing process of structural steel embraces the conversion of the ore into steel, the forming of the steel into billets, and the transforming of the billets, by passing them between grooved rolls, into various forms, known as structural steel plates, bars, angles, channels, beams, tees, zeos, and so on. The operations of the shop which cuts these various structural steel shapes to the required length, punches, drills, planes the ends, and rivets the structural steel together are termed by the trade "fabrication." Throughout the country fabricated and unfabricated structural steel moves at the same rate. This common rating, which is of long standing, places upon a parity all fabricators located at the original point of manufacture, at rate-breaking points, and at places where the structural steel is to be finally erected or used. Under the fabrication-in-transit provisions here under consideration, a fabricating plant situated along the route between the point of manufacture and the point where the structural steel is to be used in a bridge or building, may, subject to certain rules prescribed in the tariffs, receive shipments from the roller mills, fabricate the steel at its plant, and forward the shipments at the balance of the through rate from point of manufacture to point of ultimate destination, plus a charge for stoppage in transit. Some of the tariffs, instead of providing for the movement forward from the fabricating plant at the balance of the through rate, provide that upon surrender of paid expense bills for the local charges in and out of the fabricating plant, the difference between the amount of the local rates and the amount of the through rate, plus the transit charge, will be refunded.

9. LOCAL CONCENTRATION RATES IN THE SHIPMENT OF PRODUCE²

The "concentration" rate provides that goods shipped from local stations to a primary market or concentration point, where they are consolidated into car lots for shipment to the central markets, shall

¹Taken from "Fabrication-In-Transit" in Interstate Commerce Commission, *Reports*, Vol. 29 (1914), p. 73.

²Adapted from E. G. Nourse, *The Chicago Produce Market* (1918), pp. 80-81. (Published by Houghton, Mifflin Company, copyright by Hart Schaffner & Marx.)

not have to bear the full local rate to the concentration point. The full local rate is charged for the original shipment, that is, to the concentration point. But when evidence is furnished that the goods have been reshipped from this point in carload lots, the local L.C.L. rate already paid will be reduced to the amount of the special concentration rate and the excess refunded to the shipper.

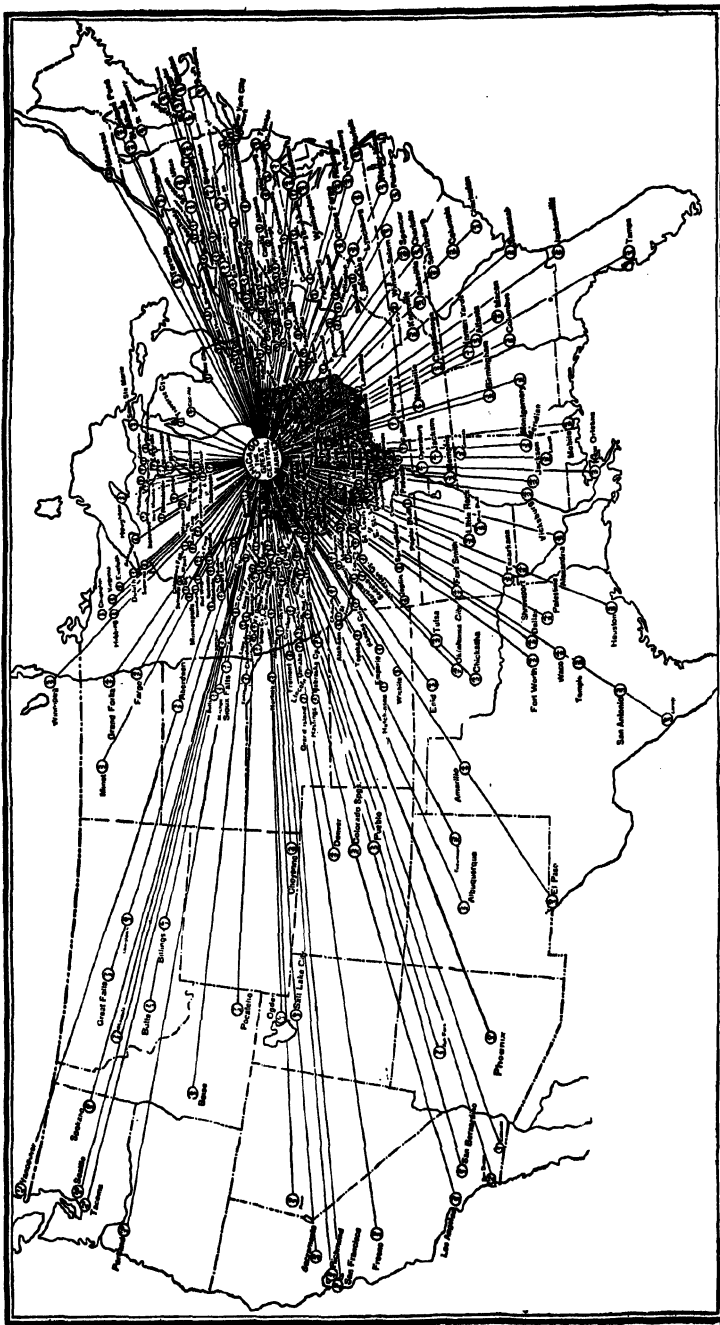
Shippers of poultry and dairy products are particularly tenacious of these special rates, which they find highly serviceable in fostering the growth of shipping centers capable of handling a volume of business large enough to justify the erection of well-equipped packing houses and adequate pre-cooling facilities. The modern methods of handling perishables seek to eliminate waste and to secure palatable and wholesale products by installing close to the producing field the technical appliances for treating products in a thoroughly scientific manner from the start. Such establishments are expensive. A pre-cooling plant, for example, calls for an investment "usually of \$10,000, although an old plant may be equipped for \$4,000 to \$5,000. The Federal authorities who have given the matter the closest study for several years, after continuous tests, have approved of a program calling for a number of small concentration points instead of a few large plants. Without favorable concentration rates a pre-cooling plant cannot be maintained. It takes a number of small shipping points to supply one central or concentration point moving car lots. This insures the small shipper a stable near-by market where he can average good prices. The average loss and damage claims in the carlot movement from concentration points is very small. The average claim on the less-than-car-lot movement, according to the railroad records, is very large. The railroads thus seem to have furnished the very evidence needed to prove the benefit of concentration rates—for the railroads as well as for the shipper."

10. SPECIAL TRANSPORTATION SERVICES AT CHICAGO¹

Freight shipments destined for many different towns are usually loaded in one freight car. This freight car, therefore, must be opened and the freight sorted out at each of the many stopping points, causing great delay. But the Chicago Association of Commerce has organized freight shipments so that 2,500 cars leave Chicago daily, each one loaded with merchandise for one specific town only and each one, therefore, going direct to that town.

Map 3 shows some of the towns for which package cars leave

¹From *The Chicago Tribune Book of Facts* (1921), p. 27.

MAP 3. CHICAGO'S PACKAGE CAR SYSTEM¹¹ From a map prepared and published by The Chicago Association of Commerce.

Chicago each day. The figures in the circles indicate the number of days necessary for the car to reach its destination. In Illinois, Indiana, Iowa, Michigan, Wisconsin, and Ohio the above map gives only a small number of the towns for which merchandise cars leave Chicago daily. Any shipper may use this system and pay only the usual L.C.L. rates.

This system is the most remarkable achievement of the Chicago Association of Commerce. Combined with it is the famous "WAY TO SHIP" guide published by the Association of Commerce. This guide enables any Chicago wholesaler or manufacturer to determine in a few seconds the precise route most economical for shipping from Chicago to any railway station in the United States. It is maintained at great expense in loose leaf form by the Association of Commerce as a service to members.

The service gives the Chicago manufacturer or jobber an extraordinary advantage over those in any other city. It takes advantage to the fullest extent of Chicago's remarkable position as the greatest railway center in the world. By means of this system Chicago shippers can reach points which are much closer to New York than to Chicago much quicker than they can be reached from New York. Because of this system it is customary to send goods for considerable distances into Chicago to be shipped out in these merchandise cars, the shipment often passing through the town in which it originated.

Chicago also has an unrivaled system for handling freight within the metropolitan district. Two belt lines intersect all roads entering the city. The greatest switching yards in the world have been built. Sixty miles of tunnel, exclusively for freight, connect docks, depots, warehouses, wholesalers, and department stores in the central district. Direct rail connection to dock warehouses is afforded.

Chicago has almost unlimited warehouse capacity. Space can be rented on an arrangement whereby the manufacturer pays for just that space his goods occupy for the period of time they are stored.

Warehouses are located so that delivery to Chicago jobbers is quick and economical. In fact, all jobbers send trucks to most warehouses at regular intervals for the purpose of picking up merchandise.

11. TERMINAL FACILITIES AND PROBLEMS IN MARKETING PRODUCE AT CHICAGO¹

The actual cost of handling goods will be increased quite as effectively by expensive methods of unloading at destination as by higher rates for the main haul. And time economies, so much striven for at the loading station or transfer point or in the running time of trains, may be eaten up by delays in switching cars at the terminal yards or due to congestion at the team tracks. It has already been suggested that Chicago is not well served in these regards.

DEMURRAGE AND TRACK STORAGE CHARGES

The necessity for expediting its business and of securing the release of its equipment by consignors at the earliest possible moment has led the railroad or private-car company to establish a general practice of charging "demurrage," "track storage," or both, whenever cars are held longer than the ordinary time of loading or unloading. Two days of "free time" are usually allowed before any charges are assessed, though a few state legislatures have extended this time to three, four, and in one case, ten days. Demurrage, which is really a car rental, usually amounts to one dollar per car per day,² but at times of car shortage or when the practice of "car peddling" becomes a nuisance, the railroads are inclined to impose heavier³ charges, shorten the free time, and demand an additional payment for the use of its tracks. Such a "track-storage charge" runs from one dollar a day up to two, three, or even five dollars per day per car after six or eight days of delay.

Because of Chicago's importance as a transaction center for goods which are purchased by or for dealers in other markets, this matter is one of much importance in this city. Thousands of cars of goods each year are dealt in at this market without ever being unloaded here. They must be held for a longer or shorter period subject to the inspection of prospective buyers and, when sold, are reconsigned to other consuming centers. Many other car lots which are broken up here are reassembled into "mixed-car" lots for reshipment to jobbers in smaller cities. And even for commodities consumed here, the high cost of hauling and the cramped conditions of the produce district

¹Adapted from E. G. Nourse, *The Chicago Produce Market* (1918), pp. 81-83. (Published by Houghton, Mifflin Company, copyright by Hart Schaffner & Marx.)

²On some lines the rate is one dollar for the first day after the expiration of the free time, two dollars for the second day, and so on up to a maximum of five dollars per day.

³During the winter of 1916-17 many roads charged one dollar for the first day after free time, two for the second, three for the third, and five dollars per day thereafter. This was modified (May 1, 1917) to two dollars per day for the first five days (after free time) and five dollars per day for each succeeding day.

put a premium upon doing as much business as possible direct from the car door. But such a practice, of course, tends to increase difficulties at the freight terminal.

OUTER AND INNER FREIGHT YARDS

Most of the roads entering Chicago have both an outer and an inner freight yard. The outer yard has belt-line connections with the other roads. Here incoming trains are broken up, cars switched to other roads or to the down-town team tracks; here, too, cars are received from other roads, trains are made up and dispatched to the company's own lines. At these outer yards there is ordinarily ample room for the holding of cars and no track storage is charged. However, these yards are miles away from the produce district, several hours are consumed in a single inspection trip, and, especially in bad weather, buyers cannot readily be induced to examine goods located there. Dealers are therefore anxious to have their cars switched to the down-town freight terminal. But here conditions are quite different: congestion is constant, every foot of unloading platform must be available as much of the time as possible, and every pressure must be exerted toward the rapid disposal of cars. Track-storage charges are inevitable. In order to keep them down to the minimum, most of the roads have provided in recent years a special "inspection track," where cars may be held without track-storage charges pending buyers' inspection and disposal of the goods, whether by reconsignment or unloading. In the latter case, the car is switched to the team track without extra charge. If the contents of the car are sold to a single purchaser or are disposed of quickly to several, track charges can be entirely avoided, though demurrage would still be assessed if the car were held for more than two days on both inspection and team tracks. If part of the contents of the car were sold early and delivery demanded at once while sale of the remainder was slow, the consignor would have track storage as well as demurrage to meet unless he had a store to which he could haul the unsold goods. But many wholesale receivers maintain office quarters only.

12. THE SERVICES AND USES OF THE PUBLIC WAREHOUSE¹

There are so many kinds of warehouses that it seems advisable to define them; but for present purposes we are concerned only with that class known as *public* warehouses.

¹ Adapted from Chamber of Commerce of the U. S., Domestic Distribution Department, *Warehousing and Transportation Economics in Distribution*, pp. 3-7.

Public—For the storage of merchandise of every description; distinguished from private warehouses by being available to, and intended for, the use of the public.

Private—Owned or occupied by merchants or manufacturers for the storage of their merchandise.

Household Goods and Furniture—For the storage both of individual property and of merchandise.

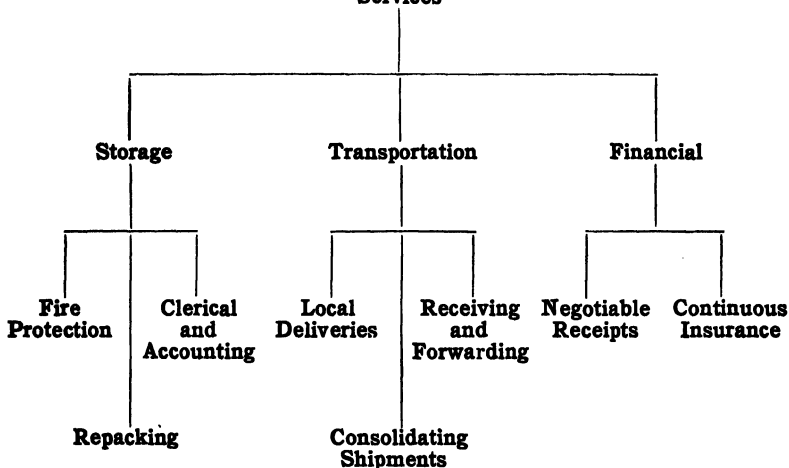
Cold Storage—For the storage, principally, of perishable foods.

Cotton, Grain, Tobacco, Wool—And others, for the storage of special commodities.

Bonded—For the storage of all kinds of commodities on which a tax must be paid before they are released for distribution.

This chart gives a rough idea of:

Figure 6.—Public Warehousing Services



Very recently, the American Warehousemen's Association has published an Encyclopedia containing among other items of useful information, 280 pages devoted to a description of commodities which it is common to store, including recognized weights of packages and the dangers from which each of the commodities must be protected. No better proof is needed of the seriousness with which warehousemen regard their duties than the results of investigations conducted by the association as embodied in this book. Proper storage is a science—no longer a mere piling of goods in an ill-lighted, possibly ramshackle old building used for that purpose because it may have been fit for nothing else.

THE PUBLIC WAREHOUSE

A thoroughly modern public warehouse is of fire-proof construction, equipped with a sprinkling system, well illuminated and provided with efficient conveying and stacking machinery. Usually there is a fleet of automobile trucks as a part of its equipment and usually it is connected with one or more trunk line railroads by means of its own sidetracks. Included among the forces who conduct the affairs of this warehouse are skilled accountants, correspondence clerks, packers, and freight tariff experts who are familiar with every physical detail of warehousing and with the effect upon the property entrusted to them of local laws, insurance, and taxation.

Practically every commodity sold in retail stores is entrusted to public warehousemen during the process of distribution. We make this assertion confidently because we cannot imagine any commodity which might be an exception to the otherwise universal rule. Not all of all commodities of course are entrusted to public warehousemen but, from the farm to the fireside, food, wearing apparel, hardware, drugs, stationery, and tobacco undergo storage and the impulse toward the use of public warehouses has only begun to gather force.

Comparatively few figures exist and so far as we are aware none of a reliable character have been published which will give a true coefficient with which to calculate the comparative cost of storage in the two types of warehouses. Yet even if we had this coefficient, only a part of the story would be told since advantages which attend the use of public warehouses are not limited to the mere cost of storage.

Indeed, the cost of storage may be only a small proportion of the whole sum involved because of the economies which are known to follow the separation of long distance carload shipments into L.C.L. shipments for local distribution. During an address before the Domestic Distribution Group Session at the Annual Meeting of the National Chamber in May, 1923, it was stated that by consolidating into a carload several long distance, separate shipments of washing machines and consigning the car to a public warehouse the savings earned paid all costs of transportation, all costs of handling for re-shipping locally, all costs of distribution except selling and, in addition, a material percentage as unexpected profit!

Advantages in Using the Public Warehouse

This is a single instance but it could be multiplied indefinitely and suggests the advisability of a careful study on the part of

distributors to determine how their present area of business may be covered more economically or even enlarged if that promises to be profitable. There is a growing tendency among retailers to increase their rate of turnover through buying in smaller quantities which, logically, will crystallize into a need for convenient wholesale sources of supply to meet the demands for more prompt deliveries.

Many manufacturers and wholesalers whose area of distribution is or may be of a considerable extent, already are preparing to meet this demand. One of the most obvious methods is to ship in carload lots consigned to warehouses in distant centers of distribution where the cargoes are stored until orders are received for local distribution. Any reasonable degree of economy should be expected from this method since the bare cost of storage may not exceed the cost in a large private warehouse and the maintenance of several hundred small private warehouses is likely to entail a prohibitory expense.

There is an unmeasured but certain economy in entrusting commodities to the care of agents who know the proper conditions of storage dictated by the need for exact degrees of temperature, humidity, and isolation as well as the "ins and outs" of local property rights, legislation, and taxation. Sometime, a good while in the future, perhaps, it may be possible to attach a value to these factors, but today they can be recognized only as existing and usually of greater importance than is attributed to them.

In the same category is the use of negotiable warehouse certificates which, based upon rigid inspection and standardized grading, not only are of vast importance now but are of increasing significance.

From the foregoing discussion it is clear that the economies disclosed through a closer correlation of warehousing and transportation invite the constant attention of those who have problems of distribution—merchants and manufacturers in an equal measure. There is no general formula by which these problems may be solved since they are affected profoundly by such varying factors as location; area of distribution; volume, size, and character of the merchandise units. This suggests the need for a more or less careful study in the interest of individual distributing organizations to determine the general financial results of storage in private warehouses compared with public warehouses. Some of the most obvious elements are:

- (a) Amount of capital investment for the maintenance of private warehouses.
- (b) Bare operating costs of storage under each of the methods.

- (c) Publicity value of private warehouses.
- (d) Intangible value of the specialized services offered by public warehouses. For example, in the control of humidity and temperature; expert accountants; familiarity with local laws and taxation and with freight tariffs.
- (e) Possibilities of reducing the costs of distribution within a given area or of increasing the area without increasing the costs.
- (f) Relative costs of additional warehouses to supply a given area.
- (g) Consideration of negotiable warehouse receipts as a means for enlarging the volume of a business.

13. THE COLD STORAGE OF BUTTER AND EGGS¹

THE TIME OF STORAGE

Eggs are produced in large quantities in the spring, but few are available in the fall and winter.

Butter is made in flush supply in the early summer when the grass is at its best, but in the winter, comparatively little is produced.

Without cold storage there would be market gluts and inadequate outlets. Cold storage stimulates initial prices to the producer, thereby increasing production, and provides for maximum accumulation and extended distribution, thus adding to the total quantity and availability of the products and resulting, manifestly, in lower average prices to the consumer.

The best of the fresh eggs come on the market in March, April, and May. They are direct from the owners of the hens, are in prime condition, and after grading, packing, and inspecting they are placed in storage for use in later months when production is light.

Cold, known to science as one of the greatest preservatives, keeps these best of eggs in fine condition until they are needed. They are selected with the greatest care; are graded, packed, and handled so that the highest quality is absolutely sure, and then are kept in the cold rooms at just the right temperature. Months later, having been perfect when they went in and having been so well cared for, these fine eggs are offered for sale, still in condition to meet the requirements of the most discriminating.

¹ Adapted from Chicago Mercantile Exchange, *Cold Storage for Butter and Eggs* (1923), pp. 13-22

Without such a service, the American people would pass through weeks and months, every year, when eggs would not be obtainable at all or, if to be had, would command prices that only the rich could afford to pay.

THE QUALITY OF STORAGE EGGS

The fine quality of stored eggs is merely the result of applying common-sense principles to the storage business. It would be foolish and unprofitable, for the owners of the eggs as well as for the owners of the storage houses, to store eggs that were not sweet, fresh, full and firm-bodied when they went into the cold rooms. If the few remaining objectors to cold storage eggs could see how the very pick of the season's lay goes into storage, and how they are cared for in the storage house, their prejudice would all be removed.

The only foundation for this fast-disappearing prejudice dates back to the days when refrigeration had not reached the high point of efficiency that it occupies today. As for the conditions that exist now, take an example from everyday experience:

Go to the grocer in August and ask for nice, fresh eggs. What do you get? The farmer is busy with his harvests. The women on the farm are equally busy. They cannot give the attention to gathering the eggs from the nests that they give in the early spring.

It may be several days before the eggs from a particular farm can be taken to the concentrating point. The shipper in town, because of limited offerings, is naturally slower in getting his car started to market. There is delay all along the line. Possibly two weeks are thus used up. Then the days in transit to Chicago. Finally the grocer gets them, and sells them as fresh eggs.

The fact is that storage eggs in August, as cold storage is now known and practiced in this country, are *better* eggs than the majority of fresh eggs that have passed through the situation above described.

That there are no better eggs to be had than the really fresh eggs of the spring months, is absolutely true. But when production is reduced, and handling is slowed down because of other work, then cold storage comes in to keep things on an even keel and the fine eggs of spring, *in storage*, take first place in goodness and general quality above eggs whose "freshness" is in doubt. Cold storage preserves the splendid quality of those spring eggs, and postpones deterioration until the time when another season's lay begins to come to market.

STORAGE TECHNIQUE

Cold storage represents exacting requirements, and therefore proves its merits by rigid practice. The principal conditions to be watched are temperatures, humidity, air circulation, ventilation, absorption, packing and piling.

While the degrees of temperature may vary in different houses, it is asserted with safety that the modern cold storage room is kept sufficiently cold to preserve the contents and prevent spoilage for the longest possible time. This booklet is not the place for a discussion of the theories of temperature. It is enough to say that scores of experts in the business make a special study of this matter, and that their findings result in practices which are altogether in harmony with the function of cold storage—which is to *keep*.

Equal attention is paid to the matter of humidity. In keeping eggs, this is a most important feature of storage service. The eggs must be neither too moist nor too dry, and the preservation of just the proper amount of humidity is another neat problem that this industry has successfully worked out.

Ventilation must also be regulated to a nicety. There is much of importance in the way goods are packed—and in the way they are piled in the storage room.

So it will be seen that this is a more or less complex business, with its distinct problems based upon scientific laws.

Eggs are inspected or candled at the storage plant. The term "candling" is really a misnomer, and originated from the fact that a candle was originally used for testing eggs. Very few candles are now used for this purpose and the incandescent light is in general favor.

The storage of butter is less exacting in its requirements than the care of eggs in storage. The successful holding of butter in cold storage depends as largely on the protecting of the product from air contact as on maintaining a low temperature in the storage room.

Butter, being composed largely of oil or fat, is susceptible to becoming rancid or "air-struck" when exposed to the air for a considerable time. The higher the temperature the quicker the butter becomes rancid. Therefore, as the temperature of a butter storage room is held lower, the less need there is to protect the butter from the air.

Humidity, air circulation and ventilation call for little attention as applied to the storage of butter. At the low temperature at which butter is generally stored the air contains so little moisture as to be amply dry to insure preservation.

Most butter storage rooms are equipped with direct piping, but some are provided with air circulation by means of fans, when quick cooling is possible. Ventilation of butter storage rooms at stated intervals is considered desirable, and has been worked out to a science.

REGULATION OF THE BUSINESS

The cold storage industry is practically a public utility in most, if not all its operations. About twenty of the states have cold storage laws based upon the so-called Uniform Cold Storage Law recommended by the Commission on Uniform State Laws.

The industry is now recognized as furnishing a vital and permanent service in handling perishable food products.

Cold Storage Profits

Profitable handling of a commodity whose production is seasonal is obtained only when its available supply is spread equally over the full period from one season of maximum production to the next. The limitation of the period during which food can be profitably carried in cold storage conforms exactly with the public welfare and is strictly regulated.

It is manifestly unprofitable to carry food to a point of deterioration at which it will be unmerchantable, or to carry it from a season of maximum production at normally low cost to compete with fresh production the incoming season.

No profit can be made by merely accumulating perishable goods in cold storage. There must be a market. Only by selling such goods into consumption, at a time of light production and consequently urgent demand, can a profit be made. And only in that way can the public be properly served. Natural and economic laws therefore regulate the whole matter.

There is no way of legislating "freshness" into perishable foods. As far as possible that freshness is *kept* in by means of the scientific use of cold. Instead of being the object of prejudice, therefore, cold storage should be regarded as the unfailing friend of man. Its proper regulation is to be expected. And its acceptance as a necessity, without which we would have sorry times between the seasons when Nature works to give us new supplies, is something to which all must agree.

There are about 500,000,000 cubic feet of cold storage space in the United States, devoted largely to the preservation of foods. Chicago has nearly one-fourth of this amount of storage space, divided among ten principal companies, and claims itself the leading city in

point of cold storage facilities. Its enormous supply is sufficient not only for the accommodation of all the present-day requirements as they develop, but to anticipate the requirements of the city for a period of several years.

One of the reasons for Chicago's large cold storage accommodations dates back to the recent war, when the Government called upon the city to an unusual extent for such service.

This city was used as a food distribution and storage point for the troops, in the United States as well as abroad. Cold storage warehouses sprang up under the sudden demand for space, and when the Government no longer had use for them they were turned over to general commercial purposes. This abundant storage capacity has resulted in lower rates in the Chicago houses than would have been available if facilities had been provided only as they were actually found necessary to meet commercial demands, and it also serves to strengthen Chicago's claim to recognition as the great Central Market for butter and eggs.

14. STORAGE HELPS TO STABILIZE BUTTER PRICES¹

The importance of storage in the butter industry is plainly shown by the fact that nearly one-half of the creamery butter for the year is made during the months of May, June, July, and August. Although consumption is not stable throughout the year, it does not vary with the seasons as does production, i.e., butter manufacturing is largely a summer industry while butter eating is a year around practice. By means of storage facilities the excess butter manufactured during the season of over-production is carried over the season of under-production.

Only 2 per cent of the total amount of butter held in storage during the year 1914 was in storage on May 1. This shows that most of the storage product was sold out, clearly in order that it would not be compelled to compete with the butter made during the season of low prices. However, beginning with May and lasting through August the amount of butter stored increases rapidly. This is the season of excess production. During September and October the amount of storage stock remained about the same, indicating that the supply of fresh goods just about equaled the demand for butter. But in November the amount taken from storage exceeded the amount put

¹Adapted from B. H. Hibbard and Asher Hobson, *The Marketing of Wisconsin Butter* (1916), pp. 35, 37. (Agriculture Experiment Station of the University of Wisconsin in coöperation with Office of Markets, U. S. Department of Agriculture, Bul. No. 270.)

in. This condition continues until May—if the year studied may be assumed to be typical.

The storage season varies from year to year. All of those factors which influence butter prices have a bearing upon the amount of butter put in storage, when it is stored and how long it is held. But in general it may be said that by far the greatest proportion is stored during May, June, July, and August, and that it is held during the season of November to March. Although nearly every year sees some storage stock carried over until late spring, and under circumstances of extremely low prices during the winter or spring it is held until the following year.

Cold storage facilities did not reach a commercial stage of development until the early nineties. As a consequence butter prices fluctuated from extremely low points in the summer to extremely high points in the winter. The prices of butter during the summer months were so low as hardly to encourage its production, while in winter, during the season of scarcity, the price was almost prohibitive to the consumer. These extreme variations are illustrated in the following table, where prices of recent years are compared with prices before the days of storage facilities. The reduction of the per cent of fluctuation from 120 to 49 is due largely to the practice of storage.

TABLE 15—ELGIN BUTTER PRICES

Year	Low Price	High Price	Per Cent of Fluctuation
1880	18	38	111
1881	18½	45	143
1882	22	50	127
1883	19	41¼	117
1884	18¾	38	102
Average for period	19¼	42¼	120
1910	27	36	33
1911	21	36	71
1912	25	40	60
1913	26	35½	36
1914	23½	35	49
Average for period	24½	36½	49

CHAPTER XVI

MARKET FINANCE

1. THE USE OF BANK CREDIT AND COMMERCIAL PAPER BROKERS¹

There are some businesses which have slight excuse for using bank credit. A fair example of this is the foundry business, which under normal conditions is blessed with a very short period of manufacture, and with prompt collections. Here working capital is not only very small compared with plant investment, but is in constant use, so that an adequate amount should be furnished by stockholders. On the other hand, the packing business requires the employment of enormous amounts of current funds, with, however, an ebb and flow which can only be efficiently and inexpensively financed by an elastic bank credit. The following principles, however, deserve almost universal application:

1. Credit lines should be substantially in excess of a borrower's maximum expectancy of requirements. The greater the margin, the stronger is a company's position. This is particularly true for businesses which are constant borrowers; and for those which are not classed as prime risks.

2. Borrowers should have credit lines at more than one bank, no matter how small their borrowings may be. The advantage of several accounts for even a small business lies in the reserve strength they create. In times of tight money each account is an avenue of approach to the Federal reserve bank.

3. Credit lines should be established by negotiation well ahead of the time they will be used. The best time is when money is easy and banks are eager for new accounts; the worst time is when credit is needed immediately.

4. Credit lines which are equal in amount to the legal limit of a bank's loaning power (10 per cent of capital and surplus for National banks, 20 per cent for the state banks of certain states) cannot be increased in an emergency. Smaller lines, and more of them, are therefore desirable.

¹Adapted from George B. Robinson, "The Problems of the Corporation Treasurer," *Administration*, Vol. IV, No. 6 (Dec. 1922), pp. 657-59.

5. The other extreme of having so many bank accounts that none of them is valuable to any bank is so rare that it is only necessary to point out that borrowers may also err in that direction.

6. Credit lines which are in full use are no longer an element of strength. Only open lines have present value. Moreover, the borrower who will cultivate a sense of pride at having open credit lines will frequently avoid bad commitments merely through his desire to keep his lines open.

ADEQUATE CREDIT LINES

It would seldom be necessary to urge borrowers to obtain adequate credit lines if it were not for the *sine qua non* of adequate balances which is their corollary. To many business men cash on deposit appears to be an idle asset, and the resulting interest loss an unnecessary expense. In actual fact, it is an exceedingly active asset, and the interest loss only represents the cost of credit insurance. Open credit lines mean not only ability to earn trade discounts, but opportunity to take advantage of favorable markets when they appear, and protection against emergencies; the gains will far exceed the cost.

Banks are not public utilities, in the sense that all are entitled to access to their loaning functions. They are private institutions operated for profit and it is their privilege to prescribe the rules under which they will loan. Borrowers do not confer a favor on banks merely by borrowing, whatever the state of the money market may be. Banks must have deposits which will be maintained or they cannot lend. The borrower who abides by the rules, placing the bank under obligation to him instead of putting himself under obligation to the bank, will profit in the end. The way to do this is to maintain, without lapse, balances which are more than adequate to justify all probable credit requirements.

Competition between banks for accounts frequently leads to an offer of unusual favors. Sometimes such offers overstep the bounds of sound banking practice. In such cases the borrower will do well to remember that while special favors may now and then be safely accepted, an extended relationship based on favoritism is undesirable. Conditions change constantly; banks, moreover, are human institutions, managed by men who are promoted or demoted, resign, die, or err, and are sometimes overruled by superiors. When management changes, a new personal equation must be written between borrower and bank. The best basis for a desirable equation is a "history of account" which shows that the borrower has, on the contrary, not enjoyed

special privileges but has placed the bank under lasting obligation to him by invariably meeting all the requirements of sound banking.

COMMERCIAL PAPER BROKERS

The facilities offered by commercial paper brokers also deserve the thought of borrowers who use considerable sums of short-term credit. The "open market" offers an excellent auxiliary to adequate bank lines provided both its facilities and limitations are well understood. The activities of well-established brokers are national in scope; their ability to buy notes in one market and sell in another has made them a large factor in equalizing interest rates between different sections of the country. They have demonstrated that they can distribute an extraordinary amount of paper under adverse market conditions; there have been times in recent banking history when their market has been "easier" than the majority of city banks.

Borrowers should never attempt, however, to use the open market as a substitute for adequate direct bank lines. Indeed, practically it is impossible for them to do so, because one of the important factors upon which open market credit depends is the possession by the borrower of adequate bank lines. If borrowers fail to maintain such lines their paper will become unsalable. Commercial paper brokers do not have direct access to the Federal reserve bank. They handle a large volume of paper for a very small commission, $\frac{1}{4}$ of 1 per cent. The majority of them do a very large business in proportion to their own capital investment; it is necessary that they should, with gross profit limited to this small commission. Their own net profit depends upon quick turnover, hence their capital must always be liquid. They cannot afford to have "frozen credits" in their vaults. For these reasons they cannot grant definite credit lines with the same assurance that member banks can. Moreover, they are forced to make quick salability their test of the desirability of buying the borrower's notes.

The salability of paper depends upon the same factors which determine its rating with the borrower's own banks, plus the factor of its repute in the open market, and minus the factor of obligation on the part of the banks. The good will of commercial paper-buying banks is a valuable asset for any borrower. It can be obtained through the salesmanship of the broker, operating over a period of years, and backed by an honorable and successful record on the part of the borrower. It should be understood that the broker's salesmanship has a better opportunity to build a borrower's market credit if the account

remains for an extended period with the same broker than if the borrower plays competing brokers against each other in an attempt to get rates below the market. When a borrower's name has become established as a desirable open market risk, he may rely with confidence upon this supply of credit. He may safely use the open market for most of his requirements if he maintains adequate direct bank lines and balances against emergencies.

Commercial paper (open market) rates are normally somewhat lower than going bank rates. The broker's charge of $\frac{1}{4}$ of 1 per cent, however, which is a straight commission, raises the net discount rate $\frac{1}{2}$ of 1 per cent if the paper is of six months' maturity, and a full 1 per cent for a three months' maturity. Then there is an interest saving because the bank balances are not required against open market lines.

2. CREDIT, PRICES, AND INSTALLMENT METHODS IN THE FURNITURE INDUSTRY¹

"CASH" AND CREDIT TERMS

Furniture is very largely sold at retail on credit, sometimes of shorter, sometimes of longer duration. The question was therefore asked of each dealer as to how his prices are customarily made with respect to cash or credit payments. Only 78 out of 556 dealers reporting stated that they priced their furniture on the basis of cash at the time of sale; 21 priced on the basis of cash in 30, 60, or 90 days; 384 priced on the basis of installment or long-time credit; 8 of them said they carry two prices on the tag—one for cash and one for installment. When prices are fixed on the basis of long-time credit it is customary to offer a substantial discount for cash at the time of sale. Thus, 216 stores reported that they offer 10 per cent discount for spot cash; only 15 stores less than 5 per cent and only 73 less than 10 per cent. One hundred and fourteen offer from 10 to 25 per cent. These are specialized furniture stores. Out of the 36 general stores answering on this point, 22 offer 10 per cent discount for spot cash, and 10 out of 15 department stores reported this same discount.

With many of these concerns "cash" often means cash at the end of the month during which the furniture is bought, or cash in 30, 60, or even 90 days, as contrasted with a long drawn-out series of installments. Thus 121 specialized furniture stores offer 10 per cent for cash in 30 days, 35 offer 10 per cent discount for cash in 60 days, and 14

¹Adapted from Federal Trade Commission, *Report on House Furnishings Industries*, Vol. I, *Household Furniture* (1923), pp. 16-18,

offer 10 per cent discount for cash in 90 days. It must be obvious from these substantial discounts that long-time credit prices are high prices.

INSTALLMENT CONTRACTS

The form of contract used by installment houses and the kinds of accounts kept with customers are of interest. Out of the 500 stores using some form of installment plan, 100 use the conditional sale contract, 121 a chattel mortgage, and 195 use a form of contract that purports to be a lease, and speaks of monthly or weekly payments as "rental." Under both the conditional sale and the lease, the stores retain the title to the furniture until payment has been completed. Unfortunately the purchaser under the lease form is often not aware of the nature of the contract he signed. When such a customer makes default before final payment he may be surprised to learn that he has no equity in the furniture that is seized.

Installment collections and installment accounting are expensive. Also, there are considerable losses due to defaults in which the realizable value of the seized furniture is not sufficient to cover the unpaid balance of accounts. One concern conducts its business on the insurance principle or the "law of averages." Credit references are taken from the customer but are not looked up. The furniture is delivered and subsequent payments are credited, if made, but if the purchaser defaults the firm is little concerned. The average experience shows the amount of loss to be expected from defaults, and the prices are made high enough so that in spite of such defaults the remainder actually collected is sufficient to insure a good profit.

The financial analysis that has been made seems to indicate that the greatest returns to the retailer were made by selling at relatively high prices on the installment plan. But it must be remembered that the installment houses are not only in the business of retailing furniture, but also of financing their customers for a period of many months. Installment contracts run from ten months to two years. That, and not their higher prices, is the reason the turnover of the primarily installment group is found to be so much less rapid than that of the less-than-half installment group. The longer the credit period the greater is the amount of investment required to sustain a given volume of business. So long, however, as a large proportion of the buying public cannot well defer their purchases of furniture until they can pay cash, the installment houses perform a function that the noninstallment houses do not perform. Installment prices probably averaged about 16 per cent higher than cash prices.

3. FINANCING THE GRAIN TRADE¹

The system of financing the production and distribution of the cereal grains is the result of long development, and has undergone but few important changes in recent years. It is frequently necessary for the grower to borrow funds to produce a crop, and the local banks, farm-loan, and other agencies are looked to for the necessary credit facilities. The grower usually expects to liquidate his loans by the sale and delivery of his product, thus shifting the financial burden upon the country elevator operator. The elevator concern can readily secure credit for a large proportion of the value of the grain as soon as it is loaded into cars and accepted by the carrier, and in the Northwest, even before any grain is purchased. Grain in transit can be financed by the transfer of negotiable bills of lading, and grain in terminal elevator storage is readily financed through the hypothecation of the warehouse receipts. The advances made against grain after it has entered the car-lot market range from 80 to 95 per cent of the apparent market value of the commodity; the percentage advanced being relatively high when the grain has been officially inspected and weighed and when it is stored in an elevator under public license and regulation. The owner of unencumbered warehouse receipts or of negotiable bills of lading is always in position to borrow working capital.

Outside of the Northwest² there appears to be little difficulty in financing, through banking channels, the movement of grain from producing areas to terminal points. The following statement made in April, 1921, by the Federal reserve agent at St. Louis will illustrate this:

(1) The unit of the country grain trade is the elevator company or grain shipper. The capital of these runs from a scoop shovel to, say, \$50,000, with an average of about \$15,000. Most of this capital is invested in buildings, plants, equipment, or is used to carry stocks of farm machinery, feeds, and farm supplies. It therefore follows that the country grain dealer as an average has not more than \$5,000 or \$10,000 fluid capital for shipping purposes.

(2) The method employed usually is that through an agreement with the local bank, the grain dealer issues his checks on the bank to farmers for the daily purchases. As soon as these amount to a carload or more, generally it is loaded and forwarded to terminal markets and by agreement with the country banker the draft is made against the commission merchant at the terminals for about the cost of the grain at home. A

¹ Adapted from Federal Trade Commission, *Report on the Grain Trade*, Vol. III, *Terminal Grain Marketing* (1921), pp. 183-84.

² Financing in the Northwest is discussed *supra*, pp. 122-23.

conservative estimate would be that 92 per cent of the grain in this zone is handled on that system. Some dealers believe that it will run as high as 98 per cent.

(3) From 4 to 8 per cent of the grain immediately around St. Louis is financed through open lines of credit, but at distances of more than 150 miles this class of financing is negligible. As far as I have any knowledge, virtually nothing is financed through bankers' acceptances, that form not having taken hold in our rural communities.

(4) The methods employed at present do not differ materially from those in use during the past decade. The commission merchant and buyers at terminal markets really finance the crop movement, though, of course, quite a per cent of the money to do so is obtained from the banks here and in other large centers. The existing system of financing and handling grain is the result of almost a century of experience, and it is believed by those in a position to judge to be about the most economical one possible.

A similar statement as to conditions in the Southwest was made by the department of examination and statistics of the Federal Reserve Bank of Dallas (April, 1921).

FINANCING IN THE CHICAGO AREA

The widest variety of methods employed in financing appears in the business tributary to Chicago. The following extracts from a report prepared for the Commission by the Federal Reserve Bank of that district (June 1, 1921) offers a concise explanation of the practice:

Three methods of financing are employed, depending upon conditions: D/BL consignments,¹ payment at country stations against credits established in Chicago by the large handlers and warehousemen, bankers' acceptances in special cases.

The choice of a method of financing depends almost entirely on the "spread" between cash grain and futures in this market. Since the opening of the World War cash grain has almost uniformly commanded a premium over the futures; hence shippers were sure of a price better than the ruling quotations for future delivery, and they have generally adopted the D/BL mode of collecting for their grain. This has enabled the Chicago grain buyers to restrict by half to two-thirds their usual lines of open credit at Chicago banks, the prevailing premium for "spot" enabling them to operate with a minimum of credit.

At the present moment speculative conditions tend to wipe out the premium on spot grain on the board of trade sample tables, and it is likely that the buyers will be obliged to go back to the old practice of transferring funds from Chicago to country stations for the purchase of the new crop.

¹ Consignments financed by drafts forwarded with bills of lading attached, the bill of lading to be transferred upon acceptance of the draft.

The outstanding feature of the method recently employed, in comparison with the old method of buying for cash at the spout of the thrasher, is that farmers have come to a position of financial independence which permits them to hold for the advantageous time to dispose of their grain, and then allows them to draw against shipping documents, thereby gaining the Chicago premiums for "spot" grain.¹

4. FINANCING THE RAW COTTON TRADE²

FINANCING IN THE PRIMARY MARKETS

Financing in the primary markets is the first problem that confronts the banking and financial institutions in the cotton-growing areas. As cotton itself is the basis for credit after it once begins to move, it is necessary at this point to discuss the several documents which are used as security for cotton loans.

Warehouse receipts.—Warehouse receipts are the first documents that arise in the primary markets. Warehouses are owned by many institutions and operated under the laws of the several cotton states.

Warehouses have been built at many local markets, notably in the eastern states, and at points of concentration as well as at points of exportation. In Arkansas, Oklahoma, and Texas, where much of the cotton is customarily marketed as soon as it is ginned and shipped directly to mills or exported, there are few warehouses except at concentration points, where cotton is held by merchants. The same conditions are found in Mississippi, western Tennessee, and Louisiana. In the eastern states warehouses are usually accessible to the farmers.

The ownership of warehouses is an important feature in determining the value of the warehouse receipt. In many primary markets, as well as in concentration centers, the warehouses are owned by cotton buyers, merchants, factors, and others engaged in the cotton trade. In the mill centers the mills usually own or control the warehouses in which they store cotton while awaiting consumption. Other warehouses may be owned by independent warehouse companies and operated under the laws of the state in which they are located; others may be controlled or licensed by the state. In the state licensed warehouse the receipt is issued according to certain rules and regulations prescribed by the state and has a value that is much more readily known in the banking fraternity than a receipt issued by an independent warehouse whose standing is unknown.

¹ For statistical data on the different methods of financing country elevators, consult Vol. I, Ch. X., of this *Report*. This chapter should also be consulted for further information on financing.

² Adapted from *Federal Reserve Bulletin* (Final Edition) June, 1923, pp. 443-53.

Realizing the wide diversity of warehousing conditions existing throughout the country, Congress attempted to remedy the situation by passing a warehouse law that would apply to the entire country. This resulted in the United States Warehouse Act, August, 1916. Since the passage of the act approximately 400 cotton warehouses have become licensed (January 1, 1923), with a storage capacity of 2,100,000 bales. The warehouse act is a regulatory statute. It makes for the issuance of a warehouse receipt or credit instrument possessing the greatest collateral value.

Such a lack of uniformity makes the task of loaning on warehouse receipts very difficult. Loans that are made on warehouse receipts representing cotton stored in the warehouse of the owner are more often made on the moral and financial standing of the borrower rather than upon the warehouse receipts. Such conditions confine loaning on stored cotton to the locality in which the cotton dealer is personally known to those making the advances.

The conditions under which warehouse receipts are issued by dealers and buyers in the primary markets are generally understood by the local bankers, and the system works fairly smoothly as long as cotton is stored for only a short period. When the marketing channels become jammed, and local banks as well as local dealers have to call on outside agencies for loans, the local warehouse receipt becomes less important, and some other basis for the loan must be found.

Compress receipts.—Compress receipts are documents used to secure loans on cotton in both primary and central markets. They are used generally for short periods. Cotton in transit is usually unloaded at the compress for further compression. In order to secure the bill of lading so that the cotton can be unloaded, compress receipts are substituted at the bank for the bill of lading under which the cotton is moving. After the cotton is compressed, it is reloaded and a bill of lading presented to the bank, against which the compress receipts are released. During the time the cotton is being compressed the compress receipts are accepted by bankers as security for loans. In many cases compresses are storage places for large quantities of cotton, serving in the same capacity as warehouses. The conditions which affect the security value of compress receipts are the same as those which govern warehouse receipts.

Bills of lading.—When cotton is shipped from the primary markets a railroad bill of lading becomes the basis for loans. If cotton is sold in the primary market to a foreign consumer, a "through bill of lading" may be used in lieu of a local bill of lading to the port.

FINANCING METHODS

The problem of financing the primary market involves the task of financing the grower or planter who desires to warehouse his crop and dispose of it when the market is most favorable; the local store that accepts or buys cotton from the growers; the resident buyer; the agent of cotton mills; and the representative buyer of cotton merchants and exporters. Other cotton dealers may operate in the local market, but the method of extending funds to them will not vary from those of financing the local and representative buyer.

The credit structure used in financing the marketing of cotton brings into use the entire banking system of the South, and when those banks become burdened, loans from banks in the distant cities, such as Boston, New York, Chicago, and Philadelphia, are obtained. The large cotton mills and merchants use the banks in these cities, while the local buyers rely largely upon the local banks in the primary markets and concentration centers. The crop can be marketed without violent interruptions only when the banking and credit structure works smoothly.

Financing the Grower or Planter

If warehouses are available and the planter does not want to sell his cotton immediately, he stores it. When he is not in a position to finance himself until the cotton is sold, he goes to his local bank and asks for a loan, presenting warehouse receipts as collateral. Loans of this type are usually made upon a straight promissory note given by the planter to the bank and secured by the former's warehouse receipts. Although bankers' acceptances offer an attractive field for country banks in financing stored cotton, they have been used very little.

Loans by the banks on cotton stored by the growers are usually made to mature within 60 or 90 days, although in some instances they run 120 days. In many cases demand loans are made by banks to growers, the bank reserving the right to call the loan if market conditions are such that the bank's margin is reduced. The length of the loan is determined in a large measure by the market conditions and the financial standing of the grower. In order to keep the loans liquid the banks generally extend from 75 to 80 per cent of the market value of the cotton. This, however, varies, as loans are extended in most cases on a flat bale basis without regard to the staple, grade, or condition of the cotton. That is to say, if a planter presents a cotton receipt at his

local bank and asks for a loan, the bank will extend usually from 75 to 80 per cent of the market value of the cotton offered, the amount being determined by the quotation for middling cotton in that market on the same day. When the cotton is graded and found to be above or below middling grade, the bank's margin changes accordingly.

Financing the Local Buyer

A local buyer may be the local ginner, warehouseman, resident buyer, or the agent of a cotton merchant or mill. The problem of financing is similar for all.

At the opening of the cotton season, generally from August 15 to September 1 in the southernmost sections and from September 1 to 15 in the northernmost areas, the local buyer arranges with his local bank for a line of credit which he expects to use in making cotton purchases. If the buyer has some capital of his own, he uses that to make his initial purchases, and after it has been exhausted he places the receipts, representing the cotton which he has purchased, with the bank and thereby secures a loan to make further purchases. Arrangements made by other buyers who depend upon the bank to finance the original cotton purchases vary with banks in different sections of the Cotton Belt. Several banks in leading buying centers of Texas and Arkansas state that original cotton purchases are made through a demand acceptance agreement. Under this agreement the buyer enters the market and buys cotton from growers at the price agreed upon by the buyer and seller. The former then signs the warehouse or compress receipt and at the same time states on the receipt or on a separate form the amount that is owed the seller. The seller then takes the signed receipt to the buyer's bank, which pays the amount stated on the receipt, and at the same time takes the receipt, which is held as collateral against the loan. This process is repeated throughout the day, and at the end of the day the buyer may call at the bank and present his demand note for the entire amount that the bank advanced or the bank may carry the advances on a strictly open account or acceptance basis, always holding the warehouse or compress receipts as collateral. In order to keep an adequate margin against loans of this type the bank usually requires the buyer to pledge stocks and bonds or other collateral that is sufficient to secure about 20 or 25 per cent of the loan. The bank holds the receipts and when the buyer has arranged for a sale he is granted permission to move the cotton to the railway station and receive a bill of lading. The buyer, who then becomes the seller, presents the bill of lading at the bank

and at the same time draws a draft on the buyer. The bank deducts the amount it has advanced on the cotton, the interest on the loan and the exchange charge, and credits the account of the local buyer with the remainder. Other methods of allowing the local buyer to ship cotton are reported by several banks. A trust receipt is given to the bank against which the warehouse or compress receipts are released to the buyer. The cotton is then moved from the warehouse to the railroad. The shipper or seller receives a bill of lading, presents it at the bank, and liquidates the trust receipt. A draft is drawn in the same manner as before.¹

Another form of acceptance agreement used in some of the western markets is one which the seller of cotton draws on the buyer and which is accepted by him. The seller then presents it at the local bank specified on the acceptance and receives payment for the cotton.

The bill of exchange may be used by either the grower or the buyer who has accumulated a number of bales and made a sale to a cotton merchant or mill representative. This, however, is used generally in the local markets by the banks that have made loans on the cotton under consideration.

Other banks in the western states report that local buyers are financed either by demand notes or notes of definite maturity. As cotton is moving rapidly to market the demand note is generally used, the borrower paying interest only for the actual period that he used the funds. If cotton is stored and warehouse receipts are used to secure a loan to finance "orderly" marketing, a note of definite maturity is usually given. In the eastern states loans are made largely on demand notes, while in Texas and Arkansas loans of definite maturity are much used.

CROP LIENS AND CHATTEL MORTGAGES

In most sections of the Cotton Belt some of the cotton is grown under crop liens and chattel mortgages. Loans secured in this manner are made to mature in the early fall, just as cotton begins to move. As the banks and others are desirous of having their loans liquidated at that period, it is necessary for the producers to sell their crop rapidly in order to meet their maturing obligations. For this reason, banks in the primary markets have not advanced much money on stored cotton. Their advances have been confined largely to cotton that is moving from local markets to interior concentration points

¹ The economic and legal aspects of the trust receipt have been analyzed and are given in the *Federal Reserve Bulletin*, January, 1922, p. 32.

or awaiting shipment from local markets. In some cases, however, growers have been able to store their cotton for regular marketing and banks have loaned to them. Also local dealers who have concentrated small lots of cotton have been financed by the local banks on the basis of their warehouse or compress receipts. In cases where banks have made advances on cotton stored in primary markets, the length of such loans average from 60 to 90 days. If it is stored in either state or Federal licensed warehouses or unlicensed warehouses of good standing, the banks loan from 75 to 90 per cent of the market value of the cotton, whereas only 50 to 75 per cent is usually advanced on cotton stored in other places.

The representative buyer and agent of cotton mills who buy from growers and dealers in the primary markets are financed largely through their head office or banks in distant cities. The local banks serve only as a disbursing medium for them. As the problem of extending credit to them is largely one of financing their head office, it is necessary to discuss their financial arrangement in connection with financing the merchant in the concentration center.

FINANCING IN THE CENTRAL COTTON MARKETS

Funds for financing the marketing of cotton are raised largely in the central or concentration markets, cotton-mill centers, and export cities. The local markets finance the initial movement of cotton, but

TABLE 16.—MOVEMENT AND CONSUMPTION OF COTTON

Month	Cotton Movement ¹	Cotton Consumption
	<i>Per cent</i>	<i>Per cent</i>
August.....	1.4	8.3
September.....	9.5	8.0
October.....	21.0	8.3
November.....	22.2	7.9
December.....	17.4	8.1
January.....	8.8	8.7
February.....	5.6	8.1
March.....	4.9	8.9
April.....	3.2	8.3
May.....	2.7	8.7
June.....	1.7	8.5
July.....	1.6	8.2
Total.....	100.0	100.0

¹Theodore Macklin, *Efficient Marketing for Agriculture*, p. 149.

as banks in the primary markets are burdened with loans to producers, the available capital is soon exhausted, and the banks have to call upon their correspondents for additional funds. Merchants who are rapidly buying cotton from the buyers in the smaller points are constantly borrowing from banks in the centers where they have their head or a branch office; factors are establishing lines in order to meet the demands made on them by the planters; and mills are borrowing from their banks in cities where they maintain offices or in near-by capital markets. The rapidity with which cotton comes to market makes the demand for excessive loans heaviest from October to January. The movement of cotton to market and the months in which the movement is most active are shown in Table 16.

Financing the Factor

Factors are found principally in Memphis, Augusta, New Orleans, Savannah, Charleston, Houston, and Galveston, and their methods of financing are confined, with few exceptions, to those cities. As the cotton is picked and ginned the planter consigns it to a factor. Instead of shipping the baled cotton to the factor, the planter may store it in a local warehouse or compress and send the receipt, with samples from the bales, to the factor. Factors reporting from several of the principal cities estimate that only a small percentage of the cotton that is handled by them is received under contract for advances which were made to the planters in the growing season. Only 25 per cent of the factors reporting indicate that more than 75 per cent is handled under contract for spring advances, while the majority of the reports show that the percentage averages between 5 and 35 per cent, the remainder being on commission. If the cotton is shipped to the factor, he has it warehoused, insured, sampled, and eventually sold. But if only samples are shipped, he handles the cotton on the basis of the samples which he receives.

As soon as the factor gets possession of the warehouse receipts he often presents them to the banks, pledging them to secure such advances as were made to him. When the cotton is sold, the factor is reimbursed by draft on the purchaser, which is deposited with the bank that holds the warehouse receipt and the loan is liquidated. The net proceeds of the sale are credited against the advance which was made to the planter in the growing season or at the time when the cotton was consigned to the factor.

The amount that factors will advance on cotton consigned varies with the different factors and the market conditions at the time of

the consignment. The advancement is either a fixed amount against each bale or a certain percentage of the market price at the time the cotton is delivered. If advances are on a percentage basis, it is usually about 50 to 75 per cent of the value of the cotton, whereas if it takes the form of a fixed amount per bale, it varies from \$50 to \$75 a bale (1922 cotton prices).

In order to meet the drafts that are drawn by the planters, the factors usually have to borrow very heavily from the banks. The banks advance funds to factors either upon an unsecured promissory note or on one secured by warehouse receipts representing the cotton consigned to them. The degree to which these methods are used varies with the different factors. In many cases the factors are of strong financial standing and can borrow on their straight promissory note. Others, although they do not own the cotton outright, borrow from their bankers and pledge the cotton as security. The banks, when they know the factors, "as a rule do not hesitate to make loans, taking the stored cotton as security." Advances to factors by banks on cotton stored vary from 60 to 75 per cent of the value of the cotton. Banks, in many instances, attempt to advance only the amount which the factor has advanced to the farmer. When loans are greater than local banks can support, banks in other cities are called upon to aid in the financing, "and in this case arrangements are usually made with the local banks to hold the warehouse receipts in trust to secure the lender." One factor reports that loans are obtained in Chicago and New York.

Financing the Cotton Merchant

The process of assembling and distributing the greater part of the American cotton crop falls upon the cotton merchant or broker. Banks in the concentration cities and other financial centers are concerned primarily in extending loans to him. The merchant or broker acts at times in the capacity of buyer, at others as a broker, and when he concentrates quantities of cotton awaiting demands from the mills he is termed a cotton merchant. The merchant is involved in a cotton transaction at three different stages, (1) buying, (2) assembling and storing, and (3) selling. Likewise the problem of financing may be analyzed under these three heads.

Buying.—Several methods of buying cotton are used by the merchants. Many of the large cotton-buying firms have head offices in one of the principal southern cities and a number of branch offices in other cities throughout the Cotton Belt. From the branch offices

buyers are sent into the near-by local markets to buy cotton from growers and local dealers or supply merchants. The extent to which each of the sources is used to obtain cotton varies with the several cotton firms that are organized on an extensive basis. One large firm operating entirely in Tennessee, Arkansas, and Oklahoma says that 65 per cent of its cotton purchases are from local supply stores and 35 per cent are from the growers directly. Another firm that maintains offices throughout the cotton areas in the larger cities estimates that 90 per cent of its purchases are from dealers in the local markets, from 3 to 5 per cent from growers, and the remainder from coöperative marketing associations. Another large organization estimates that approximately 50, 40, and 10 per cent of its purchases are from growers, dealers, and coöperative associations, respectively. Other merchants who operate one or more offices in several of the primary markets usually deal directly with the growers in these markets and resell to the firms organized in the manner described. An illustration of the method of buying is given by one of the larger firms in the following:

We buy practically no cotton from growers, but buy nearly all from local dealers in the interior markets (principally at compress points); we estimate that about 90 per cent of our cotton is bought in this way, the balance is bought from dealers at ports such as Galveston, Houston, and New Orleans; we also occasionally buy from coöperative marketing associations.

The merchants use various methods in paying for the cotton which they have purchased in the primary markets. Growers selling at one of the buying offices of the merchant are usually paid by check on a bank in the city in which the office is located. The usual practice in paying for other cotton purchases is shown in the following comments:

All sellers are paid by draft (with bills of lading attached) on buyer's head office or other buying office, except on purchases made in city of head office or buying office, in which case seller is paid by check on local bank. We have a few buyers working for us who buy at interior points and arrange a line of credit with the local bank to pay for their purchases, and in turn reimburse the local banks with drafts and bills of lading attached on the head office. The percentage of cotton bought in this manner is very small, not over 5 per cent.

One large interior firm that sends representatives from each buying office into the surrounding local markets uses the following method in financing purchases:

If we buy direct from the grower we give him a check on a local bank with which we have made arrangements prior to the opening of the season. Every night for cotton bought by ourselves the local bank draws

on our head concentrating office for the territory under consideration. After assembling all these drafts from different points in their territory, the buying offices draw on our head office for round amounts. They keep their own books, so practically each office is run on its own footing, except from the financing and selling end. The drafts are then paid by the banks serving the head office.

In contrast to this method of handling cotton purchases several merchants operating in the western sections of the Cotton Belt report the use of acceptances in their cotton financing. This has not applied generally, but the following example as given by a merchant in Fort Worth is one instance in which the method has been employed and is similar to the plan used by other merchants:

In handling cotton from local dealers we usually pay by acceptances on interior or large banks in Texas, with which we have an arrangement to handle our acceptances. We purchase cotton from local dealers and make payments by draft on the bank we want to handle the transaction. This draft is accepted by us and the bank handles it according to the terms of the agreement, holding the bill of lading or warehouse receipts as security.

Storing and assembling.—As the cotton season progresses, the concentrating merchants accumulate stocks of cotton. While the purchases are being assembled in various centers throughout the Cotton Belt, the banks which are financing the purchases for the merchants are secured by bills of lading as long as the cotton is in transit and by warehouse or compress receipts when it is in storage. The merchants' demands for funds are heaviest during this period. Two sources of borrowing are used, (1) the open market and (2) banks. Of these two sources the banks in the concentrating centers support the greater burden. Borrowing in the open market is not general with all cotton merchants, as it is used mainly by the large dealers who have been in the cotton business for long periods and whose standing is known throughout the entire cotton trade.

One firm reporting from the interior says that its borrowing is done both in the open market and from its own banks in the city of its head office and in New York—about 50 per cent from each source. In financing in this manner the firm states that it usually puts out its paper in the open market first, and leaves "its bank lines open." Borrowing in the open market is done in denominations of from \$2,500 to \$25,000 and usually for a period of six months, whereas the denominations of notes used with banks are \$100,000 and for a shorter period. The latter is usually on unsecured promissory notes.

Another merchant who has buying offices in several of the larger cities of the Cotton Belt says that all of his borrowed funds, used to buy cotton, are obtained by borrowing from banks in the cities where offices are maintained and in New York. The borrowing is done as follows:

As the cotton season opens and cotton begins to move, the buying offices borrow from the local banks, keeping the banks supplied with bills of lading or warehouse or compress receipts as collateral. As the cotton movement gets too heavy for local banks to finance entirely, borrowing is done in New York, both on line of credit and on bank acceptances. The bank acceptances are usually made for a period of 90 days and are secured by bills of lading or warehouse receipts as collateral. The acceptances are sold to New York banks, sometimes to the accepting bank. These acceptances run in various amounts, usually from \$10,000 to \$100,000 each. The money borrowed by us on our line of credit is also at all times secured by bills of lading and warehouse receipts as collateral, either put up with the New York banks in New York or being held by local banks for the account of the New York banks. In addition to secured loans, we usually borrow from \$1,000,000 to \$1,500,000 on unsecured paper.

Methods of borrowing used by merchants who handle cotton in smaller quantities are not at variance with those to whom we have referred, except that their borrowings are largely local, although in some instances the merchants report banking connections in New York. Loans obtained from New York banks are secured by either depositing bills of lading, warehouse or compress receipts with the New York bank, or placing them to the credit of the New York bank with its southern correspondent. The maturity of the loans is usually determined by the activity and rapidity with which the crop is moved, whereas the denominations of notes issued depend upon the financial standing of the merchant and the size of the bank that is financing him. Reports from merchants from 40 leading cotton centers show that the loans are usually made to mature from 15 days to 6 months, the average maturity being near 90 days. The denominations of notes issued are usually in round numbers and vary from \$1,000 to \$100,000, but one merchant says that notes are made for \$250,000. The average notes given to banks are between \$10,000 and \$50,000.

The usual period for merchants to begin borrowing is between August 15 and September 15. The earlier date is used by merchants in the southernmost areas of the belt, whereas the later date is used by merchants in the northern sections of the Atlantic states. In general, the seasonal bank borrowing follows the cotton picking and ginning season. Merchants often have considerable capital and do

not rely upon the bank until after it has been used. These two factors cause discrepancies between the replies of merchants and banks in different areas, but in general it can be said that the borrowing to move the cotton crop begins about September 1 and continues until the peak is reached between December 1 and 15. After December 15 the supply of cotton entering the market decreases and, with the regular takings by the cotton mills, the loans are gradually liquidated throughout the spring and early summer months. In normal years most merchants "clean up" their accounts with banks before August 1.

Sales by merchants.—Merchants make sales to cotton mills in the United States and to foreign buyers. The percentage of cotton handled by the different merchants that is sold to domestic consumers and for foreign consumption varies with the merchants. Some merchants in the eastern cotton states report that they deal largely with southern mills, while those from the middle and western areas estimate that their sales are mainly to northern mills and for export.

When a sale of cotton has been arranged and against which the bank holds the warehouse receipts, the merchant gives a trust receipt to the bank which, in turn, releases the warehouse receipts. The latter are presented to the warehouse and the cotton is delivered to the transportation company. An inland or ocean bill of lading, according to the place of destination, is obtained. "These ladings are then returned to the bank attached to a sight draft drawn upon the consignee, which is usually discounted by the bank, and the credit closed." Practically all of the sales made to American mills are made on a cash basis, the buyers paying either by sight draft or three days' sight draft with bill of lading attached.

Financing Cotton-mill Purchases

The methods used by cotton mills in purchasing raw cotton vary with the mills in different manufacturing regions of the country. Mills in the South are often located in the primary cotton markets or very near large supplies of the commodity. Those in other sections of the country are far distant from the source of supply and the different methods of buying are determined in large measure by this.

Mills in the cotton-growing states.—In the South the manufacturers buy cotton from three sources: (1) Growers directly, (2) local dealers, and (3) cotton merchants. Mills which are located in the large primary markets buy considerable quantities of their cotton from the growers in the local market. The importance of local buying is shown

by the fact that mills reporting from several cities in South Carolina, Spartanburg, Anderson, and Pacolet, estimate that 80, 60, and 30 per cent, respectively, of their cotton is bought directly from growers who sell in those markets and through agents who are sent into the markets of the surrounding territory. Some mills in North Carolina, Georgia, Alabama, and Mississippi report that they buy large quantities of cotton directly from the producers within their territories. The remaining cotton is bought from local dealers in the smaller towns and from merchants in the concentration centers.

Growers are usually paid by checks on the local banks in the towns in which their cotton is sold. If cotton is carried by the producer to the mill, he is given a check on the mill's bank, whereas when the mill sends its representatives into the local markets they usually pay the growers by checks on the local banks in such markets.

The arrangement made with the banks is similar to that which is made by agents of cotton merchants. Dealers and merchants generally draw on the mills and attach bill of lading as soon as the cotton is shipped. The drafts are discounted by the local bank and forwarded to the mills for collection. Several mills state that when cotton is bought in large lots they often give the merchants drafts on New York or Boston banks. This, however, applies largely to some of the larger textile corporations that maintain selling offices in these cities.

In order to finance their cotton purchases, it is necessary for many mills to use borrowed funds. Some mills are able to finance all their cotton purchases; others rely largely on their banks, while others borrow in the open market through note brokers. Loans are usually made to the mills on their unsecured paper, based upon their financial statement or indorsement by members of the corporation. In but few instances is cotton pledged by the mills as security. Payments are usually made in cash for cotton, the funds being obtained in the ways mentioned. In view of the fact that acceptances are recognized as being commercial instruments of the highest type, the use that has been made of them in financing purchases of raw cotton by mills is very limited, for in only two reports were trade acceptances reported to have been used. This is in accord with reports from cotton merchants who noted the use of trade acceptances in only a few instances.

Mills in other states.—The northern mills buy their cotton mainly through cotton merchants and brokers. These have offices or agents in the principal cotton manufacturing centers of the North and East.

They obtain cotton through buyers and merchants in concentration centers in the cotton-growing states. Cotton is sold to the mills either on "spot" or "under contract calling for future delivery of the total quantity at one specified date or by monthly installments." As many mills operate plants in both the North and the South, the method followed in buying cotton for the southern plants is similar to that used for the northern mill. The cotton is contracted for through a northern broker and is delivered to the southern mill by the dealer in the South with whom the broker contracts. The seller on delivering the cotton to the southern mill draws on the northern office by sight draft.

As the purchases of raw material by cotton mills are normally in accordance with the demands which mills have from the consumers of cotton goods, the problem of financing cotton purchases is not one of great importance to the mills. Merchants, on delivering the cotton, are paid generally by sight drafts on the mills. If, however, cotton is bought for future delivery, the "cotton mill-sale note," or mill acceptance, is often used to finance the merchant until the mill is ready to consume the cotton or, in case of a deferred shipment, until the cotton can be delivered to the mill. The sale note provides a means for the mill to receive indirect bank credit through the cotton merchant. The merchant delivers cotton to the mill, which is stored in a warehouse of the mill, and the former is given a seller's warehouse receipt by the treasurer of the mill. This document, which is evidence of an acceptance of cotton by the mill, is presented by the merchant to his bank to obtain credit with which payment is made to the original seller of the cotton to the New England merchant. As the sale note is used more to finance sales for deferred shipment, the bill of lading is usually delivered to the treasurer of the mill against which the combination bill of lading and warehouse receipt is issued. This, in turn, is presented to the bank in the manner described.

5. CURRENT FINANCING IN THE PACKING INDUSTRY¹

Consider the simple case of a packer who wishes to buy, dress, and sell a farmer's pig. Since the purchase must be on a cash basis, it must be financed. If the packer has not sufficient free funds, he must borrow. When he has borrowed the money and bought the animal, he

¹ Adapted from E. A. Cudahy, Jr., *Financing the Packing Industry* (1923), pp. 203-9, 214. (Lecture VI of a series of lectures on *The Packing Industry* given under the auspices of the School of Commerce and Administration of the University of Chicago and the Institute of American Meat Packers. Copyright by the University of Chicago.)

cannot get his money out of it without doing work on it. The consumer does not eat pig; he eats pork. To convert the pig into pork and other hog products ready for sale means more money. Plant, equipment, and operations are required.

When finally the packer has turned his pig into pork, he finds that only the fresh pork can be sold immediately. Other cuts must be put into cure for one, two, or perhaps three months. This means spending more money; wages to the man who salts them, to the man who lifts them out of one vat into another, to the man who examines them to see whether they are cured, to the accountant who keeps track of them, to the auditor who changes their value on the books as the market changes, to many others who contribute to the final result. There are also disbursements for many things beside wages. All of these expenses must be financed until the products can be sold. At last the cured meats are offered on the market. But the market has been oversupplied; the packer is forced to look for buyers outside of the day-to-day domestic demand.

An Englishman finally buys the bacon, a man in Holland takes the lard, a Boston retailer purchases the hams, a member of the board of trade contracts for the fat back, and, in the course of a month or two, receipts of hogs become light and the packer takes the shoulders out of cold storage and sells them. If he is lucky, he gets his money back and a small profit in addition. He must repay with interest all he has borrowed, pay all expenses not already met, and, if possible, give the stockholders a fair dividend on their investment. He has made it possible with the help of the banker, the retailer, and others for the farmer to sell his pig to the consumer. Multiply the operations just described by the vast number of pigs slaughtered, and of cattle, and of sheep, and of calves, and you get some idea of the magnitude of packing-house finance.

CURRENT FINANCING NEEDS

The best way to gain an understanding of the means and methods of financing this industry is first to consider the day-to-day transactions and, second, the major or long-time operations. Under the first caption the packer's main item of expenditure is payment for livestock. Every dollar of value in finished products of the slaughtering and meat-packing industry, according to United States census figures covering the year 1919, represents a payment for raw materials, principally livestock, of about 89 cents. The first concern of the packer is to have the funds on hand to pay for his daily purchases of live-

stock. Most of this money comes from his sales, the proceeds of which are transmitted as quickly as possible to livestock centers, so that additional supplies of livestock can be purchased.

All livestock is paid for the day it is purchased, either by check or by duly authenticated invoice of the commission firm, which must bear the signature of the head livestock buyer. The commission man then deposits the check or invoice from the bank to his credit, and the livestock owner receives from the commission man the net returns of his sales either in cash or draft. Often the livestock man after disposing of his livestock will reinvest his proceeds in additional cattle, to be shipped to his farm for feeding and later returned to market. The fact that the buyer for a number of firms will purchase 3,000 hogs a day, totaling approximately \$60,000, and that a single cattle buyer for an equal number of firms will buy 1,000 cattle a day, totaling about \$100,000, and that all these transactions are accomplished verbally with practically no misunderstanding speaks well for the caliber of men who are employed by the packers as buyers and of the men found in the commission business.

To carry on various manufacturing processes the packer must be a large purchaser of containers, fuel, ice, salt, and sugar. These items, according to the census figures, cost the 1,304 packers, covered by the figures for 1919, \$425,664,430. Bills for these articles have to be met, and the packer whose financial position enables him to do so accepts the cash discounts (in most cases 1 per cent or 2 per cent for payment in ten days or net thirty days or net sixty days) rather than take the extended time of thirty to sixty days without such discount. This prompt method of payment is of equal advantage to both seller and buyer. One per cent ten days, net thirty, is equivalent to an annual interest rate of 18 per cent; 2 per cent ten days, net thirty, is equivalent to 36 per cent annually.

The pay roll is another large item that must be met at regular intervals, in most cases weekly. According to the census report for 1919, just cited, these 1,304 establishments paid out in wages and salaries to 197,392 employees \$269,174,628, of which seven-ninths represented wages.

From the foregoing you will readily see that the packing industry is pretty much on a cash basis. The fact that livestock is paid for the day it is purchased, that pay rolls are met weekly, that purchases of supplies are in most cases paid for ten days after the receipt of invoice in order to take advantage of cash discount makes it necessary for the packer in turn to sell his goods on short-time credit.

Meat products are sold through branch houses and on car routes almost exclusively to the retail trade. Collections from retailers for fresh meat, or mixed sales of fresh meat and provisions are made weekly; in case of straight provision, sales thirty days net is the usual practice, except for lard, which is sold $\frac{1}{2}$ per cent ten days, thirty days net. Thirty-day terms are confined almost exclusively to southern trade. Carloads of either fresh meat or provisions are usually sold sight draft attached to bill of lading; canned meats $\frac{1}{2}$ per cent ten days, thirty days net.

Owing to the fact that livestock is paid for in cash; that it is to the advantage of a packer to discount his bills for purchases of supplies; that it is necessary for him to accumulate supplies of meats in cure and storage; that by-products must be put through manufacturing processes which take considerable time, and then often have to be carried for months before sale is effected—these and other circumstances mean that the packer operates to a large extent on borrowed capital, obtained principally through bonds, debenture notes, bank loans, and commercial paper.

6. FINANCING THE SALE OF AUTOMOBILES¹

CHATTEL MORTGAGES

The financing of automobiles by banks started way back in about 1907, and it was done in those days (but very meagerly done at first) on chattel mortgages, which, however, were not recorded to any extent. These mortgages covered the stock of cars which the dealer bought from the manufacturer, to whom he had to pay strictly cash. Later, when the business became more general, the chattel mortgages were recorded, and that system still pertains to this day to a large extent—that is, taking and recording the mortgage and allowing the dealers to keep possession of their cars. But it is a very unsatisfactory way of doing business because probably in the final court decisions the security would not hold, for the reason that if a customer goes into an automobile merchant's store, sees a car that he likes and buys it, there is nothing to show that there is any mortgage on it, and no one goes down to the county clerk's office to make a search as to its title any more than one would if he were buying a Victrola.

The dealer gives to his bank a chattel mortgage on this car which is on his floor for sale. What he is expected to do is to negotiate a sale

¹ Adapted from William C. Cornwell, "The Bank and the Automobile Market," in *The Burroughs Clearing House*, Vol. VII, No. 7 (April, 1923) pp. 20-22.

of the car, if he can, but before he makes actual delivery he is supposed to go to his bank, pay off the loan that he has on this particular car, and have the mortgage satisfied of record. He, however, never does it exactly that way, because he has to make the sale, deliver the car, and take in the money before he can pay the bank. Usually he pays the bank in lump sums—a part or all of that particular loan—and gets a release of a part or all of the cars under the mortgage.

A fair estimate is that one-half of the loans on automobiles as security are made on chattel mortgages. The balance, referring now only to when the car is put up as security, not to straight loans, is made up of loans on warehouse receipts (where the cars are put in warehouse and the receipts used as collateral security) and of loans on trust receipts.

TRUST RECEIPTS

Trust receipts consist of certificates given by the dealer to his bank, in which he certifies that the cars are the property of the bank. These would probably not really be a legal lien on the particular car or cars; at least, there is a question whether the chattel mortgage holds the car if it goes into the hands of an innocent purchaser.

Neither would the trust receipt hold; that is, unless it were recorded, and then it would become, to all intents and purposes, a chattel mortgage.

Trust receipts are accepted by banks only from the most responsible and reliable dealers (generally the very large automobile merchants), or when the retailing concern is owned or absolutely controlled by the manufacturing company. Many of these selling concerns are so controlled. The collateral in such cases is, after all, only moral security.

The principle is just about the same as when in Wall Street a loan is made on all straight collateral, and the borrower is allowed to hold the collateral. If the moral responsibility is all right, such loans are made and the borrower is relied upon to give back the collateral to the bank when and if it is asked for or needed for any reason.

We have been considering thus far loans from banks made when the automobile itself was used as the background of the credit, and when, as we have said, the dealer was bound (as he still is) to pay to the manufacturer spot cash, or cash against draft with bill of lading attached for automobiles shipped, and the customer paid cash to the dealer. This made it necessary for the dealer to obtain from his bank (if he could) whatever credit was needed in the operation.

At about that time, six or seven years ago, there came gradually into the industry, the practice of selling to the customer on time, taking part cash and the balance in notes. These notes were secured, in some instances, by strict chattel mortgage on the particular car.

THE FINANCE COMPANY

When the retail purchaser bought a car and gave notes for it, he did not get clear title to the car until the last note was paid. The conditional bill of sale of the dealer to the purchaser enabled the former to seize the car at any time the latter defaulted, inasmuch as the title still remained in the dealer. He was really loaning the car to the customer until it was paid for. These notes thus had a certain physical collateral value, and some of them were discounted by the banks. But the banks were reluctant about taking them, and this brought into existence the finance companies.

The finance companies recognized the value of these notes carrying behind them a title and negotiated by careful dealers, who took sufficient margin in cash at the first payment to protect themselves.

It was a new way for the dealer to get the money needed to pay the manufacturer and was much more satisfactory to the banks than the old way, where the merchant dealer went to the bank and borrowed on chattel mortgages.

The business of the finance companies was a profitable one, due to the fact that while they loaned to the dealer at only 6 per cent they were entitled to insurance fees in the transaction, because the dealer must turn over to the finance company the insuring of the car, and the purchaser was obligated to place and pay for all kinds of insurance—theft, fire, collision and property damage. As he was a part-payment purchaser there was no difficulty in insisting upon this, and it was, in fact, a protection to himself which he would have effected in any case. In this way the finance companies began to make money—not by discounting the paper which they took at 6 per cent, but on the insurance premiums which were quite profitable and which were paid, as has been said, by the purchaser.

This is the method by which a very large part of the retail automobile financing is done today. These companies, many of them, are well capitalized and can establish large credits with the banks, using the notes with sufficient margin as a basis of a loan to themselves. As a rule, they will accumulate a few hundred thousand dollars' worth of these notes and then place them with some bank or trust company as collateral security to a debenture or note, with ample margin, and

these notes with collateral are readily negotiated by the big banks who would not loan on ordinary automobile paper.

That is the case throughout the country where finance companies have been established, and while a country banker would not think of loaning on the installment notes themselves, he will loan on the obligations for which these notes are collateral.

The finance companies will also loan money to any reputable dealer at 6 per cent, taking a trust receipt, chattel mortgage, or a bill of sale against his cars in stock. The bill of sale is used when the dealer arranges with the manufacturer to ship cars to him, but to bill them to the finance companies. The cars thus become directly the property of the finance company, who authorizes the dealer to sell them and account for proceeds.

The trust receipts are used where the finance companies, to establish relations with the dealer (in order eventually to get his retail note business), loan to him at 6 per cent on the cars he has ordered from the manufacturer and against which the manufacturer draws a sight draft with bill of lading attached. The dealer turns over to the finance company a bill of sale of these cars, and the company immediately gives him a check with which he pays the draft. It is in effect a cash sale by the dealer to the finance company, for the time being.

Importance of Finance Companies

Finance companies have sprung up within the last six years all over the country, and they seem invariably to have been prosperous. They are said to have had the best legal minds in the country work out their system, and today it is asserted that the machinery is perfect. Many of them have large capital. In the City of New York alone, it is said that there are at least fifteen who each have capital invested in their business of \$1,000,000 and over. Some of them do not confine their attention exclusively to the financing of automobiles, but take in other industries. The large part of their business, however, is in supplying automobile credit.

It is said that over 70 per cent of all automobiles manufactured are sold on time through the banks and these finance companies. This volume of business is one reason for the prosperity of the finance company. There is so much of it that, while the interest rate charged is moderate, the companies make much money out of the insurance premiums which the purchaser pays. It is not an added burden to him because he is bound to take out insurance anyway, whether he buys on credit or for cash.

The retail merchant, from the banker's viewpoint, has had a very difficult proposition inasmuch as he receives as a rule no credit from the manufacturer. It makes no difference how responsible he is; his goods come to him sight draft attached. He has to pay cash for them.

In practically every other industry the merchant gets some credit from the manufacturer, who does not expect spot cash for his product as soon as it is manufactured and shipped. But in the case of the automobile, in 90 per cent of all transactions, the manufacturer gets spot cash. By the time the dealer's goods are placed on the car, the manufacturer's money is in his bank account, because he has the sight draft sent to his bank and they give him immediate credit. The sight draft is sent to the bank of the dealer who must take up the draft at once as soon as he gets notice that the cars have arrived. He, therefore, gets no credit at all on his goods except in an infinitesimal way.

7. THE CREDIT PROBLEM IN THE RETAIL LUMBER TRADE¹

The problem of credit is regarded by many retail lumbermen as equal in importance to that of volume. The lumber business throughout the region studied is transacted largely upon a credit basis. Dealers conducting a strictly cash business were noted only in rare instances. The amount of credit carried on the books of the average yard at the close of 1914 was \$10,404. Applying this average to the total number of yards in the region, the sum carried by the trade was approximately \$114,121,476, or 26.35 per cent of the sales made during the year. Interest on this amount at 6 per cent is equivalent to \$6,847,288.

In the 2,445 annual line-yard operations, covering a period of four years, the average outstanding accounts were 26.83 per cent of the total sales, while at the city yards studied in Chicago, Kansas City, and Minneapolis, outstanding accounts formed 27.09 per cent of the total sales. Accepting these figures as approximately correct, the dealers carry from 25 to 30 per cent of their sales for an average period of one year. Using average lumber selling prices of \$30.75 per thousand feet for country trade and \$26.44 per thousand feet for city trade, the interest charges incident to carrying credits may be expressed as follows per thousand feet of lumber:

¹ Adapted from Ovid M. Butler, *The Distribution of Softwood Lumber in the Middle West: Retail Distribution* (1918), pp. 48-49. (U. S. Department of Agriculture, Report No. 116, *Studies of the Lumber Industry*, Pt. IX.)

Item	Country Trade	City Trade
Average selling price of lumber per thousand feet.....	\$30.75	\$26.44
Percentage carried on books for average period of one year.....	26.83	27.09
Equivalent value in dollars.....	\$8.25	\$7.15
Interest at 6 per cent	\$0.495	\$0.429

In other words, for every thousand feet of lumber sold in the country trade the interest charges resulting from the extension of credit amount, at 6 per cent, to approximately 50 cents, and in the city trade to approximately 43 cents.

The data obtained indicate that a relatively small proportion of the transactions in the retail lumber business by and large are cash sales. For example, it was ascertained from the records of 14 yards in one of the prairie states that for a period of three years only 13 per cent of the sales were cash transactions, credit being granted in the remaining cases. Replies from 418 dealers distributed throughout the entire region showed an average of 16.1 per cent of cash sales. During the course of the study accounts were noted which had been carried as long as six years, although it is the common practice for dealers to charge off small accounts on which hope of collection seems futile after a period of two years. The greatest proportion of the accounts carried are, of course, incurred during the current year's business.

Aside from the greater capital required for carrying accounts, an added cost of transacting credit business is the loss from bad accounts. The average loss from bad accounts is 8 cents per thousand feet for the city yards and 10 cents per thousand feet for the country yards. The total cost of transacting a credit business, therefore, if interest on the added capital is included, is approximately 50 cents per thousand feet in the city trade and 60 cents per thousand feet in the country trade.

Many methods have been employed by different dealers to reduce the credit burden. Although not the uniform practice, it is common for dealers to grant a discount of from 2 to 5 per cent, in exceptional cases 10 per cent, for cash or for a settlement of the bill within fixed date. Interest is charged on credit accounts from the date incurred, in some cases, but more commonly after the expiration of a given period.

CHAPTER XVII

MARKET RISK

1. THE STRUCTURE AND ORGANIZATION OF THE CHICAGO BOARD OF TRADE¹

The Chicago Board of Trade, like all the other important grain exchanges, is a corporation. It was incorporated under a special act of the Illinois Legislature passed February 18, 1859. This act incorporated the then existing Board of Trade, which had had its early beginning in 1848 as a voluntary association. It was not till 1856, however, that the trade in grain was important enough to make the Board of Trade a real grain exchange.

The objects of the Board of Trade are set forth in its rules as follows:

- (1) To maintain a commercial exchange.
- (2) To promote uniformity in the customs and usages of merchants.
- (3) To indicate principles of justice and equity in trade.
- (4) To facilitate the speedy adjustment of business disputes.
- (5) To acquire and to disseminate valuable commercial and economic information.
- (6) To secure to its members the benefits of coöperation in the furtherance of their legitimate pursuits.

The Board of Trade, as a corporation, does no trading. It owns a building. In short, it merely furnishes (1) a place to trade; (2) rules of trading; (3) market information. The members, acting as individuals, trade among themselves and as agents for many thousands of outsiders.

MEMBERSHIP

The membership of the Board of Trade now (1919) numbers 1,617. There is no limit to the number of members who may join.

The membership may be classified (1) as to place of residence, and (2) as to the nature of their business.

¹ Adapted from James E. Boyle, *Speculation and the Chicago Board of Trade* (1921), pp. 14-21. (The Macmillan Company.)

(1) There are 1198 members of the Board of Trade resident in Chicago. The remaining 419 are distributed as follows:

New York.....	131	Kentucky.....	6
Illinois.....	71	Louisiana.....	5
Missouri.....	50	South Dakota.....	3
Minnesota.....	44	Arkansas.....	2
Ohio.....	24	Texas.....	2
Canada.....	24	Washington.....	2
Nebraska.....	18	Washington, D. C.....	1
Indiana.....	16	Arizona.....	1
Iowa.....	16	Kansas.....	1
Wisconsin.....	14	Virginia.....	1
Massachusetts.....	11	Florida.....	1
Pennsylvania.....	11	Colorado.....	1
Maryland.....	8	Utah.....	1
Michigan.....	8	Oklahoma.....	1
California.....	7	Oregon.....	1
Tennessee.....	6	England.....	1

This distribution corresponds fairly accurately to the location of the larger terminal markets and to the important consuming centers.

(2) In classifying members on the basis of their principal activity, it must be borne in mind that such members are quite generally active in two or more lines of the grain business, and hence an effort has been made to list a member according to his chief activity.

About one-fourth of the membership are interested in receiving and selling consigned grain or in shipping cash grain; about one-fourth are primarily concerned with future trading in grain (both speculative and hedging); about one-fourth are brokers who act as agents for others (and sometimes for themselves as principals) in doing the pit trading (future trading); the balance of the membership represents those interested directly and indirectly in grain or provisions. Banks, railroads, and steamship companies have thirty-five memberships in order the better to give attention to the financing and transportation of the grain. The great flour mills, the great corn products companies, the cereal breakfast food manufacturers, have memberships and represent heavy buying interests. All important terminal elevator companies belong, and these too represent strong buying power. Exporters represent another group of buyers. Both the buying and the selling side of the market are well represented so that the market factors are present which go to make up a real auction.

One farmers' company which belongs to the Board of Trade is an export company of Canadian farmers, and does a very large wheat export business. A second farmers' company operates six or seven country elevators in Illinois.

Classification of Members, Chicago Board of Trade, Year 1919

Cash grain trade.....	394	Seeds and miscellany.....	14
Future trading.....	393	Oats products.....	14
Brokers.....	385	Corn products.....	10
Terminal elevators.....	50	Railroads.....	10
Pit scalpers.....	48	Steamships.....	9
Packers.....	44	Salvage grain.....	8
Provisions.....	41	Line elevators.....	8
Feeds.....	35	Stockyards.....	1
Exports.....	27	Vinegar.....	1
Flour mills.....	24	Inactive.....	70
Banks.....	16		1,617
Malster.....	15		

The packers and provision dealers are represented, since there is one pit on the Exchange floor where there is future trading in provisions (pork, lard, short ribs).

In the above list are included two farmers' companies, namely, Grain Growers' Export Company, Winnipeg (Thomas Crerar), and the Plainfield (Ill.) Grain Company (Joseph A. Henebry).

The pit scalper, in the above list, is a person who trades for himself in the pit, and is in and out of the market on very small price fluctuations.

The future trading list of members includes the various firms in Chicago and elsewhere whose main business is to handle future trading orders for customers. In almost every case a Chicago firm executing future orders for a commission is also engaged in receiving consigned grain in car lots on commission. In fact, one distinguishing feature of the Chicago market is the large mingling together of the cash and the future business.

There are several large and influential firms operating leased wires, and these firms are generally called "private-wire houses." Some of these firms have only one branch office; some have twenty or more branch offices; one of them has 40,000 miles of leased wires, stretching from Boston and New York to San Francisco, and from Winnipeg to the Gulf, and with "drops" in most of our large cities. Some of the private-wire houses reach out into the small towns of the country. Some are engaged almost wholly in future trading; others feature the cash grain business. In the above list, the wire houses are listed under the heads of cash grain and future trading.

Any male person of good character and credit, of legal age, is qualified, under the rules of the Board, to become a member. Applicants for membership must first be indorsed and recommended by two

members who stand sponsors for them, and must next be approved by the membership committee. The applicant's name is posted on the bulletin board for at least ten days. An unfavorable vote by three directors (out of eighteen), three "black balls," is then sufficient to shut out the applicant. Upon joining, the applicant signs an agreement to obey all the rules of the Board of Trade, and he is held to be strictly bound by these rules, under penalty of suspension or expulsion and loss of his membership fee. Memberships are bought from retiring members or from the estates of deceased members, and cost, during the year 1919 from ten thousand to eleven thousand dollars. The price varies greatly from year to year.

MANAGEMENT

The affairs of this corporation are managed by a board of directors of eighteen members. The president is elected by the general membership for one year. The annual election is held in January. There are two vice presidents whose term of office is two years. There are fifteen other directors whose term of office is three years. Hence the president, one vice president, and five directors are elected annually.

As a self-governing institution, the Board's method of law making is very democratic. The initiative and referendum came into vogue here long before it became popular with our state governments. All rules are adopted by the members. And it is worthy of comment, that when it comes to a vote, the "small business" men out vote the "big business" men. In practice, the usual vote cast at an election is about 400 or 500 — much less than half the membership. Since one-fourth of the members are non-residents, it would seem just and wise to introduce a plan of voting by mail. A larger and more representative vote would then be secured.

Under the charter of the Board it has power to adopt rules and to enforce them. Under this provision, there have gradually grown up, during the past fifty years, an elaborate set of rules, by-laws, and regulations, filling almost one hundred and fifty printed pages. The rules are easily changed to meet emergencies, such as war conditions. These rules give very great power to the directors to discipline members. And the courts have repeatedly and consistently upheld this disciplinary control of members.

The active administrative work is largely in the hands of committees. A glance at the list of these committees shows the great number of important details with which the Board must concern itself in order to keep the market machinery running smoothly. At the

outset we find two committees, provided for in the original state charter, and the only committees which are elected by the membership at large. These are:

- (1) Committee on Arbitration (10 members)
- (2) Committee of Appeals (10 members)

The other more important committees (chosen by the president) are:

- (3) Membership
- (4) Warehouse
- (5) Grain
- (6) Clearing House
- (7) Market Report
- (8) Violation of Rules
- (9) Transportation
- (10) Weighing and Custodian
- (11) Claims and Insolvencies
- (12) To-Arrive Grain

PHYSICAL EQUIPMENT

The trading room of the Exchange is a high-ceilinged room, 144 by 161 feet. The adjoining smoking room (no smoking is permitted on the trading floor) is 64 by 72 feet. In the trading room along the large east windows, there are fifty-two tables for displaying samples of cash grain, each table capable of accommodating four firms. In the case of the larger firms, of course, one table is used by one firm only.

To accommodate those engaged in future trading there are four circular "pits," with three or four steps leading down into the pit. These are the wheat pit, the corn pit, the oats pit, and the provisions pit.

To accommodate those buying grain "to-arrive" there is a desk where all bids are recorded and from which they are at once posted on the large blackboard.

MARKET INFORMATION

The trading floor of the Exchange is provided with means of securing market information, rapidly and accurately, and of disseminating market information to all interested. There are 100 telephones and 150 telegraph instruments. Large blackboards display such information as the following: Exports of breadstuffs at Atlantic and at Pacific ports; cash grain market at other important

terminals; futures market at Minneapolis, Duluth, Winnipeg, Kansas City, St. Louis, New York; visible supply of grain at Baltimore, Boston, Buffalo, and all other important markets, including also grain afloat at each terminal where vessels are loaded; movement of grain at Chicago—receipts by each railroad, shipments by each railroad; daily receipts in Chicago warehouses and daily shipments from same; inspection—car lots, grades, etc., in Chicago. Several tickers are on the floor, some giving price quotations, and some the so-called market gossip (i.e., domestic and foreign news items of commercial and financial significance). There is also a large weather map, furnished by the United States Department of Agriculture, showing for each morning the country's weather (wind direction, precipitation, clear or cloudy, and barometer). This is supplemented by large charts giving precipitation for many shipping points in each grain-producing state.

The factors affecting either supply of, or demand for, grain are quickly noted and made public here. A strike of the Boston police, for instance, is reported on the gossip ticker, and a depression is cast over the demand for wheat.

The important newspapers have representatives in the "press gallery"—a section near the provisions pit. They report the doings of the market to their millions of readers in any manner they see fit—so long as they don't spread market rumors, which is strictly forbidden by the rules.

2. RULES FOR TRADING IN FUTURES¹

The rules applicable strictly to contracts for future delivery are confined for the most part to the following classes of subject matter:

- (a) The "contract grades" established for future delivery.
- (b) The requirement of margins as security.
- (c) Operation of, or agreement with, a clearing house.
- (d) Requirements for "regular delivery."
- (e) Liquidation of damages on default.
- (f) Prohibited methods of trading.

These rules form but a skeleton for the business engaged in and by no means indicate the technical intricacies of the futures market.

¹Adapted from Federal Trade Commission, *Report on the Grain Trade*, Vol. II, *Terminal Grain Markets and Exchanges* (1920), pp. 282-87. For more detail on many of the points mentioned here the reader is referred to Vol. V of the same *Report*.

THE CONTRACT GRADES

The grades of grain which shall be valid tender on future contracts are selected necessarily from those varieties under the Federal Grain Standards Act which are dealt in on the particular exchange. For example, the Chicago Board of Trade lists certain No. 1 and No. 2 varieties of wheat, corn, and oats which are deliverable at contract price in 1,000 or 5,000 bushel lots. There are also listed other varieties which may be delivered at a premium over, or discount under, the contract price. Occasional rules have been adopted to insure the condition of these grades, such as the prohibition against treating contract wheat by any process except drying. For the most part, however, dependence is placed on the statutory requirements for grading.

MARGIN REQUIREMENTS

The exchanges where future trading is active provide for the protection of buyers and sellers on time contracts by permitting either party to require the deposit of adequate margins as cash security. The Minneapolis rule is typical:

On time contracts purchasers shall have the right to require of sellers as security 10 per cent based on the contract price, and further security, from time to time, to the extent of any advance above said contract price for the article named and the delivery specified in the contract.

Sellers shall have the right to require, as security from buyers, 10 per cent based on the contract price, and further security from time to time to the extent of any decline below said contract price for the article named and the delivery specified in the contract. Should the contract price be above the legitimate shipping or intrinsic value of the property sold, sellers may require additional security to the extent of any difference that may exist between such legitimate shipping or intrinsic value and the price of sale.

Margins are usually required to be deposited with a bank approved by the directorate, or with an officer of the association such as the treasurer (Chicago). In Minneapolis the banking house must be a member of the Clearing House Association. In Duluth deposits are made in "some well-established bank or banking house in the city of Duluth, which may be designated by the seller."

OFFSETS AND SUBSTITUTIONS¹

The settlement of contracts by offsets or the substitution of other principals is characteristic of future trading in grain and recognized by rule on the exchanges. In the markets where trading in futures is

¹ This subject is discussed in detail in Vol. V. Ch. V. of this *Report*.—EDITOR.

active, clearing houses have been established for clearing and settling the trades of members in this way.

While the practice of making offsets and substitutions is impliedly recognized in the rules of various exchanges, only in Chicago and St. Louis is it set up as a right of traders executing contracts. Both rules are identical in requiring that any differences between the current market value of the property and the several contract prices "shall be due and payable immediately." The Chicago rule provides a basis for adjustment of such balances (which is omitted from the St. Louis provision); "such memorandum shall be in writing, and shall state on its face the date of the transaction, the quantity and kind of property covered by the same, the month of delivery, the price, and the name of the party to whom sold or of whom bought, and shall be signed by the party or firm making the same."

REGULAR DELIVERY

Time contracts are limited to denominations of 1,000 and 5,000 bushels of grain. The requirements for a valid tender of such property are fairly uniform where the seller's option is the prevailing form of contract.

In all the active futures markets except Kansas City the rules provide for delivery by service of notice of delivery on the buyer. Such notice must state the place of business of the issuer, the precise receipts which the seller proposes to deliver, the contract price and (in Chicago) the net cash price at time of delivery.

The exchanges set a definite time and place for the notice of delivery and designate such delivery by notice as a valid and sufficient tender on futures contracts.

In Chicago, where the volume of futures business is largest, two delivery periods are provided. Between 9:30 and 11 A.M. deliveries may be made by notice at the office of the buyer and between 1:30 and 2 P.M. may be made in the exchange hall or "in such other place as may be designated by the board of directors," with certain special provisions for the first and last days of the month.

In Minneapolis notice of delivery may be made on the exchange floor between 9:10 A.M. and 1:20 P.M. If, however, the buyer or his representative is absent from the floor, or in case delivery is made through the Clearing Association, the time limit is extended to 2:30 P.M.

The Chicago (and St. Louis) rules provide that parties must be present at the time and place of delivery. "Any property which

cannot be delivered owing to the absence of the buyer from the exchange hall, or such other place as the directors may have designated for the purpose of delivery, may be sold out by the party having sold same to such absentee, as hereinbefore provided in cases of default; all expenses and risk of carrying the property, commissions, etc., shall be paid by the absentee, the same as in the case of default; provided, however, such property shall not be sold until the absentee has had notice in writing, either delivered to him in person, to his business representative, at his place of business, or left at the secretary's office in case he has no regular place of business, that the property was ready for delivery under this rule on his contract."

Such notices of delivery may be transferred from purchaser to purchaser by proper indorsement, up to the limit set on the specified day of delivery.

The Merchants Exchange of St. Louis has written into the rules the form of delivery notice and the indorsement required:

NOTICE OF DELIVERY

St. Louis, Mo._____

Messrs._____

We hereby give notice that we shall this day deliver to you or to the last indorser hereon five thousand bushels_____at_____cents per bushel on account of our contract sale to you dated_____at_____cents per bushel.

Signed_____Originator,
_____Indorser.

All the rules mentioned provide that payment at the market price shall be due immediately from the final holder of the delivery notice at the expiration of the time limit. The "market price" of grain deliverable on such time contracts is required to be posted by the secretary twice daily in Chicago. In Minneapolis, Duluth, and Milwaukee the closing price of the preceding business day is taken as a basis for settlement and posted daily on the exchange bulletin.

Failure to pay for the grain upon receipt of the above notice constitutes a default, which may be settled by liquidation of damages.

3. HEDGING IN THE BUTTER AND EGG MARKET¹

You have on hand today, ready for shipment to one of the big markets, a car of eggs. For these eggs you have paid an average price of 25 cents a dozen.

To what you have paid for the eggs must be added transportation and other charges, and when they reach destination you *hope* to sell

¹Adapted from Chicago Mercantile Exchange, *Hedging Butter and Eggs* (1923), pp. 3-9.

these eggs at a profit. And, if the market stays where it is today, there is a neat profit in sight for you.

But many things may happen before that car arrives at the point where you intend to dispose of it. Instead of going up, or even remaining where it is, the price of eggs may decline before your car gets to market, leaving you to face a loss.

Now, there is a way for you to insure yourself against such loss. It is by the simple process of hedging. And hedging is the one thing that takes the speculative element *out* of the business of buying and selling perishable products like butter and eggs, with their widely changeable prices due to the fact that they *are* perishable.

When your car of eggs is ready for shipment, simply wire your broker to *sell* a car of eggs for future delivery, on the Chicago Mercantile Exchange. If you are shipping more than one car, do this same thing car for car. Then you are reasonably protected. You need have little cause for worry about price variations. If the price stays where it was when the car left your town, you have practically offset your loss on the car sold short.

If the price goes down, you make a profit on the short sale because the future market, acting in sympathy with the spot market, will decline also. It is the shipper who sends unhedged cars to market who is taking chances. Instead of being a speculative transaction, as many ignorant ones have charged, hedging is the exact opposite of speculation. It is the process that puts *certainty* into the buying and selling of such products.

The unhedged shipment may bring a loss. That is speculation. The hedged shipment is largely protected against a loss. Therefore it is good merchandising practice—sound business—common sense.

But hedging may also consist of buying to cover a selling transaction. While actual merchandise does not pass in a hedging transaction, hedging consists of buying or selling a contract representing merchandise, and is therefore as legitimate as though the thing bought and sold were then and there passed from hand to hand. Hedging eliminates the risks that are always incident to shipping or carrying perishable stock. It is insurance against loss. It may be applied to sales made against merchandise already in storage, where the owner wishes to take advantage of prevailing prices in order to insure his profit or minimize his loss.

Hedging sales may also be made against goods which do not grade, and which would not be good delivery.

The owner of current receipt eggs in storage can sell against them, because if the market on storage packed eggs declines, the market on current receipts will likely decline also. And while the current receipts are losing in market value the owner is making a profit on his short sale, which can be closed out at an opportune time.

The process of selling short, in hedging, is perfectly legitimate because every short sale must eventually represent a purchase to match it.

We sometimes hear it said that traders on grain, produce and other exchanges are "gambling in blue sky," because the things in which they are dealing "do not exist."

But all such trades are based upon commodities which do actually exist, and every transaction contemplates ultimate delivery of the thing sold. If you sell a car of eggs short, for delivery three months from now, and if, when the three months roll round, you do not own a car of eggs, you must *buy* a car with which to complete this transaction, unless meanwhile you have closed out the transaction on the board of the Exchange. Every sale is matched by a purchase.

A DEFENSE OF HEDGING¹

The process of hedging, as described in the foregoing, works to the advantage of more than the shipper of merchandise and those otherwise directly interested in its purchase and sale. Hedging is an actual benefit to the ultimate consumer—to the general public.

It is a means of affording greater security, greater stability of price, for all concerned. Compare the narrow trade margins between producer and consumer—on commodities that have the advantages of liquid hedging—with the trade margins on commodities not thus protected, and the value of hedging is even more apparent.

Such competition as that represented by exchange hedging is easily created. It is easily and quickly expanded by credit facilities. Large capital investments are not required for such creation or expansion.

Banking support for hedging is easily obtained, because bankers realize that the hedging system provides the minimum of risk and is the great stabilizer of trade practices. Loans against hedged trades are not hazardous, therefore money lenders are willing to make such loans, and on more favorable terms.

Trading on the Chicago Mercantile Exchange works to the benefit of the producer by equalizing the weight of marketing throughout the

¹ Adapted from Chicago Mercantile Exchange, *op. cit.*, pp. 9-17.

year. Buyers *must* be attracted beyond actual current needs if depression at one period and overinflation at another are to be prevented.

THE PROFESSIONAL SPECULATOR NOT A GAMBLER

This fact emphasizes the need of that class of traders who carry on the requirements of those who hedge on actual shipments.

Such "traders in futures," as they are called, have frequently and unfairly been referred to as "gamblers" in futures. But with few exceptions, their business is as legitimate as that of traders who buy and sell goods that are tangible at the moment and that can be immediately passed from one ownership to another.

The gambler deals only in self-created risks. On the contrary, the risks assumed by the trader or speculator are based upon the ownership of property, and are incident to actual changes of value.

It is the class of constant, year-round traders—the so-called future speculators—who *make the market*; who prevent trading from being spotty and uncontrollable; and who make it possible for handlers of butter, eggs, and other perishable merchandise to place or remove their hedges with a minimum of fluctuation.

Such traders insure liquid trade margins for those who handle the goods. They keep the market alive. And it must be remembered that there could be no hedging by butter and egg dealers if trading in futures were limited to those who deal in the actual merchandise.

Hedging, then, is merely a shifting of risk from the shipper who does not care to assume a risk—who is satisfied with a reasonable profit on what he has collected from various sources for the central market—to one who is willing to assume such risk.

It is fortunate for this business—just as it is for any other business involving the distribution of essential commodities—that there are men who are willing to risk speculative losses in the hope of making speculative profits.

If it were not for the privilege of hedging, every man and firm engaged in the gathering and forwarding of butter, eggs, grain, etc., would have to carry his own speculative risks. As it is, the speculative trader assumes the functions of an insurance company to protect the shipper against loss.

Referring again to the banking phase of hedging, it is well to say here that in the grain business the amount of credit extended to the owner of a certain amount of grain depends entirely upon whether the grain is protected by a hedge. And this is and should become more and more a feature of our own business.

The butter and egg dealer or shipper who hedges will find a much more favorable reception at his bank. For whereas, without hedging, a sharp decline in prices might bankrupt the holder or shipper, *with* hedging the danger of such loss is removed and the bank's attitude is correspondingly favorable when a request for a loan is made.

4. THEORETICAL HEDGING OPERATIONS AND RESULTS¹

The following theoretical illustrations of the employment and results of hedging by country elevators will sufficiently explain the practice.² The Farmers Elevator Co. at Barrett, Minn., a subscriber to the Grain Bulletin price information service, is assumed to be the elevator engaging in the various trades, and the year 1913 has been selected as the time of the transactions, owing to the fact that the course of prices during that year was such that the various illustrations could be easily worked out. The prices employed are within the ranges of the actual cash and future prices prevailing in Minneapolis on the specific dates, and for the purposes of the example it is assumed that the Grain Bulletin card is followed exactly.³

The freight rate from Barrett to Minneapolis is 8.8 cents per hundredweight or 5.28 cents per bushel on wheat. On October 2, 1913, the Grain Bulletin price card received by the Farmers Elevator Co. made the minimum buying price of No. 1 northern wheat at Barrett 75 cents per bushel. The Minneapolis market price on which this price was based was about 85 cents per bushel. The difference between the price shown by the card and the terminal price, 10 cents, was the gross buying margin. As the freight rate is 5.28 cents per bushel and the Grain Bulletin price card usually eliminates the fractions, it may be assumed that the 10-cent margin was composed of 5 cents for freight and 5 cents to cover the costs of operation and the elevator's profit. Assuming that $3\frac{1}{2}$ cents per bushel covered the costs of operation and $1\frac{1}{2}$ cents per bushel is the balance of profit, the gross margin was divided as follows:

Freight per bushel.....	\$0.05
Cost of operation per bushel.....	.035
Net profit per bushel.....	.015
Total margin.....	<u>.10</u>

¹ Adapted from Federal Trade Commission, *Report on the Grain Trade*, Vol. I, *Country Grain Marketing* (1920), pp. 208-10.

² Approximately 50 per cent of the elevators reported that they customarily hedged their grain transactions, and 50 per cent reported that they did not. See p. 213 of this *Report*.—EDDOR.

³ For details regarding the Grain Bulletin card see Vol. III, Ch. VIII, of this *Report*; see also *infra*, pp. 544-45.

By 11 A.M. on October 2, 1913, let it be assumed that the Farmers Elevator Co. has purchased from various farmers a total of 1,000 bushels of No. 1 northern wheat, paying for it the price shown on the card for grain of that grade, namely, 75 cents per bushel, making the total cost of this grain \$750. In order to hedge this transaction the elevator operator would wire to his commission firm in Minneapolis about as follows: "Sell 1,000 December wheat against cash purchases."¹

Upon receipt of the above telegram the commission firm executes the order in the future pit, either directly or through a pit trader. On October 2, 1913, the December wheat future opened at $\$0.84\frac{3}{4}$ and during the day's trading the high point was $\$0.85\frac{1}{4}$, the low $\$0.84\frac{1}{2}-\frac{5}{8}$, and the closing prices were $\$0.85\frac{1}{8}-\frac{1}{4}$ to $\$0.85\frac{1}{4}$. For the purposes of this illustration assume that the future sale of 1,000 bushels was made at \$0.85 per bushel, or at a total cost of \$850. After effecting the sale the commission firm sends a confirmation of this trade to the country elevator.

About a week later, on October 10, 1913, the elevator operator loads a car with 1,000 bushels of No. 1 northern wheat and consigns it to his commission firm at Minneapolis. At the same time the firm is instructed to buy in 1,000 bushels of the December wheat future upon sale of the carload of wheat, in order to close out the 1,000 bushels of December which was sold on October 2.

On October 17 the car reaches Minneapolis. It is inspected and graded and a sample of the wheat is sent to the commission firm's table on the trading floor of the Chamber of Commerce. On that day No. 1 northern wheat sold for \$0.81 to $\$0.83\frac{3}{8}$, this last price being for only one car which contained good dockage. The highest general price was $\$0.83\frac{1}{4}$. Let it be assumed that the commission firm's cash grain salesman receives an offer of \$0.82 per bushel for the car and accepts it, and that the firm receives therefor \$820.

When the car of cash grain has been sold, the commission firm's pit trader buys in the pit 1,000 bushels of December wheat to close out or cancel the elevator's future account of 1,000 bushels sold on October 2. On the day in question—October 17, 1913—December wheat opened at $\$0.80\frac{1}{4}$, the high was $\$0.80\frac{7}{8}-81$, low $\$0.79\frac{7}{8}-80$, and the close $\$0.80\frac{7}{8}$ to $\$0.80\frac{3}{4}-\frac{7}{8}$. The pit trader executes the trade at \$0.80 per bushel and purchases 1,000 bushels of December at a price of \$800.

An account sale of the cash transaction is then prepared by the commission house and also an account of purchase and sale of the future, and both are mailed to the elevator.

The results of the cash transaction to the elevator are as follows, disregarding all charges for commissions, weighing, inspection, etc.:

Sold 1,000 bushels No. 1 northern, at \$0.82.....	\$820.00
Cost of 1,000 bushels No. 1 northern, at \$0.75.....	750.00
Gross profit.....	<u>70.00</u>
Less freight, \$0.0528 per bushel.....	52.80
Less operating expenses, \$0.035 per bushel.....	<u>35.00</u>
Total expenses.....	87.80
Net loss.....	17.80

On the basis of prevailing cash market prices, therefore, at the time of the purchase and sale of this particular thousand bushels of wheat, and assuming a 10-cent buying margin, this elevator would have lost \$17.80 had only the foregoing cash buying and selling transactions been effected.

But at the same time that the elevator bought the wheat from the farmer it also, as stated, sold 1,000 bushels of the December future, and when it sold the actual grain at Minneapolis it bought back 1,000 bushels of the same future, thus canceling its previous sale. The results of this operation were as follows, disregarding commissions:

Sold 1,000 bushels December at \$0.85.....	\$850
Bought 1,000 bushels December at \$0.80.....	800
Net profit.....	<u>50</u>

While, therefore, the elevator lost \$17.80 on the cash operation, it made \$50 on the future, and thus made a profit on the whole transaction of \$32.20. Actually, of course, the profit was somewhat less, since commissions, fees, etc., would amount to at least a few dollars.

5. HEDGING WITH WHEAT FUTURES AT A DISCOUNT¹

It is well known that trading in grain futures is highly concentrated at Chicago. Statistics for the period prior to the entrance of the United States into the war indicate that six-sevenths of all trading in grain futures in the United States is done on the Chicago Board of Trade. It has appeared unnecessary to compute the volume of future trading on other markets. The volume of trading has been very narrow at Minneapolis and Duluth; so narrow indeed as to make these markets difficult to get in and out of with hedges of any considerable size. The

¹ Adapted from Federal Trade Commission, *Report on Wheat Prices* (1920), pp. 52-58. This selection is chosen because it shows the possibility of hedging when the future is "out of line" with the cash price.—EDITOR.

greatest element in the trading is doubtless hedging, and this element predominates to an extent not true for the period prior to the war. There have been no large speculative operators conspicuous in future trading at Minneapolis or Duluth or at Kansas City. There may have been slightly more speculation at Kansas City than in the Northwest markets, but the volume has been probably inconsiderable as compared with former conditions and clearly insignificant as compared with the usual amount of speculation at Chicago.

The most important hedgers are the elevators that accumulate large stocks of grain, according to trade conditions, against which they sell futures in order to protect themselves against unforeseen changes in grain-price levels. Among the elevators, by far the most important hedgers are the terminal elevators. In the Northwest, under normal conditions, most country elevators hedge and line elevators, controlled from terminal markets, usually hedge consistently. In the Southwest there are fewer line elevators and less consistent hedging even by such lines as there are. Furthermore, country elevators have limited storage capacity and depend for their earnings more upon turnover than upon performing a warehousing function. Terminal elevators are primarily warehouses and are used to accumulate and hold grain for longer periods according to the season and according to trade conditions. Terminal elevators are built to accumulate grain in large quantities, and the operators may hold it for some months, selling futures against it to avoid risking great loss from a decline in price. Assuming a constant relation between cash and future prices, if there is a decline in price the profit on the future sold, when it is bought in, compensates for the loss on the cash grain held when that is sold.

TERMINAL ELEVATOR HEDGING

The ideal condition for hedging by a terminal elevator exists when the future is slightly higher than the cash grain or, in the terms of the trade, when future prices are on a "carrying-charge" basis. Under such circumstances it is possible for the terminal elevator to buy the cash grain and store it, selling the future at a cent or two above the price it pays for the cash, and holding the grain for delivery on the future contract at the contract price when the future matures, which process yields to the elevator as earnings for carrying the grain the difference between the price it paid for the cash grain and the price for which it sold the future. The relation between cash and future prices is seldom such that the terminal elevator's hedge works out this way. The cash grain can usually be sold on the basis of its

quality at slightly more than the futures. Furthermore, the futures are frequently, and of late increasingly, at a discount as compared with the cash grain. Under such circumstances grain can not be accumulated and disposed of at a profit through delivery on future contracts made at the time the grain is purchased.

When Future Prices Are Out of Line

Notwithstanding the obviously unfavorable price situation for terminal elevator hedging when the futures are at a marked discount below the cash, terminal elevators do hedge their purchases by sales of the futures and have done so as regards their wheat purchases during the period since July 15 (1920), regardless of the fact that the future has sometimes been as much as 25 cents a bushel below the cash. Under such circumstances, however, the elevators do not accumulate grain but sell it as soon after they buy it as is practicable in order to prevent the loss they will incur if the spread between the future and the cash narrows or disappears. It is bound to disappear at the close of the delivery month.

As noted above, wheat futures since July 15 have usually been at a marked discount. This has made hedging conditions unsatisfactory. In addition to its size, the discount has greatly fluctuated along with the fluctuations in future prices. Such sharp fluctuations impair the usefulness of the future as a hedge because even if the elevator operator is able to get rid of his purchases quickly, so that the normal tendency of the discount to narrow would not be operative to reduce his profits greatly, yet, because of the sharp fluctuations, the buying in of his hedge, even shortly after he puts it out, may involve a loss that is not made up on the cash transactions. On the other hand, it is thought better to risk the possibility of a 5-cent loss through fluctuations in the discount, or through the narrowing of it during a short period, than it is to risk a 50-cent loss in a few weeks by reason of not hedging at all. These are the alternatives that have faced elevator operators handling wheat during the present season.

Effect on Margins

It is the general consensus of opinion in the grain trade and is admitted by the strongest advocates of future trading that the wheat futures market since its opening has not worked satisfactorily for hedges. The reasons for this, as already indicated, are the large discount and the sharp fluctuations in future prices. This situation has necessitated operating on larger margins than are usual for termi-

nal elevators. Statements that hedging has worked satisfactorily for the elevators may be taken to refer to general or typical conditions rather than to the specific situation relating to wheat futures since July 15. It is true, however, that practically all the operators of private terminal elevators do hedge, though they avoid the necessity of hedging as much as possible by making their purchases and sales as nearly coincident as is practicable. It is stated, and it is evidently true, that hedging conditions have been better in the past month or two than they were during the earlier period of the resumption of future trading.¹

It is probable that country elevators that might otherwise hedge have been dissuaded from doing so by reason of the large discount on the future, which looks to them like starting in with a loss on their transactions. It is true, nevertheless, that if they have held unhedged grain for any length of time during the present marketing season they probably lost more by reason of not hedging than they could have lost by reason of the discount on the futures.

HEDGING BY MILLERS

The hedging use of the futures market by millers has not been so different from that of its use by elevators as might *a priori* be supposed. The reason for this is that all mills have more or less storage capacity and the big mills have very large elevators. By accumulating wheat during the crop movement, the miller can pick from the receipts from the country the car lots that show the qualities that he particularly wants, either with reference to intrinsic millable value or with reference to the commercial advantage to be obtained from blending the different varieties of wheat. It is largely with reference to being able to buy so-called virgin or unmixed wheat as it comes from the country that the big mills find it desirable to have large elevator capacity.

The situation of the miller as regards the hedging of his purchases of wheat is different from that of the elevator because he may be selling flour in advance of accumulations of wheat. If so, he will wish to hedge his flour contracts by the purchase of wheat futures just as much as the elevator company will wish to hedge its purchases of grain by the sale of futures. In discussions of hedging, it is often assumed that millers will have flour contracts to hedge instead of having grain that they need to hedge. In fact, and doubtless more and more in recent years as compared with fifteen or twenty years ago, the miller will

¹ During part of the war period future trading in wheat was restricted. It was resumed July 15, 1920.—EDITOR.

often have a net quantity of wheat to hedge instead of having a net quantity of flour contracts to hedge. Therefore, he is as likely to need the futures market, especially during the season of heavy crop movement, for hedging grain purchases as he is for hedging flour sales. As regards the big mills, and as regards the season of heavy crop movement, the mills are as likely to be hedging by sales of futures as by purchases of futures, although in this respect the needs and transactions of the mills differ greatly from year to year.

With a discount on the futures in relation to the cash grain, or in other words a premium on the cash grain, the situation as regards hedging purchases is the opposite of what it is as regards hedging sales of futures. If the initial future transaction is a purchase when the future is at a marked discount, the prospective narrowing of the discount inures to the profit of the miller instead of causing him a loss, or it may be used to enable him to sell flour at a low figure as compared with the price he pays for the wheat used. Claims have recently been made that millers were offering flour to the public at a margin as compared with the cost of wheat which would apparently result in a loss. In order to take advantage of the discount on futures in this way, however, the flour contract hedged by the purchase of futures should run for some months, and in fact for the transaction to work out perfectly, the flour contract hedged in the December option should be for delivery in January. In that case the mill may take advantage of the discount on the future by actually obtaining the wheat for grinding from deliveries made to it on future contracts in December. In practice, however, millers prefer to buy the actual wheat in the cash market on the basis of quality as determined by sample, at the same time closing out their hedges by selling the future. Such a future sale to close the hedge, however, should come near the close of the life of the particular option in order that the assumed large discount on the future will have been narrowed down to a small amount, as it is bound to do with the approach of the maturity of the future contract.

HEDGING BY EXPORTERS

Exporters constitute another important class of grain dealers that make a very large and accordingly consistent use of the futures market. The statement is made that exporters always hedge. Such a proposition, however, is always subject to the qualification that a dealer in grain to a considerable extent may make his sales and purchases coincide with each other as to quantity and time and thus avoid the necessity of using futures for hedging purposes. Doubtless ex-

porters have done this to a considerable extent whenever there has been an unsatisfactory hedging market. Because of the large quantity of a given grade which must be procured on one order, exporters can do only a restricted business on a flat-price basis. Exporters make their sales abroad in large lots. The quickest way to insure themselves of ability to meet such contract of sale for several hundred thousand bushels is to buy the future as a hedge and then pick up the grain piecemeal in the course of a few days, buying from terminal elevators or to some extent in the country. Especially during the summer of 1919 they were buying to a great extent in car lots in the country. Since the exporter ships very promptly, and leaves his hedge open only a short time, he is not so much concerned about the discount on the future, but is hampered in his operations by rapid fluctuations therein.

CHAPTER XVIII

MARKET NEWS

1. DISTRIBUTION AND TRADE INFORMATION: MEAT¹

To meet and conform to the rapidly changing condition of the market for livestock and meat products, the packer must be in closest possible contact with consuming centers, and he must have machinery for making his purchases of raw materials constantly reflect, as regards price and quality, the demand of the consuming public.

Every well-regulated meat-packing concern arranges to have in its head office every day complete information from the consuming centers. This information is drawn from various sources. The most important source and the one most likely to govern business procedure is that based on the judgment of the representatives of each firm at the big wholesale markets. In case such representatives are not available, there are numerous organizations, such as trade papers, for example, which provide the general information as to the market and its trend. In recent years the Government has attempted to provide a market service which is useful for the man who is operating away from the market, but is too slow for the firm with meat to sell at any particular hour. Supplemental information on the status of foreign trade in meats is reported by cable and appears in many of the metropolitan papers as well as in the general run of trade papers.

On the basis of these reports and information, the general office of the firm is able to determine approximately what it can afford to pay for livestock and also the volume which it can afford to buy. All calculations are based on what may be termed average conditions and trends toward or away from the average. Furthermore, the receipts of livestock at the big markets and their fluctuations must always be balanced against the trends in the meat trade.

Fluctuations in demand are almost as pronounced as are fluctuations in supply. A sudden hot wave in the East knocks the bottom out of the beef market. Housewives do not want roasts and steaks when the thermometer is around blood heat. Sudden arrivals of well-laden

¹Adapted from F. Edson White, *The Distribution of Meat Products* (1923) pp. 353-54. (Lecture VIII of a series of lectures on *The Packing Industry* given under the joint auspices of the School of Commerce and Administration of the University of Chicago and the Institute of American Meat Packers. Copyright by the University of Chicago.)

fishing boats at big eastern seaports usually affect the sale of meat, as do holiday supplies of poultry. The opening of the game season has a similar influence—though I must confess that my success as a hunter never tended to put any meat-packer out of business. Fast days and feast days affect the demand for meat, and there are various other factors, insignificant in themselves but powerful enough in combination, to change materially the demand for meat from day to day. This fluctuation in demand must be reckoned with in the daily management of the business.

2. STATISTICS OF SUPPLY AND DEMAND IN THE GRAIN TRADE¹

SUPPLY STATISTICS

1. *Visible.* The visible supply of wheat in the United States is tabulated weekly by the Secretary's office of the Chicago Board of Trade. The information is gathered by telegraph. It is then posted on the blackboard of the trading floor, and also given to the press and published in every part of the United States and the world interested in this market information. Taking the year 1920 as typical of the fluctuations in the weekly visible, we note from the statistics that the visible supply fluctuated from 75,000,000 bushels, the highest amount, to 16,000,000 bushels, the lowest amount. The last half of the year shows much more irregular fluctuations than the first half.

2. *Receipts.* Some grain dealers claim that receipts are the most important item on the supply side. Receipts fluctuate greatly from year to year, from month to month, from week to week, and from day to day. Sometimes heavy receipts are accompanied with falling prices, sometimes with rising prices, depending largely on how strong or how weak the demand factor happens to be at the same time.

3. *Crop.* The crop is the underlying factor of supply, but the world crop must be taken into consideration as well as the United States crop, since the wheat market is, of all markets, a world market. The "normal" world's crop is sometimes stated as 3,500,000,000 bushels.

4. *Acreage.* Acreage is not closely coordinated to production. Taking a twenty-four year period, it is interesting to note that in eight years of the twenty-four there was lack of any coordination between production and acreage. During four years, an increased acreage was

¹Adapted from James E. Boyle, *The Law of Supply and Demand and the Wheat Market* (1921) pp. 13-21.

followed by a decreased crop; conversely during four other years a decrease in acreage was followed by an increase in crop.

DEMAND STATISTICS

The market recognizes that demand which expresses itself in buying orders. Exporters and millers are the chief buyers, and hence their purchases constitute the bulk of the demand for wheat. Exports are reported in bushels, after the shipments have been made, so this factor of demand may be expressed in definite statistics. Millers buy wheat as they sell flour. When flour sales fall off their buying of wheat falls off. Hence statistics of flour-mill output correctly reflect the milling demand for wheat. Such statistics are now available showing the flour-mill output by weeks.

1. *Flour Mills.* It is interesting and instructive to note that the flour-mill output fluctuates greatly from week to week, from month to month, and from year to year.

An examination of the statistics shows that the Kansas City mills, for instance, in the year 1918 were operating some weeks at 96 per cent of full capacity, and in other weeks at only 5 per cent. It will also be noted that the fluctuations in output (and consequently in demand for wheat) are sometimes sudden and big. For instance, the output for the week ending April 27 was 33 per cent of full capacity; the next week it dropped off to 14 per cent. The week ending May 25 the output was 18 per cent; the next week it dropped to 5 per cent. The week ending July 6 it was 5 per cent; the next week it rose to 49 per cent—a net increase of 880 per cent over the low week.

Similarly the mills of the Central states showed a fluctuation in output ranging from 11 per cent to 93 per cent. The Toledo mills ranged from 7 per cent to 95½ per cent, and the output of the Northwest mills show wide and sudden fluctuations.

Millers' demand for wheat is not constant, quite the contrary, it varies widely from week to week and month to month.

2. *Exports.* Exports of wheat show tremendous fluctuations in amounts exported from the same country in any two successive years. For instance, the United States and Canada, in pre-war days, made a record as follows:

In 1904 the wheat exports were 144,103,000 bushels. In 1905 the exports were less than half this amount. In the year 1907 the exports rose to the large figure of 189,000,000 bushels. Next year the amount increased by 29,000,000 bushels. But next year they fell off by 50,000,000 bushels. Under the stress of war emergency these exports

were greatly increased, despite the shortage of labor on farms. In 1916 the exports reached 488,000,000 bushels; in 1918 the amount was 236,000,000; in 1919 it was 364,000,000 bushels.

Similar wide fluctuations are shown in India and Argentina.

Monthly exports and weekly exports show sudden and irregular fluctuations. In short the export demand is never constant.

SUMMARY

The demand for wheat is never constant. Statistics of exports and flour-mill output prove this.

The supply of wheat is not constant, nor is the amount marketable definitely known or knowable.

In short "supply" and "demand" are both indefinite factors and normally subject to sudden fluctuations.

The orderly marketing of wheat—that is, a steady flow of wheat to market during the fifty-two weeks of the year—would not tend to stabilize price unless there were at the same time an "orderly demand" for wheat. The question may well be asked, in what manner, if at all, can demand be controlled and be made "orderly," or free from fluctuations?

Difficult to Regulate Supply of Wheat

And finally, there is the one important difference between agriculture and manufacturing, namely, manufacturing can control its output at will—increase it or decrease it—but agriculture cannot control its output at will. For instance, the farmer sometimes says, "Why could the United States Steel Corporation fix the price of steel rails at \$28 a ton and hold the price steady at this figure for several years?" The answer is, they produced neither a surplus nor a shortage of steel rails, but controlled their output to meet their demand. This control of output is not possible in agriculture. Increased acreage frequently means decrease in crop; decrease in acreage sometimes means increase in crop. It is beyond human power to control weather conditions. In legal phrase, the weather condition is termed "an act of God." Yet weather conditions largely determine the size of the crop. Hence the constant difficulty for coördinating supply of agricultural products to the demand for such products.

The work of the market, therefore, in registering a fair price, reflecting supply and demand, is not a simple matter

3. MARKET NEWS AGENCIES OF THE TERMINAL WHEAT MARKET¹

Price information from the terminal grain markets is made available to country shippers through a variety of agencies.² From several terminal markets there are issued one or more daily market journals or "price currents," such as the *Daily Trade Bulletin* of Chicago, the *Daily Market Record* of Minneapolis, the *St. Louis Market Reporter*, and the *Kansas City Daily Price Current*; and these journals, or the quotations contained therein, are available to the trade generally.

Actual bids for grain to arrive from the country are sent out almost daily by terminal market dealers and afford a price basis for buyers and shippers in producing territory. In addition to these bids, there are the daily telegraphic dispatches distributed by the Western Union and Postal Telegraph Companies over local Morse wires or tickers through the producing areas. By subscribing to either the "continuous service," or the "interval service,"³ a local grain dealer at a railroad shipping point may secure regular wire quotations from the terminal markets. Moreover, the private-wire systems which radiate out of Chicago, through their branch and correspondent offices, supply their customers and the trade in general with market price information and other market news. Exchange members, especially the commission merchants, often advise their customers by wire of important market developments and send out by mail daily market letters, price currents, and other circulars. In the case of line-elevator systems, letters, cards, and wire messages are sent out as instructions for local agents to follow in purchasing grain, and these are a direct influence in determining the prices paid to producers.

The custom of sending out buying prices for country shippers, i.e., lists of prices with the freight, handling costs, and profit already deducted, has developed more extensively in the Northwest than in any other producing section.⁴ The *Grain Bulletin*, a price card of this character issued daily by F. R. Durant, of Minneapolis, is now used very widely in the territory tributary to Minneapolis and Duluth.

¹Adapted from Federal Trade Commission, *Report on the Grain Trade*, Vol. III, *Terminal Grain Marketing* (1921), p. 197.

²See Vol. I, Chap. VIII, of this *Report*.

³See Vol. V, Chap. II, Sec. 4, and footnotes of this *Report*.

⁴Although line-elevator companies in all sections generally furnish their country agents with buying prices.

4. GRAIN BULLETIN CARD¹

Minneapolis, Minn.

May 13, 1922.

DARK NOR. SPG.

NOR. SPG.

1 58-lb. test.....	\$1.39	1 58-lb. test.....	\$1.38
2 57-lb. test.....	1.35	2 57-lb. test.....	1.34
3 55-lb. test.....	1.29	3 55-lb. test.....	1.26
4 53-lb. test.....	1.21	4 53-lb. test.....	1.18
5 50-lb. test.....	1.09	5 50-lb. test.....	1.06

5c discount per pound under 50 pounds.

No. 1 Fancy, 1c more than No. 1 DNS.

Soft varieties 5c less than above.

Red Spring 15c less than Nor. Spg.

MIXED WHEAT 10c less GRADE for GR.

AMBER DURUM

DURUM

1 60-lb. test.....	\$1.20	1 60-lb. test.....	\$1.12
2 58-lb. test.....	1.18	2 58-lb. test.....	1.10
3 56-lb. test.....	1.10	3 56-lb. test.....	1.00
4 54-lb. test.....	1.00	4 54-lb. test.....	.93
5 51-lb. test.....	.94	5 51-lb. test.....	.87

3c discount per pound under 51 pounds.

MIXED DURUM same as DURUM.

FLAX

RED DURUM

No. 1.....	\$2.55	1 60-lb. test.....	\$1.07
No. 2.....	2.50	2 58-lb. test.....	.98
Sample.....	2.30	3 56-lb. test.....	.88
		4 54-lb. test.....	
		5 51-lb. test.....	

SHELL CORN

OATS

No. 3 Yellow.....	\$0.39	No. 3 26 lb.....	\$0.26
No. 4 Yellow.....	.37	No. 4 23-lb.....	.23
Mix 1c discount.		1c discount per pound under	
White 1c discount.		26 pounds.	
No. 2 Yel. 1c more than No. 3			

Yel.

Ear 70 pounds 4c less.

BARLEY

RYE

No. 3 44 lbs.....	\$0.44	No. 2 54 lbs.....	\$0.91
No. 4 41 lbs.....	.41	1c discount per pound under	
2c discount per pound.		54 pounds.	
under 41 pounds.			
Buckwheat, Cwt.....	\$1.50;	Speltz, Cwt.....	\$0.45
No. 237 Nor.			

THE GRAIN BULLETIN.

¹ Adapted from Frank Durant, "Handling the Farmers' Grain," *The Grain Bulletin*, June 1, 1922, p. 28. (Published by Minneapolis Chamber of Commerce.)

5. TELEGRAPH SERVICES OF THE WHEAT MARKET¹

PRIVATE WIRE SYSTEMS

The great means of spreading information and general news as to conditions affecting the futures market is the private-wire systems. By means of the private wire news is telegraphed from head offices in Chicago to branch offices and correspondents throughout the country. Such news itself may be received from New York, similarly over private wires. Information is thus made available practically instantaneously throughout the country.

Such news, whether sent by mail or telegraph, consists largely of statistical items—figures of world shipments or port clearances of grain, grain afloat in transit, receipts and shipments at various primary markets, visible supply of the United States, world's visible supply, etc.; also cabled quotations, spot prices at Chicago and elsewhere, Government crop reports and private estimates, demands for milling, for export, etc. Extracts from market letters and other statements of specialists in one or another line are often included. Information gathered on the exchange, perhaps by the pit trader of the house, is included. Interspersed with such matter are informal items, some merely of the nature of spice.

The ephemeral news sent out over the wires is appropriately called "gossip." There is no time for careful consideration and little inclination to hold back anything interesting, since the desire is to beat somebody else on the news. Naturally much that is sent over the wires is of the nature of rumor, some is doubtless sheer invention, and often dishonest invention to influence prices to some one's advantage. The volume of news or gossip sent out in the course of a year is, of course, very great. Therefore no file is kept. Some of the rumors relate to foreign political conditions. One staple subject of gossip is as to who is buying and who is selling heavily in the various futures markets. Crop conditions are, of course, regularly included, also weather reports, where anything special seems to be developing. Sometimes the matter sent over the wire is, or has been, directly of the nature of advice to customers and prospective customers as to when the market is a "good buy."

Some houses have "gossip makers" to keep up the supply and make the matter interesting, who often stimulate interest in the market by mixing facts with imagination.

¹ Adapted from Federal Trade Commission, *Report on the Grain Trade*, Vol. V, *Future Trading Operations in Grain* (1920), pp. 70-72.

Information sent out over a private wire may be mimeographed at the correspondent's office or branch office of the wire system and further circulated by mail from there.

The private wire is also, of course, used for transmitting orders, confirmations, etc. It is impossible to say whether the purpose of a private wire is fundamentally to transmit news and develop trade through a special news service or rather to convey orders as promptly as possible from the customer to the exchange floor and also to notify the customer promptly of the execution of his order. Presumably, the use of the private wire for such direct business purposes is primary. The news and gossip service was probably developed largely as a means of keeping the wire busy when not needed for direct business matters.

Gossip is said to be sent "in between orders and reports," and to vary in amount inversely as the latter. This fact helps largely toward an understanding of the extent to which ephemeral news and rumors, or mere gossip, is sent. If there were more important business a great deal of such matter would be crowded off the wires.

TICKER COMPANIES

Much of the news sent out by the private wires is in turn received from ticker companies. Some ticker companies confine themselves to price quotations. Others supply general news. Of course, they serve stock exchange as well as the grain exchange brokers and commission houses, and perhaps especially the former. Many clubs and the more expensive hotels have news tickers available for the use of their customers. The important ticker services drawn upon by the Chicago grain wire houses are the Raymond News Bureau, the Chicago News Bureau, and the Illinois Telegraph News Service.

It is claimed, on behalf of the private wires that cover so comprehensively the grain territory tributary to Chicago, that they keep the farmer informed of prices at terminal markets in a way to make it impossible for the elevator manager with more recent information to exploit the farmer's dependence upon newspapers that are a day or two old and upon other sources of information arriving through the mails. Formerly the line elevators in particular, with head offices at terminal markets, may perhaps have maintained wider margins by reason of this situation. The private wires keep the independent and farmers' elevators as well informed as are the local representatives of the line elevators. A wire-house man finds in the difference in respect to wire networks between the Minneapolis and the Chicago territory the

reason for the continued importance of lines in the Northwest and for alleged larger handling margins there, and for agrarian discontent and political agitation. In getting the quotations to the country points the private wires perform a direct service to country grain dealers and to the farmers.

In the matter of quotations, the information sent out by private wire concerns and ticker companies is about as reliable as it could be made. This is subject to careful regulation by the exchanges. The only chance for any manipulation and unfairness would be in the direction of favoring some subscriber or some company with earlier news than that obtainable through other sources. Doubtless every effort is made to prevent this sort of thing. In the matter of news and gossip, on the other hand, the service of the private wires is susceptible of much improvement.¹

6. MARKET NEWS SYSTEM OF THE U. S. DEPARTMENT OF AGRICULTURE²

The greatest organization for the gathering and distribution of market news now operated in the world is that of the United States Department of Agriculture represented in its Bureau of Agricultural Economics. This organization covers a greater variety of products and assembles and distributes a larger mass of information than any other Government agency. Few producers, tradesmen or consumers realize the far reach of this machine, the rapidity with which it works, and the manner in which it touches the daily life of practically every producer, merchant, manufacturer, and consumer.

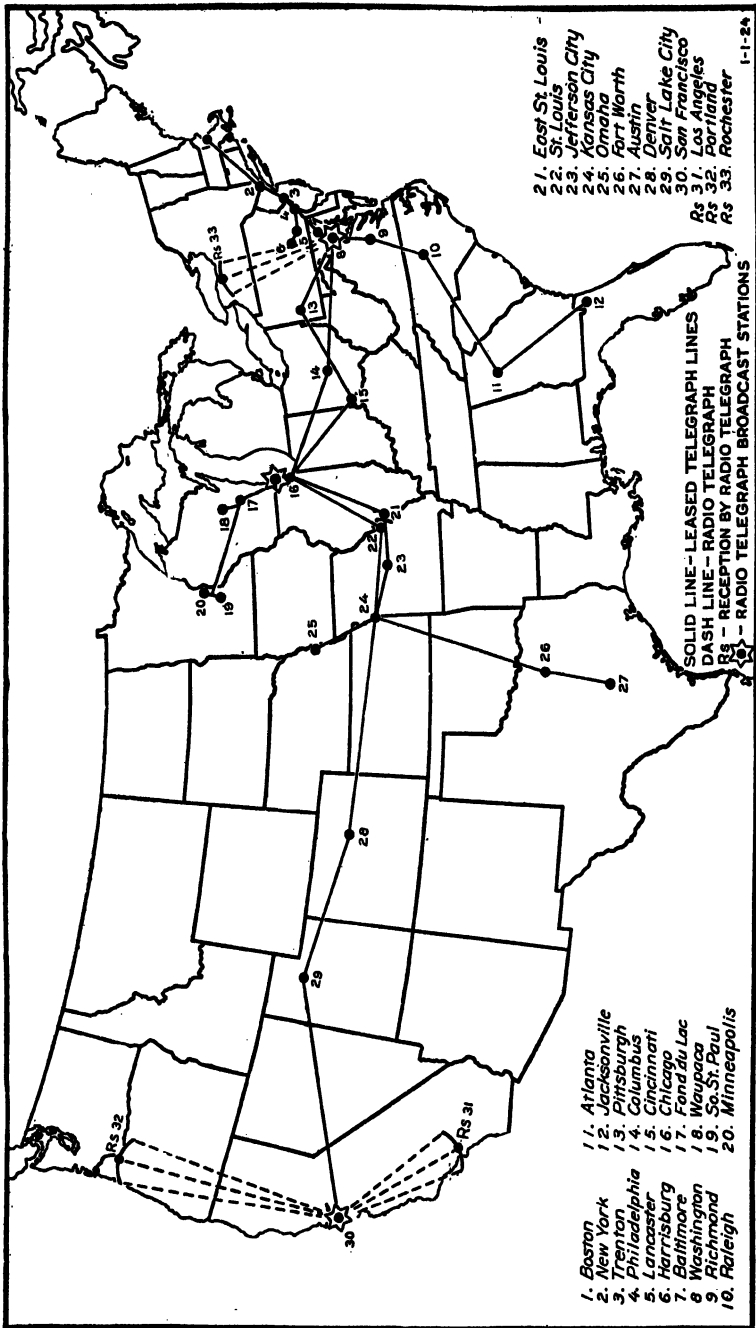
The bureau known as Bureau of Agricultural Economics includes the three former Bureaus of Markets, Crop Estimates, and Farm Management, because each of these contributes a part of the big story of crop production and distribution.

THE ORGANIZATION

The organization has 148 branch offices in seventy-nine leading producing and consuming centers of the country, employing in this field the services of nearly 1,000 crop and marketing specialists who know agriculture from the planting of crops to their final marketing. General headquarters are at Washington, where an additional 1,000 people are

¹The description of the private-wire systems—which are the principal news distributors—and of their place in the grain trade is the subject of a separate chapter following in this *Report*. The so-called censorship of news is discussed on pp. 72 ff. of the *Report*.

²Adapted from an article prepared (1923) by the U. S. Department of Agriculture, Bureau of Agricultural Economics.



employed to bring together, study, and disseminate for general information the business facts collected in the field, to study the effect of general economic factors on the various branches of agriculture, and to gather from world sources the important conditions that affect both domestic and world supply and demand for food.

A leased telegraph wire circuit that connects the various branch offices with one another and with central headquarters at Washington is operated for rapid dispatch of the information over the country. This wire system covers approximately 7,000 miles extending from Boston in the Northeast to New York, Philadelphia, Washington, Pittsburgh, Chicago, Omaha, and San Francisco. A branch circuit covers the Southeast with stations at Norfolk, Richmond, Atlanta, and Jacksonville, and another circuit goes into the Southwest to Austin and Ft. Worth, Texas. The wire circuit is in continuous operation twelve hours a day. The leased wire system makes it possible for the Bureau's representatives in the field to communicate on a moment's notice all over the country the important day-to-day agricultural changes.

Radio is also employed by the bureau more quickly to flash the news over the country. More than ninety radio broadcasting stations over the country flash out the daily market and crop news. There is virtually no place in the United States where producers, dealers, shippers or anyone else cannot now get an accurate and unbiased current picture of the agricultural situation. The news is literally in the air and only simple radio equipment is required to capture it.

THE NEWS WHICH IS DISSEMINATED

Beginning with the crops and livestock in the field, the bureau studies production costs and broadcasts the information far and wide in an effort to bring about economical food production. When the products are grown their size is measured with the aid of several hundred thousand voluntary and paid crop reporters and the country is informed months in advance what may be expected in the way of food and raw agricultural materials. There are approximately six and one-half million farm units in the United States covering a combined area of more than 900,000,000 acres. The job of recording what takes place in every part of this territory is a big one.

Marketing is the next step, and to report on daily shipments a staff of experts is maintained in the leading producing and shipping sections in season. These representatives not only keep the country informed of conditions and prices at shipping points, but inform the local pro-

ducers and shippers of conditions and prices in competing areas and at market centers. Through an arrangement with practically all the agricultural-products-carrying railroads, steamship lines and other transportation agencies the bureau obtains each morning a record of shipments for the preceding day and a record of shipments moving to market. This information combined with the reports from market centers gives a day-to-day view of the national marketing situation.

INSPECTION SERVICE

At shipping points and market centers a corps of food products inspectors makes individual inspections of cars of products upon the request of shippers, receivers, and transportation companies. A small charge is made for this service. Official certificates are issued by these inspectors attesting the grade and condition of products shipped or received. The certificates are accepted as bona fide evidence in Federal courts and in many state courts. Butter inspection is maintained at six markets, and inspection of fruits and vegetables at thirty-two market centers and in producing areas in twenty-six states. The shipping point inspection is done in coöperation with state bureaus of markets. Shipping point inspections last year totaled more than 72,000, and receiving market inspections 28,000.

The Division of Crop and Livestock Estimates makes crop reports through the Crop Reporting Board. Two new services recently added are the intention-to-plant reports, and a new service on livestock reporting. Special cattle and sheep reports were issued during the past year, and swine reports to indicate hog production. Monthly livestock changes are reported, the price-reporting work having been much expanded. Truck-crop reports will be expanded as funds become available. The division makes constant studies with a view to improving methods of estimating acreages. Statistical methods are constantly studied with a view to incorporating any new ideas of value.

The Division of Livestock, Meats, and Wool has branch offices with leased wire connections for reporting the wholesale meat trade in Boston, New York City, Philadelphia, and Chicago, and the livestock markets in Chicago, St. Paul, Kansas City, East St. Louis, Omaha, and St. Joseph.

The market reporting service and the methods of operating it have been practically standardized, hence there is little in the way of new accomplishments to report, except when extension is made to other markets. Every effort has been made to refine and improve the service and to utilize modern methods of news dissemination.

Wholesale meat-trade information in three principal eastern markets is collected and disseminated in the same manner as that outlined under livestock market reports above. In addition to preparing mimeographed reports covering conditions at his market, the meat reporters release a number of miscellaneous reports of particular interest to the livestock and meat industries, prepared in Washington and in the branch offices. The reporters are always ready to respond to special requests for information and at some of the offices reports for radio broadcasting and for publication in trade and commercial papers are prepared.

Representatives at the three eastern meat markets also compile information desired by the Washington office regarding imports and exports of livestock, meats, and wool, and other animal products. They also compile records showing the volume of western dressed and local slaughtered meats received in their cities.

Reports issued on California lambs during the past year have materially assisted producers and the trade. A news service on wool was recently begun.

The Division of Statistical and Historical Research assembles statistics and facts on the domestic and foreign production and stocks of agricultural commodities. It studies the trend of production, imports, and exports movements, and other data relative to the demand and prices, which makes possible a world crop and market service.

Canada, India, Norway, and agricultural commissioners in London and Berlin send foreign agricultural information direct to the bureau by cable or radio. The International Institute of Agriculture at Rome sends bimonthly radiograms on crop conditions in different countries and, as soon as received, crop and livestock estimates and forecasts of each of the foreign countries which report to the institute are prepared.

The State Department has coöperated through the Consular Service by making reports on the agricultural situation and market conditions, and arrangements are being made for more extensive coöperation in developing a supplementary reporting system, through the Consular Service. The Department of Commerce coöperated with the bureau by submitting reports of the trade commissioners and plans have been made for securing regularly, through commercial attachés, reports on the cotton crop of China.

The Division of Information is particularly interested in the assembling of related facts bearing on the farmer's market questions, as provided by the work in the various parts of the bureau, into concise

statements of practical value to farmers. It supplies an increasing demand for information bearing on the changing agricultural conditions, to the press, agricultural writers and editors, investigators, legislators, and farmers. The effort has been to get facts from widely separated sources which have a bearing on one question and to make this information effective by putting it into clear and concise form.

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CHAPTER XIX

STANDARDIZATION

1. STANDARDIZATION IN MARKETING¹

STANDARD MONEY

Whatever differences of opinion may exist with respect to other functions of government, little is said or to be said against coining money and fixing the standards of weights and measures. Though these two functions are grouped together in the same clause of our Federal constitution, it is doubtful if it is generally realized how close is the logical connection between them. Both result in great economy of effort in the transfer of goods. The economy involved in transferring coined money rather than uncoined metal is apparent. Coining the metal merely enables it to pass from hand to hand without the labor of inspection, that is, without weighing it to determine its quantity and without testing it to determine its quality. It "sells"—if we may speak of selling money—on grade and reputation rather than on inspection. It is the most salable of all commodities, and the fact that it is so standardized as to make inspection unnecessary on the part of the "buyer" has a great deal to do in giving it its superior salability. By the same process of standardization, any other commodity may approach gold coin in salability, though it may not quite reach it. At least it is safe to say that whenever it can be sold entirely on grade and reputation, and absolutely without inspection, its salability will be enormously increased.

QUANTITY STANDARDS

A short step is taken in the direction of standardizing other commodities when the State establishes uniform standards for determining quantity, that is, when it fixes the standards of weights and measures. Without some uniform system even our present methods of selling would be much more clumsy and wasteful. Every buyer would have to have his own system for determining the quantity of his purchases. This falls short, however, in two important particulars, of what is accomplished when metal is coined in a modern mint. In the first

¹ Adapted from T. N. Carver, "Standardization in Marketing," *Quarterly Journal of Economics*, Vol. XXXI, No. 2 (Feb., 1917), pp. 341-44.

place, the Government actually coins the money or requires it to be coined according to its own rules; whereas in other cases it only defines the units of measurement and commands conformity to its definitions. In the second place, coins are standardized, not only as to quantity, but as to quality as well. There is no probability that any government will be called upon to do that which would be analogous to coining money—actually put up other commodities in standardized packages. Something is to be said in favor of fixing standards of quality as well as standards of quantity.

QUALITY STANDARDS

The reasons in favor of fixing standards of quality, wherever it can be done, are identical with those in favor of fixing standards of measuring quantity. They are all summed up in the superior economy of buying on grade and reputation as compared with buying on inspection. The buyer of an unstandardized commodity may have enough confidence in the sellers' system of weights and measures to avoid the necessity of weighing and measuring for himself; but he can scarcely avoid the necessity of inspecting the commodity in order to determine its quality. In some cases, the determination of its quality is easier than that of its quantity, but in other cases it is not. In all cases where quality can be standardized, there is economy of effort. So far as buyers can be saved the trouble of inspection, so far will they be enabled to economize the time and effort involved in making purchases, and so far, also, will the salability of commodities be increased. Whether this will reduce the cost of getting the standardized commodities from producers to consumers, or merely enable the consumers to use their time more advantageously to themselves, may be open to question; but the ultimate economic effects are much the same in either case.

Not the least among the advantages of a minute division of labor is the fact that each individual can avoid the necessity of being expert in many things and therefore has time to become a specialist in one thing. One of the advantages of the standardization of commodities is that the average consumer can avoid the necessity of being an expert judge of the many articles which he has to purchase. He may therefore utilize his time and mental energy in his own special field of work. There is, to be sure, something attractive in the custom of the well-to-do burgher going to market and selecting with the eye of a connoisseur the various articles needed by his household; but it is wasteful of time and mental energy. When he or his housekeeper is able to order by

telephone, without any inspection whatever, and still get what he wants, more time is left for other things.

This will help to explain two very distinct tendencies in present-day retail marketing methods. The first is to put more and more articles up into standardized packages. The second is to place more and more dependence upon the retailer, who, in many cases, is coming to regard his customers as clients to whom he is bound to give his own expert service. Both tendencies are designed to save the consumer the trouble of becoming an expert buyer. Neither tendency has, as yet, reduced the cost of getting products from producer to consumer. If the consumer utilizes the time saved in earning a larger income with which to purchase goods, it perhaps does him as much good as it would if these tendencies merely reduced the price of commodities.

One reason why these tendencies merely save the time of the consumer rather than reduce the cost of getting the products to him is that the standardization takes place only in the last stage of the process, that is, just before the commodities reach the consumer. In order to reduce materially the spread between the price which the producer gets and that which the consumer pays, standardization must take place early in the process. This will enable the standardized article to go through the channels of trade at a lower cost. If it has to be inspected every time it changes hands, the process is expensive and some one must pay the cost. Some products apparently cannot be standardized, and there must therefore always be a wide spread between the producers' and the consumers' prices.

2. ON THE NEED FOR STANDARDIZATION¹

AN ILLUSTRATION

Consider for a moment the situation of a dealer in paints: There are ten shades of pearl gray paint, more or less, produced by the manufacturers of the United States and these shades seldom are the same for any two manufacturers. Therefore, a retail paint dealer who carries the lines even of three different manufacturers may find himself out of stock of a particular shade of pearl gray because no standards of color have been adopted by the trade. Let us suppose that a farmer who wished to paint his house a certain shade of pearl gray bought all that he believed necessary, but ran short. When he returned to the paint dealer to buy more he discovered that the precise shade he needed

¹ Adapted from Chamber of Commerce of the United States, Domestic Distribution Department, *A Commercial Tower of Babel*, pp. 3-4, 8.

was sold out. There were plenty of cans of pearl gray paint but none of *his* pearl gray. Hence he waited a long time to get his extra can or two, suffering no one knows how much annoyance and inconvenience.

Every retail merchant has a certain amount of capital which he can invest in merchandise for resale and his chances for profit depend mostly upon the frequency with which this capital can be reinvested—turned over, leaving in his hands each time a reasonable percentage. This percentage is not earned until the merchandise is sold, and it is evident that the dealer just mentioned had several shades of unsalable gray paint so far as his farmer-customer was concerned. If his investment had been based upon recognized standard shades he would have had many more cans of each shade, which probably would have supplied promptly the farmer with his paint and the dealer with his needed profit. This is by no means the whole story—merely a rough outline of the conditions which every wholesale and retail merchant faces who thinks himself forced to carry too many articles of the same general description in his stock. Any scheme of merchandising which does not consider this question carefully and constantly, fails just that much of approaching a possible height of success.

WHO IS AT FAULT?

In attacking any difficult task, it is well not to begin with the most obstinate or apparently most unconquerable conditions. These, we believe, are found among styles since the changes which they produce are the commonest causes for variety. Fashion is an inconstant dame who at one time shrinks at the display of an ankle yet soon afterwards appears unblushingly in knickerbockers, riding breeches, or a one-piece bathing suit. Even the most casual investigation of this subject leads into the ungoverned whirl of a vicious circle: When a manufacturer is asked what he can accomplish toward reducing the number of styles, he shakes his head and says "that his trade demands novelties"; and when the trade is asked what they can do toward the same purpose, they say, "The manufacturer produces these styles and if my competitor across the street handles them, I have to do the same or go out of business." It has been somewhat ineffective to call attention to the fact that if the manufacturer does not produce these novelties, the trade cannot buy them, because the individual manufacturer retorts, "If they don't get them of me, they'll get them of my competitor." Somewhere there is a common ground where both manufacturer and retailer would be comfortable, but its precise situation has not been identified and our purpose is to discover this locality.

3. STANDARDIZATION OF FARM PRODUCTS IN THE UNITED STATES¹

When great foreign trade associations adopt American standards for a world commodity a new era begins in the history of standardization of agricultural products. American standards for cotton, worked out with great care, used in domestic trade for many years and found satisfactory, have been accepted by the Liverpool and Manchester cotton associations and the Havre and Bremen cotton exchanges, upon the recommendation of their representatives recently sent to this country. Thus the official cotton standards of the United States have virtually become the universal standards.

COMMODITY STANDARDS

The official standards for cotton greatly facilitate the trading in cotton, and add greatly to its value as collateral. Although cotton varies in three important particulars (presence of foreign matter, length of fiber, and discoloration present), through the use of the established standards a comparatively accurate statement of the qualities of cotton may be made without actually handling the product.

Multiplicity of grain grades on American markets became so confusing that gradually the demand for uniform standards became insistent throughout the country. Farmers, grain associations, exchanges, manufacturers, foreign buyers, joined in the demand which crystallized in the passage of the Grain Standards Act in 1916. The establishment and enforced use of a single set of official standards for American grain was the primary purpose of the law. Standardized Federal grades for wheat, oats, and shelled corn were promulgated and made mandatory in interstate and foreign commerce under this law. On July 1 of this year, official rye standards became effective.

Similar grades have been established for grain sorghums and rough and milled rice which will be made compulsory when sufficient funds for enforcement are available. Meanwhile they are being voluntarily used to a considerable extent.

Through provisions of the United States Grain Standards Act, correct inspection of grain throughout the United States under a uniform system of standards, and reliable certification as to quality and condition of grain, are assured because only competent men licensed by the Secretary of Agriculture may inspect, grade and certificate the

¹ Adapted from C. B. Sherman, "Standardization of Farm Products," *Journal of the American Bankers' Association*, August, 1923.

grade of grain for which the Federal Government has established standards. All certificates issued by inspectors covering the grade of these grains clearly state that the inspector is a licensed inspector operating under and in accordance with the United States Grain Standards Act. More and more bankers are insisting on grain inspection certificates issued under this Act.

Standards for official inspection of quality and condition of hay have been established this year, after the hearty indorsement of the hay trade associations. Official Federal inspection has been established in several important markets, including New York City, Boston, Philadelphia, Chicago, Richmond, and Alexandria, Virginia. Seven hay inspectors are also located at shipping points in New York State. Before Federal hay inspectors are licensed to inspect hay and issue certificates, they are trained under the direction of experts of the Department of Agriculture.

Another important step forward in the march of standardization made this year, is the adoption of official wool standards for grades of wool under the United States Warehouse Act, after indorsement by the Research and Standardization Committee of the wool and textile industry, and by wool producers and by the wool trade. These standards cover diameter of fiber only, and much further study and work must be done that the standards may eventually cover other properties of wool.

Noteworthy progress has been made toward national standards for livestock and meats. Market classes and grades of livestock and meats are quoted according to grades in the proposed Federal standards in the Federal market news service which is used on all large markets. The United States Shipping Board is making its purchases of meat according to these standards, with marked savings as a result. The exhibit of colored transparencies illustrating these standardized grades is in constant demand at livestock shows, fairs and educational institutions the country over.

Standards and the results of their establishment are even more necessary in the financing of perishables and their movement than of staples. Farmers must usually work through organized units to finance the movement of a perishable crop; to finance it to the best advantage the organization must have a reputation for general soundness, and its products must have become known in the markets of the country.

An officer of one of the large banks of the Northwest recently states that there was evidence of competition among the banks of that region

for the preferred class of business in financing the fruit crop of the Pacific Northwest where previously there had been reluctance. Bankers had changed their attitude, he said, only because organization and science had so largely succeeded haphazard operation and speculation among the fruit farmers. Standardization of product, inspection, and use of an association trade-mark were the fundamental factors in business reputation of the well-known growers' association of that region. They adopted standards early in their development, regard them as their most valuable stock in trade and guard them carefully by strict inspection.

Potato grades were among the first worked out for perishables by the Department of Agriculture but they received little consideration until war conditions focussed attention on many such matters. With transportation space at a premium the Food Administration ruled that all potatoes handled by licensees be graded to United States standards and that only potatoes that reached those standards could be shipped. Many were the complaints at the time but although these standards were compulsory only during the war their very general use has since been maintained voluntarily and United States No. 1 and No. 2 grades are found with increasing frequency on the markets.¹

As a result of much study standard grades have been recommended for Bermuda and northern-grown onions, white and sweet potatoes, and strawberries, and large quantities of these commodities are shipped under these grades. Texas, the great shipper of Bermuda onions, has made the grades compulsory in shipping from that state. Standards have been proposed and are now under commercial test for apples, asparagus, cabbage, cauliflower, celery, cucumbers, lettuce, peaches, and tomatoes, and for white Spanish shelled peanuts and for farmers' stock unshelled peanuts. National standards for can-house tomatoes, bunched vegetables and for honey are under study.

STANDARD CONTAINERS

Standardization of the containers of fruits and vegetables preceded standardization of the products themselves. In 1915 the Standard Barrel Law abolished the use of barrels of all sizes. In 1916 the Standard Container Act so regulated the huge number of sizes and shapes of grape baskets and berry and till boxes, that deceptive types were eliminated; grape baskets were made in two, four and twelve-quart sizes only, and berry boxes and till baskets were provided for indefinite subdivisions and multiples of the dry-measure quart. This law met

¹Probably 85 per cent of the commercial crop of potatoes is now sold under U. S. grades.

with practically no opposition and its enforcement has been largely a matter of education.

Legislation now before Congress provides for five styles each of hampers, round stave baskets and market baskets, whereas we now have about thirty sizes and styles of hampers, twenty of round stave baskets and an unknown number of kinds of market baskets. On many curb markets of the country the market basket is the usual unit of measure for fruits and vegetables. Indorsement of this legislation is hearty and universal. The package manufacturers and the best elements of the trade want it in the interests of fair play and to reduce costs.

Studies in earlier form are under way for tobacco, for eggs and for other products. One of the largest coöperative tobacco growers' associations in the country has voluntarily adopted the tentative grades for four different kinds of tobacco outlined in preliminary form by the Government investigator. The poultry committee of the State Agricultural Conference of Pennsylvania, recently convened, passed a recommendation "that the State Bureau of Markets exert its influence to have the Federal Department of Agriculture set a standard grade for poultry and poultry products." This is illustrative of many other inducements offered to the Government from widely different sources to push its work of standardizing agricultural products.

4. SHIPPING-POINT INSPECTION AND THE F.O.B. AUCTION¹

The Division of Fruits and Vegetables, of the U. S. Bureau of Agricultural Economics, does extended work in market news and in standardization of farm products. Its market inspection work has been well known for several years. Through this inspection service carloads of fruits and vegetables are inspected on request at the large city markets and certificates issued to show the quality and condition of fruits and vegetables at the time the inspection is made. Congress has ruled these certificates *prima facie* evidence in the courts of the United States. An outstanding development in the inspection service during the past year has been the inauguration of the shipping-point inspection service. Congress authorized the shipping-point inspection work by amending the law under which this service is rendered, but provided no additional appropriation to carry on the service. It was

¹Adapted from an article prepared (1923) by the U. S. Department of Agriculture, Bureau of Agricultural Economics.

necessary, therefore, to inaugurate the work through coöperation with state agencies which had funds at their disposal or authority to use the fees collected as a revolving fund for carrying on the work. Coöperative agreements covering inspection at shipping points have been entered into with twenty-six states.

Some of the economic results of the shipping-point inspection service have been spectacular in the swiftness of their movement and bid fair to leave a lasting impression on the fruit and vegetable industry. By bringing the lessons of proper grading and standardization home to the growers it seems evident that production methods in many districts will be profoundly affected.

Jealousy and suspicion, which too often attach to the work of the inspector employed by the local coöperative association, does not attach to the work of the Federal inspector. The certificates issued have been found a new and satisfactory basis for pooling by organized growers who have never been able to solve this problem in the past.¹ The shipper is furnished with a new basis upon which he can offer his product to the purchaser in the district market and is able to have in hand when the car leaves his station *prima facie* evidence that he has made a good delivery. The purchaser, on the other hand, has been given a new method for specifying exactly what the shipment shall be, and if he buys demanding "Government certificate attached to bill of lading" he can be sure that an impartial agency has passed upon the quality of the goods which will be shipped him.

THE F.O.B. AUCTION

Capitalizing this situation, enterprising business men have established auctions in eastern and western cities, the sole business of which is to sell cars in transit on the strength of the Government inspection certificate. The auctioneer in Pittsburgh, for instance, has in hand a telegraphic summary of the result of the Government inspection on a

¹One of the greatest evils which has grown up in the perishable produce market is that of rejection. If the market has fallen or is falling, the temptation on the part of the buyer to reject produce purchased on a higher market is great, and rejection had become a too prevalent practice on all perishable produce markets. The consignee, or buyer, would in some cases allege the produce was not up to grade, or in other cases he would bluntly tell the consignor or broker, that he would not take it. This was an extra-legal procedure in many cases, but the expense and delay in suing the consignee were often so great that the broker, or the consignor, if there was one, would sell his produce at the lower market price to another dealer in order to get some return. If there was no representative of the consignor in the local market, it would often be abandoned to the railway for freight charges. The railways would generally turn the produce over to some salvage organization, which specialized in rejected freight. Such procedure resulted not only in great losses to consignors, but also in the loss of much perishable produce to the consumer.

This pernicious and illegal practice has been decidedly modified under the regulations of the Food Administration by requiring consignees to meet their obligations under the penalty of having their license revoked.—W. F. Gephart, "Perishable Produce under Food Regulation," *Quarterly Journal of Economics*, Vol. XXXII, No. 4 (August, 1918), p. 628.—EDITOR.

car of California products which left the shipping point the evening before. The car is offered for sale on this description. The buyers purchase on an f.o.b. shipping-point basis with no other evidence of what the car contains than that carried in the telegram.

The car is sold, purchase price is transmitted to the shipper by wire, and the transaction is completed within forty-eight hours after the car is loaded. The car proceeds at once to destination without in-direction or delay, although neither auctioneer nor purchaser has seen even a sample of the goods. The buyers need not attend these auctions in person, houses in cities hundreds of miles away doing business at the auctions through resident buying brokers by stating the size, variety, and grade of the product desired and the character of the containers in which the product is packed.

5. STATE INSPECTION, GRADING, AND WEIGHING OF GRAIN¹

The three main considerations in arriving at the grade of wheat are: the quality of the grain, its condition, and the admixtures. The quality depends upon soundness, color, weight, and the percentage of hard grain. The condition depends upon the moisture content, the heat, smut, etc. The admixtures are tested by a process of sieving and weighing, by which the dockage is determined. Much the same factors are considered in grading other grains.

On such a basis it is manifestly impossible to determine the grade of grain scientifically by the old "car-door inspection" with poor light and inadequate apparatus. The laboratory method of inspection provides orderly work in a well-lighted room with a scientific equipment. This method has been highly developed in Minneapolis and Chicago with substantially the same methods in use.

SAMPLING

State inspection, notably in Minnesota, does not confine its activities to the terminal market. In order to expedite inspection and relieve congestion in railroad terminals the Minnesota Railroad and Warehouse Commission has established sampling stations at various interior points, and has even provided an inspection and weighing station at La Crosse, Wis. The samples obtained at these interior stations are forwarded by express to the main inspection office, so that the bulk of the grain is officially graded before it reaches the terminal.

¹ Adapted from Federal Trade Commission, *Report on the Grain Trade*, Vol II., *Terminal Grain Markets and Exchanges* (1920), pp. 304-6, 308-9, 313-17, 319.

The samples of grain are procured from newly arrived cars on the "inspection tracks"—special tracks provided for the purpose by the railroads in the larger markets. The samplers work in crews under a yard foreman in the large yards. The foreman receives the car waybills or receivers' notices from the railroad and assigns the cars to individual samplers, whom he holds accountable. Each grain car is tagged by the railroad employees, showing the contents.

The work begins in the morning as soon as the crew can see to work, which, during the month of December is a little past 7 A.M. The crew goes at once to the shack maintained by the carrier in the different yards, where the men get their tools and change their clothes. The cars to be sampled include all cars of grain which have come into the yards since the close of sampling operations on the day before. On arrival of a train the conductor leaves the car bills in the railroad company's yard office. A list of these bills is made showing the car number, name of shipper, the shipping station, and consignee. These details are necessary for issuing the inspection certificates. From such a list the yard sampling foreman with his crew works the cars. A record of the seal is made when the car is opened.

In Minneapolis the operations of the sealer precede those of the sampler. He enters the number of the car seal upon his record book, also noting any defects that he may observe in the condition of the car. He pounds upon questionable looking spots with his crowbar to determine whether the car when moving was likely to have been leaking. He then breaks the seal, opens the door, and leaves the car to the sampler.

Under Minnesota practice, before entering the car, the sampler records on an inspection ticket the car number, the initials, the date of sampling, and the name of the sampler. This ticket is kept until the sample is taken and is placed in the sample sack with the grain taken.

The sample is drawn by means of a brass or steel probe about sixty inches long. In Minneapolis the implement used is composed of two tubes, one within the other, each part having seven (sometimes ten) equidistant slots (approximately $\frac{3}{4}$ inch wide by $3\frac{1}{2}$ inches long) through which the grain at various depths may enter the probe. By revolving the inner tube the holes of the probe are tightly closed before insertion and are opened again after the tube has been plunged into position.

The holes are closed again when the probe is filled and samples of grain at various depths in the load can thus be lifted out. Employees are instructed to probe the cars in at least five places—more if there

is reason to believe that a car has been "plugged." The two bottom holes of the probe sometimes empty into separate compartments in order to give a separate examination of grain near the bottom of the car. The records of the Minnesota Railroad and Warehouse Commission indicate about $1\frac{1}{2}$ per cent plugged cars in Minneapolis receipts. The grain is carefully emptied onto a canvas so as to keep its relative position as in the car. The samples thus emptied in parallel lines show a trained man at once the comparative qualities in various points of the car and at various depths.

In the Chicago market a similar device is used except that the probe consists of a single tube inclosing a wooden stick which must be withdrawn to let in the grain. The limited room on top of a load often makes it necessary to insert this style of probe at a considerable angle.

This grain which has been taken by the several probes is, after it has been looked over by the sampler, put in the sample bag. In the same bag with each sample there is placed a card giving the sampler's name, the car number, the contents, and the date sample was taken, together with the receiver's notice from the carrier. The car is then closed and is ready for sealing.

It has been noted that in Minneapolis the grain is spread on a canvas before being deposited in the sample sack. This practice is also recommended by the Federal grain supervision office.

Another Minneapolis practice which has Federal indorsement is that of placing a part of the contents of the probe sample in an airtight tin container in the case of wheat and corn. This sample is used to make a moisture test in the inspection laboratory in conformity to the provisions of the Federal grades.

In Minneapolis after the sampler has reached the end of the string of cars the sealer goes down the line, closes the doors, and applies the state seal.

The record of this seal as well as all the other records of seals and car orders are preserved so that it is possible to ascertain for years afterwards the name of the person who broke the seal, who took the sample, who inspected it, and the condition of the car at the time of sampling.

Under the Illinois inspection department no grain is taken in metal containers for moisture tests. Instead, all moisture tests are made from grain taken in bags. When asked the reason for not using the tin containers the reply given by the chief inspector was that it takes extra time and involves extra expense, and that they have found from actual experience that moisture tests made from grain taken promptly

in sacks to the laboratory do not differ to any appreciable extent from tests made of similar grain taken in the metal containers.

The methods of sampling employed at the other interior markets do not differ materially from those described.

INSPECTION OF SAMPLES

When a sample of wheat or other grain is placed upon the inspector's table it is emptied into a large pan, where observations are made of color, odor, and general appearance. In the determination of dockage 500 grams are put over what is generally called the "kicker." The Emerson kicker is used in the Minnesota inspection department. This machine separates out from the grain foreign material, such as the wild oats frequently found in wheat. Dockage is determined on the basis of per cent by weight.

All samples of corn are tested for moisture. In the case of wheat, when the moisture content is the determining factor, or from general observation of the inspector is likely to be an important factor, in the determination of the grade, a moisture test is also made. It has been found necessary at Minneapolis under the new government grades for wheat to make a moisture test on approximately 5 per cent of all samples of this grain handled.

This moisture test, as approved by the United States Department of Agriculture, is made over the Brown-Duvel moisture tester. The test is made in a separate laboratory room, connected with the main inspection laboratory, by employees who have that work exclusively in charge. Whenever an inspector finds a sample on which he wants a moisture test he makes it known, and the contents in the air-tight container are taken to the moisture-test room, where the test is made and the results reported directly to him. Then, on the basis of complete study of the sample in hand, the grade of the grain is determined.

In Minneapolis an average hour's work for each inspector under the new standards is eight to ten samples, while under the regulations of the old boards of state grain appeals, fifteen to eighteen samples could be graded each hour. Seventeen inspectors are generally required for the work.

Inspectors, as well as samplers, now work under licenses issued by the United States Department of Agriculture.

SAMPLING BY PRIVATE AGENCIES

Besides the sample taken by the state or official agency (upon which the official grade is issued), samples are frequently procured

by private agencies on the order of commission men, dealers, elevator buyers, and other traders. The commission man is interested in obtaining the best possible grade for his consignor, and in consequence the best price procurable for the grain handled. Hence he desires an inspected sample of the grain for his own use, that he may be in a position to determine whether or not he should accept the official grade or ask for reinspection or appeal.

Both state and exchange inspection offices are presumed to be self-supporting. The two sources of income are the inspection fees and the sale of grain taken in samples. The latter is, of course, a meager revenue except on the large exchanges.

Under statutory inspection the fees are usually fixed by the state utilities or warehouse commission.

Under exchange inspection the grain committee (or inspection committee) is generally authorized to control the charges for inspection.

In Chicago the inspection fees are fixed by the Illinois Public Utilities Commission at a rate calculated to cover the budget of the department without profit to the state.

The Minnesota inspection fees for Minneapolis have varied somewhat according to the volume of grain received at the market and the operation costs of the department.

REINSPECTION AND APPEALS

At least two appeals are open after the initial grade has been taken on a car of grain. Where state inspection exists reinspection may be obtained from a supervising inspector or the chief inspector, with further appeal to a state board constituted for that purpose. Under exchange inspection similar reinspection is provided, and appeal lies to the appropriate committee. In any case, when grain shipped in interstate commerce has been inspected by an inspector licensed by the Federal Government, appeal may be had to the office of Federal grain supervision for that district.

The inspection services of all the markets are in such a state of flux that anything more than a bare outline of the facilities provided would be unsatisfactory. For technical discussions of the administration of standard grades reference should be had to the publications of the Bureau of Markets, Department of Agriculture.

Reinspection is generally instituted on written application to a supervising inspector within a stated period after the original inspection, upon the deposit of an amount equal to the reinspection fee.

The following table shows the results of appeals taken to the State Board of Grain Appeals at Minneapolis during 1914-15 and 1915-16:

TABLE 17.—APPEALS.

	1914-15		1915-16	
	Number	Per Cent	Number	Per Cent
Total cars inspected. . . .	227,208	.....	325,665	.....
Per cent of cars appealed.		7.3		10.2
Number of cars appealed.	16,703	.....	33,212	.....
Raised to higher grade.	1,172	7.02	2,580	7.17
Grade lowered.	331	1.98	1,033	3.71
Dockage changed.	681	4.07	899	2.71
Total changes.	2,183	13.07	4,509	13.59
Grades sustained.	14,519	86.93	28,700	86.41

In Chicago reinspection is done under the direction of one of the supervising inspectors. Below is given a record of the calls for reinspection during the years 1915, 1916, and 1917, showing the requests that were canceled, the cases in which the grade was maintained, and the cases in which the grade was changed.

TABLE 18.—REINSPECTION (CARS).

	Called	Requests Canceled	Sustained	Changed
July 1, 1914, to June 30, 1915, inclusive. . . .	3,975	22	2,176	1,777
July 1, 1915, to June 30, 1916, inclusive. . . .	3,161	91	1,587	1,483
July 1, 1916, to June 30, 1917, inclusive. . . .	1,464	35	641	788

If the grade as determined from reinspection is unsatisfactory to either party concerned, an appeal may be taken to the Illinois State Board of Grain Appeals. The party requesting the appeal signs a formal application. The board is then called together by the chief grain inspector. If there is reason to believe that the sample already taken is not representative, another sample is taken by some regular employee of the inspection department. The board reviews the sample and fixes the grade. Any interested party may be present during the time the review is being taken, but he is forbidden to

make any suggestions with reference to the grade. If the grade is sustained, the deposit fee of \$5 is retained. If the grade is changed this amount is refunded.

On grain inspected under the Federal Grain Standards Act, appeal may be taken to a Federal grain supervision office upon deposit of a sum sufficient to cover the fees and charges. The schedule of fees announced February 24, 1919, was as follows:

For bulk grain in carload lots, \$3 per car.

For bulk or sacked grain in wagon lots, \$1 per wagon.

For bulk grain other than in carload or wagon lots, \$3 per 2,000 bushels or fraction thereof, not to exceed \$50 for any one inspection lot or parcel.

For sacked grain other than in wagon lots, 1 cent per sack.

Such further charges may be made for telegrams, express, parcel post, registry fees, traveling expenses, and other items paid or incurred by the Department of Agriculture on account of a dispute, or an appeal taken from an inspection made at a point where no licensed inspector is located, and for oral hearings, as will reimburse the department; all charges above the minimum, and all of such additional items, to be determined in each case by the Secretary of Agriculture.

Appeal must be taken (a) before the grain leaves the place where the inspection which is appealed from was made; (b) before the identity of the grain has been lost; and (c) as promptly as possible, but in no event later than the close of business on the second business day following the date the grading was performed as shown by the record.

FEDERAL GRADES

Whatever the effect of the Federal grades upon inspection costs and upon the country prices there seems to be no question that they have instituted a nation-wide uniformity which has greatly benefited the mill buyers.

The receiving interests at Buffalo now state that they have no reluctance in buying wheat by grades, whereas prior to the introduction of these grades "the grade placed by western inspection would be below the standard used in the East."

6. THE NEED FOR LEGAL STANDARDS AND GRADES FOR MILK¹

Legal standards for milk are quite necessary. In the first place, the consumer cannot determine for himself whether the milk complies

¹Adapted from H. E. Erdman, *The Marketing of Whole Milk* (1921), pp. 32, 35-36. (The Macmillan Company.)

with his particular consumption standard or not. Though he can in a general way tell whether milk is deficient in fat and in solids not fat, there is a wide range within which he cannot distinguish. That being the case, there is always the temptation for competitors to cut down slightly in the quality, as measured by fat content particularly. Hence competition often reduces rather than improves the quality. As for sanitary conditions under which the milk is handled and as to its safety with regard to its germ-carrying possibilities, the consumer is entirely in the dark. The result is that the honest producer and the honest distributor are penalized, since the dishonest man can sell an inferior milk at the same price that the better milk brings.

Government standards are usually minimum standards, and it often appears that there is a tendency for them to become also maximum standards. For example, where there is a minimum requirement of 3.25 per cent fat, the dealers are inclined to market milk which comes as near this minimum standard as possible without too much risk of occasionally dropping below. There are, however, instances where competition seems to keep the quality rather high. In Columbus, Ohio, though the city minimum is 3 per cent, a considerable proportion of milk sold is 4 per cent or better, which the dealers claim is about the standard demanded by consumers.

In most cities milk is sold with no reference to grade. City inspection, where there is any, merely determines whether the product is fit for food at all. If it is, it may be sold as "milk." It is coming to be recognized, however, that there are differences in the demands for milk which are legitimate and which can be met only at varying costs. For example, milk for infants must be of the very highest quality from a sanitary point of view at least. For cooking purposes, however, this is not so important, since there is no danger from even a rather high bacterial content in milk which is to be cooked. The latter grade can be produced at a much lower cost.

Some few cities are now making allowance for such differences in demand by having milk graded and the various grades labeled in order that the consumer may know just what grade he is getting and pay for it accordingly. These differences from the broad, general basis of present grades of milk, namely: (a) milk for infants to drink; (b) milk for adults to drink; (c) milk for cooking purposes only. Under each of these there should doubtless be a number of sub-grades based on fat content. The principal points which are considered in establishing the various grades are the food value and questions of safety and decency.

THE U. S. BUREAU OF STANDARDS¹

It may be said that the bureau occupies somewhat the same position with respect to the manufacturing interests of this country that the bureaus of the Department of Agriculture do to the agricultural interests. Many industries realize the importance of scientific investigation which, in practically every case, involve some kind of precision measurement.

It is upon quality as well as upon price that competition must finally depend, whether in domestic or foreign commerce. The use of exact methods and scientific results is the greatest factor in the improvement of quality, efficiency, or the development of new industries. The educational value of the bureau's work in this respect is almost entirely unknown to the general public, and yet the bureau receives hundreds of letters, as well as many personal visits, from manufacturers seeking information as to standards of measurement, how to use them, how to measure the properties of materials, or as to the fundamental, physical, and chemical principles involved; also, what is of even greater importance, how to initiate and carry out scientific investigations and tests on their own account in their particular fields of work.

The importance of maintaining scientific institutions having to do with standardization and the application of precise measurements to the industries has been recognized by all the leading countries of the world. Great Britain maintains the Standards Department of the Board of Trade, which is in charge of the standards and inspection service of the trade weights and measures; also the National Physical Laboratory, whose functions include matters pertaining to scientific and technical standards, physical constants, and to some extent the properties of materials. The Laboratoire d'Essais of France, while not as extensive as the English institution, is charged with similar duties. Germany maintains three such institutions—the Normal-Eichungs Kommission, equipped with the buildings, personnel, and apparatus necessary in standardizing and controlling the weights and measures of trade; the Physikalisch-Technische Reichsanstalt, covering testing and investigations in connection with scientific and technical standards other than weights and measures; and the Materialprüfungsamt of the Prussian Government, a large institution devoted to the investigating and testing of structural,

¹ Adapted from Director of Bureau of Standards, *Annual Report to the Secretary of Commerce* (1923), pp. 2-11.

engineering, and other materials. It is generally recognized that these institutions have been exceedingly important factors in the industrial progress of these countries.

ADVISORY AND CONSULTING CAPACITY

One of the most important services which the bureau has been able to render to other departments of the Government, both civil and military, has been of an advisory and consulting nature in matters pertaining to the scientific work in which these departments are interested. Too great emphasis cannot be placed on the importance of this phase of the bureau's work. Its maintenance would be warranted for this reason alone, even though its usefulness in this field is but a small portion of the total service which it has rendered other branches of the Government.

The bureau's laboratories have been open and its experts available at all times to every department of the Government, and in many cases substantial help has been rendered to the military and civil departments through the familiarity of the bureau with certain kinds of work and its ability to quickly decide whether the particular methods, materials, or devices were suitable for the service in question.

Among the Government bureaus and establishments which have utilized the Bureau of Standards as a testing institution in connection with the purchase of supplies may be mentioned the Government Printing Office, in connection with the purchase of paper, inks, and printing supplies, and the Post Office Department, in connection with the purchase of paper, twine, textiles, etc. A wide range of materials has been tested for the Quartermaster Corps of the Army, the Bureau of Supplies and Accounts of the Navy, and the Panama Canal. The General Supply Committee has called upon the bureau for assistance in the specification of all sorts of supplies and equipment, as well as the testing of samples submitted by bidders of the supplies bid upon. Practically every branch of the Government service, including the District of Columbia, utilizes the Bureau of Standards as a testing bureau. Here, again, as in other fields of the bureau's activities, it gains much useful knowledge, which is given to the public in the form of suitable publications.

STANDARDS OF QUALITY, PERFORMANCE, AND PRACTICE

A standard of quality for a given material may sometimes take the form of a sample of that material with which other materials of the same kind can be compared, but this is generally a makeshift of

the poorest sort. It is only resorted to in the absence of definite and reliable specifications in terms of measurable properties; that is to say, a standard of quality of a material usually takes the form of a specification or definition of its properties, involving, of course, the measurement of those properties by means of the usual standards of measurement. A certain kind of steel, a cement, a paint, an oil, a paper, or a cloth is found by use to be good or poor for a definite purpose. The questions then arise: Why is it good or poor? What are the physical or chemical properties or the particular combination of elements which make it of good or poor quality? How are its properties to be measured or its constituents determined? These are questions for the laboratory to answer and involve physical and chemical investigations of the most difficult sort.

A standard of quality for a given material necessarily takes into account the purpose for which the material is to be used. To set the standard too low results in losses, poor efficiency, and even loss of life; to make it too high may result precisely in the same thing; that is to say, the material must be suitable for the purpose intended, and the bureau's investigations in connection with the properties of materials are to enable the user of these materials, first, to select intelligently the material best suited for the purpose; second, to specify it in terms which the producer cannot mistake; and, third, to make the necessary tests to ascertain whether or not the material supplied is in accordance with the specifications.

The value of an instrument, device, or machine almost always depends upon the efficiency of its performance. In such cases it is necessary to state the performance desired or guaranteed in terms which are correct and susceptible of measurement. As in the case of standards of quality, the standard involved is more often in the form of a specification, but specifications are useless unless based upon correct scientific and mechanical principles and supplemented with a statement of the method to be used in ascertaining whether or not the specification or guarantees have been complied with.

The performance of an engine or boiler, a pump, an electrical generator or motor, a weighing device, or a telescope can usually be measured, but the quantities to be measured and the methods used must be specified correctly and understood by all the parties concerned in the construction, purchase, or use of such apparatus. To secure information upon which to base proper standards of performance involves investigations quite as scientific in character and as difficult as in the case of other standards, as well as a knowledge of

technical and manufacturing processes. In this field, as well as in the field dealing with the properties of materials, the bureau has had the hearty coöperation of the various Government experts, manufacturers, engineers, and technical societies. It has conducted many investigations which have led to improvements in machinery, appliances, and manufacturing processes.

Standards of practice are generally involved in the enactment of laws when technical and scientific matters are concerned, in the ordinances relating to the regulation of public utilities, and in the establishment of building and safety codes. Like standards of performance they are dependent upon standards of measurement and standards of quality and are of the most vital importance in questions pertaining to the welfare and safety of the public. In a field so broad the bureau can only touch upon the more important aspects of the work, where national uniformity is desired—fields which are not covered in private laboratories.

CHAPTER XX

COMPETITION AND PRICES

1. THE SYSTEM OF PRICES¹

The prices ruling at any given time for the infinite variety of commodities, services, and rights which are being bought and sold constitute a system. That is, these prices are so related to each other as to make a regular and connected whole.

THE PRICES OF CONSUMERS' COMMODITIES

The prices which retail merchants charge for consumers' commodities afford the best starting-point for a survey of this system. These prices are loosely connected with each other; for an advance in the price of any commodity usually creates an increased demand for other commodities which can be bought as substitutes in certain if not all of its uses, and thus creates business conditions which favor an advance in the prices of these substitutes.

But retail prices are more closely related to the prices for the same goods which shop-keepers pay to wholesale merchants, and the latter to manufacturers. Of course, this series of prices for consumers' commodities often has more or less than three members, because of the intervention of more than one wholesale or jobbing house or of an importer in the regular traffic, or because of direct selling by manufacturers to retail merchants or even to consumers. There is wide diversity also in the margins between the successive prices in the series. These margins are usually wider in retail than in wholesale trade; wider on goods limited in sale, perishable, requiring a large assortment for selection, subject to changes in fashion or season, than on durable staples; wider when the manufacturer sells directly to the consumer than when wholesale and retail merchants intervene; wider when a monopolist can fix prices in his own favor than under conditions of keen competition, etc. But these diversities are themselves measurably regular, so that the margins between the successive prices in the series for each kind of commodities forms a tolerable business basis for making profits out of the process of supplying the community with the goods it habitually uses.

¹ Adapted from Wesley Clair Mitchell, *Business Cycles* (1913), pp. 27-32. (Published by University of California Press, copyright by Wesley Clair Mitchell.)

THE PRICES OF PRODUCERS' GOODS IN RELATION TO THE PRICES OF CONSUMERS' COMMODITIES

The business men engaged in squeezing money profits out of these price-margins are seldom able to keep the whole difference between selling and buying prices. From retailers back to manufacturers they require various commodities, services, and rights for the efficient conduct of their operations. For such producers' goods they have to pay out prices which eat into the profit-margins on the consumers' goods in which they deal. The more important classes of these producers' goods are commodities such as raw materials and current supplies, buildings with proper machinery or other equipment, manual and mental labor, loans, leases, transportation, insurance, and advertising.

To merchants, the prices paid for all these producers' goods are important factors in fixing the margins between the buying and selling prices of the consumers' goods in which they deal. But, save in the case of transportation and certain kinds of labor, it is difficult to connect directly the prices which figure as costs with the margins upon which particular commodities change hands. For the cost prices of the other producers' goods are usually paid for the pecuniary advantage of the enterprise as a whole, and the accruing benefits extend to many transactions and often cover a long time. The like is true of manufacturers, with this modification, that they often regard the margins between the prices of their chief raw materials and their leading products much as merchants regard the margins between the buying and selling prices of their staple wares. That is, manufacturers often think of the difference between these particular prices as *the* margin on which they deal, and from which the costs of their other producers' goods must be deducted in figuring net profits.

THE PRICES OF PRODUCERS' GOODS IN RELATION TO ANTECEDENT PRICES

With the exception of labor, producers' goods are provided, like consumers' goods, chiefly by business enterprises operating on the basis of margins between buying and selling prices. Hence the price for any given producers' goods is related not only to the prices of the consumers' goods in the manufacture or distribution of which it is used, but also to the prices of the various other producers' goods employed in its own manufacture and distribution. Thus the prices of

producers' goods do not form the ends of the series of price relationships, but the beginnings of new series of relationships which run backward with countless ramifications and never reach definite stopping points. Even the prices of raw materials in the hands of the ultimate producers are related intimately to the prices of labor, current supplies, machinery, buildings, land, loans, leases, etc., which the farmers, miners, lumbermen, etc., employ.

Concerning the prices of such producers' goods as consist of material commodities no more need be said. And most of the less tangible services—loans, transportation, insurance—require but a word. They are the subjects of an organized business traffic in which price margins are computed on the same general principles as prevail in the buying and selling of commodities. Therefore, the prices charged by the bank, the railway, and the insurance company are systematically related both to the prices which these enterprises must pay for their own producers' goods and to the prices of the wares dealt in by the enterprises which borrow money, ship goods, and carry insurance.

The price of labor may seem to bring the series to a definite stop at least at one point. For, in most cases, the laborer or his union deals directly with the employer or his association, and the laborer does not have a business attitude toward the production of his own energy. But the price which the laborer can command is indubitably connected with the prices of the consumers' goods which established habit has made into a standard of living. At this point, therefore, analysis of the interrelations between prices brings us not to a full stop, but back to our starting-point—the prices of consumers' commodities.

THE PRICES OF BUSINESS ENTERPRISES

Besides the prices of consumers' commodities, of raw materials, and of other producers' goods, we must take account of the prices of business enterprises themselves. Occasionally established business enterprises are sold outright as running concerns. Promoters are also constantly offering new business schemes, or reorganizations of old enterprises for sale. But the most important transactions of this class are stock-exchange dealings in the shares of joint-stock companies. That the prices of whole business enterprises or of shares in them are intimately related to the prices which have been discussed is clear; for these prices depend primarily upon present and prospective profits, and profits depend primarily upon price-margins and the volume of business transacted.

THE PRICES OF SERVICES TO PERSONS

There remains one other division of the system of prices—a division which has much in common with the prices of consumers' goods on the one hand and with the prices of labor as a business adjunct on the other hand. It consists of the prices of the heterogeneous services rendered to persons as such—not to business enterprises. Here belong the prices of domestic service, medical attendance, much instruction, many forms of amusement, etc. The furnishing of such services presents a certain contrast to the business traffic in consumers' goods, materials, machinery, loans, transportation, etc. For systematic organization has not been developed to so high a point, business motives do not have such unrestricted scope, and the wares are not standardized in equal measure. Moreover, the prices which people are willing to pay for such services are based on personal needs and personal income, rather than on closely calculated chances of profit. The prices of these services therefore form the most loosely organized and irregular division of the system of prices.

A tabular survey may assist in getting a general view of the system of prices:

Prices of consumers' commodities charged by:

- Retail dealers
- Wholesale dealers
- Manufacturers

Prices of producers' goods:

- Raw materials
- Current supplies
- Machinery
- Buildings, etc.
- Leases
- Labor
- Bank loans
- Investment loans
- Transportation
- Insurance
- Advertising

Behind the prices of each group entered in this classification stands an equally complex array of antecedent prices, and between the several groups exist interrelations too intricate to be set forth in tabular form.

THE INTERRELATIONS BETWEEN PRICES

The value of this classification of prices is that it assists in seeing the relations which bind all prices together and make of them a

system. The close relations between the prices of consumers' commodities, materials, business adjuncts of all kinds, and of business enterprises are sufficiently clear, and enough has been said about the looser bonds which unite the prices of services to persons with the larger field of business traffic. But several other lines of relationship should be indicated more definitely.

1. On the side of demand almost every producers' or consumers' good has its possible substitutes in certain or in all uses. Through the continual shifting of demand, changes in the price of one commodity are often communicated to the prices of its substitutes, from the latter to the prices of their substitutes, and so on. An initial change, however, usually becomes smaller as it spreads out in these widening circles.

2. Similarly, on the side of supply, almost every good has genetic relationships with other goods, made of the same materials, or supplied by the same set of enterprises. Along these lines also price changes may spread over a wide field. Particularly important because particularly wide are the genetic relationships based upon the use of the same producers' goods in many lines of trade. Floating capital most of all, in somewhat less degree transportation and certain general forms of labor, current supplies, machinery and plant, not to mention the less important insurance and advertising, enter into the cost of most commodities. Accordingly, a changed price established for one of these common producers' goods in any important use may extend to a great diversity of other uses, and produce further price disturbances without assignable limits.

3. Closely connected with this genetic relationship through common producers' goods is the relationship through business competition, both actual and potential. In so far as effective competition exists, a state of price-margins which makes any one trade decidedly more or less profitable than other trades in the same market area can not long maintain itself. For sooner or later the influx or efflux of capital so changes the supply of the commodities concerned as to restore a balance on the basis of cost prices.

4. Present prices are affected by prices of the recent past and the anticipated prices of the near future. Indeed, present prices are largely determined by past bargains, which established time contracts. Thus the price system has no definable limits in time. No analysis can get back to the ultimate term in the endless series of bargains which helped to make the prices of the present.

5. Nor has the system of prices any logical beginning or end. At whatever point analysis may start to follow the interlocking links, to

that point will analysis come again if it proceeds far enough. The above analysis, for example, began with the prices of consumers' goods at retail. These prices are paid out of personal incomes. But these incomes are themselves aggregates of prices received for labor, for the use of loan funds, or for the use of rented property; or they are aggregates of the net price-margins which yield profits. Thus the system of prices is an endless chain.

THE RÔLE OF PRICES IN ECONOMIC LIFE

Prices, then, form a system—a highly complex system of many parts connected with each other in diverse ways, a system infinitely flexible in detail yet stable in the essential balance of its interrelations, a system like a living organism in its ability to recover from the serious disorders into which it periodically falls.

The most significant fact about the system of prices, however, is the function it performs in the economic life of nations. It serves as a social mechanism for carrying on the process of providing goods. For prices are the means which make possible the elaborate exchanges, and the consequent specialization, which characterize the modern world. They are the source from which family income is derived, and the means by which goods are obtained for family consumption; for both income and cost of living—the two jaws of the vise in which the modern family is squeezed—are aggregates of prices. Prices also render possible the rational direction of economic activity by accounting, for accounting is based upon the principle of representing all the heterogeneous commodities, services, and rights with which a business enterprise is concerned in terms of money price. Most important of all, the margins between different prices within the system hold out that hope of pecuniary profit, which is the motive power that drives our business world.

2. COÖPERATION, STYLES, AND BRANDS AS MEANS OF AVOIDING CUTTHROAT COMPETITION¹

It is very difficult to prevent cutthroat competition among the producers of ordinary salt because it is not possible, here, to use a variety of brands to good effect. Similarly, it takes a strong consolidation in the sugar industry to prevent the occurrence of cutthroat competition. Although the use of a variety of brands is not practicable in the steel industry the larger initial investment required for

¹ Adapted from Spurgeon Bell, "Fixed Costs and Market Price," in *Quarterly Journal of Economics*, Vol. XXXII, No. 3 (May, 1918), pp. 513-14, 516-23.

successful operation and the smaller number of competitors render it less difficult to prevent underselling.

The style tendencies in shoes and dress goods are to some extent an outgrowth of the requirement of specialties to prevent cutthroat competition. As soon as a given style of dress goods is standardized its production is placed on a very close profit-margin. The tendency of the factories is to discover dress goods that will give them a specialty and remove them from the baneful results of cutthroat competition. A similar situation in the shoe industry results in a constantly shifting variety of styles. The competition must be placed on a style and quality basis regardless of the cost of developing a market for a new style. The new style is essential for the purpose of avoiding destructive competition.

The typewriter industry has developed another device. The number of competitors was not so large that it was impossible to create a satisfactory situation in the market for new machines. But the number of dealers in second-hand machines was large and the character of the competition was dangerous. It was possible, however, by means of the number series to tell the age of a second-hand machine. The discounts on old machines can be based on their age, and the publication of the list of discounts graded in this manner serves to establish a basis of competition which does not demoralize the market.

The automobile industry furnishes an example of still another means of avoiding destructive competition. Not only must a new machine be a new brand or model, but it has a still better chance if it is made to sell at a price which will fill a rather large gap in the price range of existing machines. When the Dodge Brothers wished to compete with Ford, they did not make a car that would sell for the same price as the Ford car. They made a car of a different model and a different price.

The associations of job printers have been particularly active in promoting a uniform cost accounting plan. They have also established a rule that no one shall bid for a job at a price which will not fully cover overhead as well as prime costs. The job printers are in dire need of a coöperative basis because of the comparatively large investment in machinery and the resulting large fixed costs. If the job printers in a given locality are few it should be possible for them to get together on some such arrangement as the cost basis of bidding.

By the devices above mentioned and others of a similar character the domestic market may be so organized as to remove the more dangerous causes of destructive competition.

CHAPTER XXI

MARKET PRICE

1. THE RELATIONSHIP BETWEEN THE PRICES FOR RAW MATERIALS AND FINISHED PRODUCTS¹

It would be contended by some of those to whom this article is addressed that the fall in by-product values automatically and immediately raised beef prices. Their argument would go somewhat as follows: The prices asked for beef and by-products together must be high enough to cover the cost of live cattle, plus the expenses of operation. If the value of by-products falls, the cost of the beef rises accordingly, and the packer must get more for his beef in order to come out even.

Interrelations between By-Product, Livestock, and Beef Prices

The fallacies in this argument are at once apparent. If it were possible to raise the price of a perishable product like beef, simply because by-products had fallen in value, and at the same time move the whole supply into consumptive channels, it would likewise be possible to prevent the value of by-products from falling below cost. The main fallacy, of course, lies in the assumption that the price of livestock products depends upon livestock prices. The causal relationship is just the reverse. A decline of \$1 in the value of the hides and other by-products per 100 pounds of live cattle will *cause* a corresponding decline in the price of live cattle—assuming that operating costs and the demand for beef remain unchanged—and widen the spread between cattle and beef prices. Likewise, a rise in the values of by-products will cause an increase in the price of live cattle by a corresponding amount, and narrow the spread between cattle and dressed-beef prices.

Obviously, it is the price of cattle, rather than the price of beef, that is immediately affected by a fall in by-product values. The price of beef could not rise in this case except through a diminution in the number of cattle shipped to market, and since cattle already produced must be sold whether the price is high or low, it follows that a

¹ Adapted from George E. Putnam, "Unit Costs as a Guiding Factor in Buying Operations," *Journal of Political Economy*, Vol. XXIX, No. 8 (Oct. 1921), pp. 670-74.

slight fall in cattle prices could have no appreciable effect, for the time being, in diminishing the supply of beef or in raising beef prices.

There is no denying the fact, however, that a steady decline in by-product values will sooner or later affect the price of beef by reducing the supply. Declining cattle prices will ultimately curtail cattle production; and even before there has been an actual reduction in the number of cattle produced, many of the cattle being prepared for shipment will be marketed before they are properly finished. In either case the supply of beef will be diminished and, other things being equal, beef prices will be higher than they would have been had not the value of by-products fallen.

Wholesale Price Changes Greater Than Retail

It is not alone in the packing industry that buying prices are largely governed by selling prices and unit-cost considerations. Throughout the whole field of business activity may be seen the effect of cost calculations upon buying operations, especially in periods of rapid price changes when the effect is the most conspicuous. It is a familiar fact that during such periods wholesale prices rise or fall more rapidly than retail prices, and raw material prices more rapidly than the prices of manufactured articles. At each stage in the marketing chain from producer to consumer, the percentage of price change is greater than in the stage immediately following.

The retail price of bread, for instance, declined 3.5 per cent in Chicago during the year ending April 15, 1921. During the same period and in the same market, the retail price of flour declined 33.8 per cent, the wholesale price of flour declined 43 per cent, and the price of wheat 51 per cent. The price of hogs declined 44.2 per cent and of corn, 67.2 per cent. It is interesting also to observe that on the farm, seeds declined more than hay, and hay more than horses and other livestock. Such cases might be multiplied indefinitely.

Unit-Costs, the Explanation

The explanation of these peculiar price relationships is fundamentally a matter of unit-cost considerations. When a fall in consumers' prices is under way, each of the various middlemen in the marketing chain is confronted with the prospect that by the time his service—whether manufacturing, distributing, etc.—has been performed, his selling price will have fallen. He will, therefore, reduce the volume of his purchases. Whether or not he succeeds in adjusting his buying prices down to a level where he can continue to sell at a profit,

depends largely upon the opinions of his competitors as to the probable course of selling prices. But he will at least get his buying prices in line with present selling prices, i.e., he will take account of his unit costs of operation in buying raw or finished products for resale. If, in the meantime, the fall in the price at which he sells is not accompanied by a proportionate decline in his unit costs of operation—and this is invariably the case in the early stages of falling prices on account of the relative inflexibility of such expenses as wages, rents, interests, taxes, etc.—the percentage decline in his buying prices will necessarily exceed the percentage decline in his selling prices.

The effect of constant unit costs of operation upon relative price declines becomes much more conspicuous when the costs of all the services performed between producer and consumer are combined and comparisons are made between consumers' and producers' prices. Suppose, for example, that consumers have been paying \$100 for certain finished products which have been manufactured and distributed to them at a cost of \$50, making the price of the raw material about \$50. Now, if the consumers' price falls 25 per cent (\$25) while the cost of manufacture and distribution remains the same, the price of the raw material must fall to \$25, which is a reduction of 50 per cent. If, under the same conditions, the consumers' price had fallen 10 per cent, the price of raw material would have fallen 20 per cent. The wider the spread between producers' and consumers' prices, the greater will be the relative decline in producers' prices.

In the face of steadily falling retail prices and fairly constant unit costs of operation, wholesale prices have been falling rapidly during the past year—out of all proportion in fact to the fall in consumers' prices—while raw material prices have fallen more rapidly than wholesale prices. And, in a sense, the burden of these high operating costs has fallen chiefly upon the producers of basic commodities rather than on the consumers of finished products. That is to say, enterprisers have not added the expenses of manufacture and distribution to the prices paid for raw materials to determine consumers' prices but, on the contrary, they have deducted their unit costs of operation from consumers' prices to determine the amount that could be paid to the producers of raw material.

The part played by unit operating costs in periods of rising prices is substantially the same, although the effect produced is the opposite. During the period of business depression, which normally fills the interval between periods of falling and rising prices, unit costs of operation are substantially reduced. A balance is finally reached between

labor cost, capital cost, raw material and consumers' prices where business revival becomes possible. In the upward trend of prices which follows, unit costs of operation again tend to remain fairly constant. They are not immediately affected by the rise in commodity prices. The result is that wholesale prices rise more rapidly than retail, and raw material prices more rapidly than wholesale.

Thus, at each step in the marketing chain from producer to consumer, buying prices are governed chiefly by unit-cost considerations and prospective selling prices, no less when the general price level is rising than when it is falling. And although the operation of this principle inflicts relatively heavy losses upon the producers of raw material during a period of falling prices, these losses are counterbalanced, in part at least, by the relatively large gains which accrue to them with the return of business prosperity. This point is generally overlooked, or ignored, by those who subscribe to the popular doctrine that producers in general are entitled to cost plus a fair profit for their services.

The writer would be the last to proclaim that unit costs are not a factor in selling operations. It is admitted, even in the case of perishable meat products, that they are a factor in the asking price and sometimes in the price realized. It is also admitted that one who has expended money in the purchase of a share of stock, a bond, or any non-perishable product, will naturally be reluctant to dispose of his possessions for less than cost; and that reluctance on the part of a great many sellers to sell below cost might, for a short period of time, tend to sustain prices.

But these are not the points at issue. The fundamental point for which the writer contends is that in the case of both perishable and non-perishable products, unit costs, although *appearing* to guide the seller, perform their *real* guiding function at the time goods are purchased for resale. Any service which they subsequently render is in the nature of reminding the seller of the price at which he originally expected to sell, with the result that he may put forth greater sales effort in trying to realize this price.

2. INFLUENCES WHICH AFFECT THE GENERAL WORLD PRICE LEVEL FOR WHEAT¹

Broadly speaking, it may be accepted as axiomatic that the price for an entire crop will be the price at which the surplus of that crop finds its market. That is, that both the price on the export surplus

¹ Adapted from Julius H. Barnes, *Address to the Committee of Seventeen of Farmers' Organizations Appointed to Consider Grain Marketing Problems* (Nov. 5, 1920), pp. 5-7.

and the price on the entire portion of that crop marketed at home will be the price determined at the market in which that export surplus is sold, less the costs of delivery. This is true whether the export surplus is 50 per cent or 10 per cent of the crop, except that the smaller surplus may be marketed earlier in the crop year and the home marketing thereafter, somewhat independent of the final export market.

The importance of this to the grain grower of America in this particular year, 1920, is appreciated when it is stated that all of the five principal grain crops—wheat, corn, oats, rye and barley—have been harvested in sufficient quantities that each of these crops will more than provide any possible domestic consumption and therefore in the normal operation of the law of supply and demand each of these crops, generally speaking, will seek a price level which reflects an overseas consuming market, less costs of delivery.

This consumption demand culminates finally in Europe. Relative consumption requirements may shift from one European country to another, according to conditions of local crop yield and local consumption, but to Europe generally there flow the offers from every grain surplus producing country in the world. It is at that datum point of European consumption that the price level is largely determined. At that datum point the pressure of demand for consumptive requirements exceeding their home supplies meets the pressure of competitive offerings of various overseas surpluses of grain.

That is the point at which the law of supply and demand operates most decisively on the world price level and from it by reflection of transportation and other delivery costs into producing countries. That point feels most quickly and, with a resultant price reflection, any radical alteration of general supply and any enlargement or contraction of demand. This demand is created by the buying necessities, but also controlled and limited by the buying ability of consumers.

Supply after all is not a factor definitely ascertainable. Crop production is after all but an estimate and subject to the usual human errors. Even statistics of existing stocks are partly made up of estimates and contain a measure of possible error.

So on the other hand demand is influenced by the opinions and convictions of many individual buyers. Anticipated consumption may actually prove to have been a miscalculation. Consumption of a given grain is always susceptible of variation from a standard estimate. Substitution and alternates or their lack may decrease or swell the actual consumption of any given grain. These factors of supply and

demand estimates with their possible variations are translated into the actual practices of selling and buying by producers and dealers and consumers everywhere. The current price should be the free meeting point of such individual judgment and opinion as being the fairest interpretation of supply and demand influences.

Really cost of production is not a determining factor. Of course, in the long run it must exercise its influence, for a prolonged period of unremunerative effort will naturally reduce acreage and thus reduce supply. To look on cost of production of a single country and, as has been sometimes argued, even of one section of a single country, as a solely dominant influence in the world price would be a most superficial consideration of the play of forces that determine a price level.

3. THE TEST OF A FAIR PRICE FOR SUGAR BEETS¹

The beet grower often complains that he does not receive a fair price for his beets. The sugar manufacturer replies that the farmer makes as much or more money on his beets as he does on any other crop. This is probably, in the main, true. The farmer rejoins with the assertion that the manufacturer makes large profits extracting sugar from beets and that he can afford to pay more for them than he does pay. This also is sometimes true. It is thus seen that the manufacturer applies one test as to the fairness of the price and the beet grower applies another. The contention of the grower that the large profits of the manufacturer would often enable him to pay a higher price than he does pay implies the idea of coöperation. If the profits of a manufacturer are a fair criterion for the establishment of the price of beets, then, the grower should be willing always to accept a price low enough to enable the manufacturer to realize a profit. In other words, on this basis of establishing the price of beets, when the sugar business is prosperous the beet grower would receive a high price, and when it is not prosperous he would receive a low price. If this system of determining prices had been employed in the past the farmers supplying a number of factories would have received a very much lower price for beets than they have received. On the other hand the farmers in the vicinity of other factories would have received a very much higher price. Some factories have never made much money, and have often lost large sums. If the farmers had shared these losses, the results of their beet-growing operations would have been disastrous.

¹ Adapted from Federal Trade Commission, *Report on the Beet Sugar Industry in the United States* (1917), pp. 163-64.

With a fixed price for beets the intelligent, industrious farmer is generally assured a fair return for his efforts. As soon as he harvests his beets he knows precisely what he has made. This advantage of certainty is unquestionably worth considering. If the price of beets depended absolutely upon the vicissitudes of the sugar market it is doubtful whether any considerable number of farmers would be willing to engage in this branch of agriculture. Upon the whole, therefore, it would seem that the principle involved in the present system of determining prices of beets is the more advantageous to the beet grower. This system, however, might be more equitable by basing the fixed price more nearly upon the sugar content and purity of beets. The sugar manufacturer knows the relative value of beets of different tests, and he should be willing to pay a price that will place all farmers upon an equal basis. It is manifestly inequitable to fix a flat price for beets based upon a range of sugar content embracing as much as 2 or 3 per cent. If the farmer who grows 12 per cent beets is entitled to a given amount, say \$4.50 per ton, then beets testing 13, 14, or 15 per cent are worth proportionally more and should be paid for on that basis. On the other hand, if the base price is fixed on a sugar content of, say 15 per cent, then the farmer's beets which test below this are not worth as much as the basis price and he should not expect to receive that price for them.

4. CRUDE PETROLEUM PRICES INITIATED BY THE STANDARD OIL COMPANY¹

In most of the Standard marketing areas east of the Rocky Mountains, as in California, Standard crude petroleum purchasing companies and Standard marketing companies usually take the lead in announcing price changes, while other companies usually follow. Occasionally some of the larger independent companies, such as the Texas Co. and the Gulf Co., take the initiative. However, officials of the above companies stated in May, 1920, that the prices announced by the Standard companies are generally regarded as the market price. As stated in a former report:

Price initiative today seems to be left generally to the Standard companies and competition is apparently more directed to developing facilities for getting business than to seeking to obtain it by under-selling.

¹Adapted from Federal Trade Commission, *Report on the Pacific Coast Petroleum Industry, Part II, Prices and Competitive Conditions* (1921), p. 129.

5. "PITTSBURGH-PLUS"¹

This system means that, regardless of the place of production, the delivered price of steel quoted by the mills is the base price (in this case the ruling price at Pittsburgh) plus the freight to the purchaser's plant. Concretely, it means that a Chicago consumer who hauls steel by motor truck from a near-by mill pays the Pittsburgh price plus the freight from that city, although no shipment by rail has actually occurred. In practice the system has never been rigidly applied. Purchasers from the Birmingham mills have paid the base price plus a fixed differential that has been less than the freight; in the Chicago district, in recent years, the mills have quoted prices that averaged on most kinds of steel about \$2.00 a ton above Pittsburgh. Railroads have never paid the "plus" on rails.

The attack on the system was begun in 1919 by consumers of steel in the Chicago district. In 1921 the Federal Trade Commission issued a complaint against the United States Steel Corporation and, in conformity with practice, took over the case. The legal basis for the complaint is found primarily in Section 2 of the Clayton Act, which makes it unlawful for any person engaged in commerce "to discriminate in price between different purchasers of commodities where the effect of such discrimination may be to substantially lessen competition or tend to create a monopoly." The same section provides, however, that such discrimination shall not be unlawful if "made in good faith to meet competition."

The arguments against the system can be briefly summarized as follows: (1) that it tends to keep the steel industry centralized at Pittsburgh in spite of the superior advantages of other locations; (2) that the prices thus established are discriminatory within the meaning of the Clayton Act; (3) that consumers near other mills than those of Pittsburgh are deprived of the advantages of their locations; (4) that the system could not survive under freely competitive conditions. As might be expected, the testimony before the examiner has related largely to discrimination and the arbitrary maintenance of prices. In defense of the system the Steel Corporation has asserted that price differentials based on Pittsburgh are due to the fact that Pittsburgh is the point of surplus production and that the Chicago district cannot produce enough steel to supply its needs. Under the circumstances steel must be shipped from the eastern district, and the

¹ Adapted from F. B. Garver, "Pittsburgh-Plus," *American Economic Review*, Vol. XIV, No. 1, March, 1924, pp. 192-93.

price quoted will be the Pittsburgh price plus the freight. The Chicago mills will naturally ask and receive the same price. Hence, the apparently discriminatory prices are made in good faith to meet competition. The soundness of this answer depends, obviously, on the question whether the Chicago district can and does supply its local demand for steel. Testimony on this point has been both indefinite and conflicting. It is generally admitted, however, that Birmingham is a point of surplus production.

At the present writing no decision has been handed down. If the commission should issue an order to the Steel Corporation to "cease and desist" then, unless the Corporation carries the case to the courts, the basing point system will disappear, since the independent producers will undoubtedly fall into line without any further opposition. That this would mean substantial uniformity of steel prices in all centers of production is not probable.

6. FEDERATED MARKETING: FACTORS INVOLVED IN SETTING THE SEASON'S PRICE FOR CRANBERRIES¹

COORDINATING DEMAND WITH SUPPLY

Successful marketing consists largely of accurately gauging the factors of supply and accurately estimating the factors of demand with a view of anticipating the price which will coordinate these two sets of forces. For instance, if the association should ask too low a price for its fruit it would not have enough to supply the demand. If it should ask too high a price the entire crop would not be sold by the end of the season.

This principle may be illustrated further. In 1912 the following questionnaire was sent to 200 retail dealers throughout the United States: "Suppose the retail price of cranberries is $8\frac{1}{8}$ cents per quart, or 3 quarts for 25 cents. Please state what reduction in your sales would result from advancing the price to 10 cents per quart, $12\frac{1}{2}$ cents per quart, 15 cents, and 20 cents." Ninety-two replies from 20 markets located in 16 states were received. The average estimated percentage of decrease of sales as price advanced was as follows:

An advance of $8\frac{1}{8}$ cents to 10 cents per quart reduces sales 12 per cent.

An advance of 10 cents to $12\frac{1}{2}$ cents per quart reduces sales 23 per cent.

An advance of $12\frac{1}{2}$ cents to 15 cents per quart reduces sales 37 per cent.

An advance of 15 cents to 20 cents per quart reduces sales 67 per cent.

¹ Adapted from Asher Hobson and J. Burton Chaney, *Sales Methods and Policies of a Growers' National Market Agency* (1923), pp. 20-21. (U. S. Department of Agriculture, Bul. 1109.)

Although the price levels of 1912 have little relationship with the price levels of today, it is probable that proportional increases in present price levels would have similar effects upon consumption.

The economic value of the cranberry is represented by the highest price (or series of prices) that will clean up the supply by the end of the normal selling season. It is to the advantage of the association to obtain as high a price as possible, but in obtaining this price care must be exercised that future consumption is sufficiently encouraged to take care of the normal season's yield.

With these points in mind it can be seen that the success of the association depends not so much upon influencing the market as on putting itself in position to gauge the factors which influence the sale of its product. Thus it can be prepared to take advantage of the conditions which exist.

THE "OPENING PRICE"

The only price named by the exchange is the "opening price" at the beginning of the season. Market conditions set the remaining quotations. It is of the utmost importance that this opening price conform closely to supply and demand factors. As an illustration, in 1920 the exchange's opening price was \$8.50 a barrel, while private dealers were quoting \$10 a barrel. Much complaint came from the competing trade because of the exchange's low price. Yet the manager and directors of the association were convinced that market conditions would not permit a retail price higher than 15 cents per quart. An exchange price higher than \$8.50 per barrel would not allow a 15 cent retail price. The slow demand at the beginning of the season proved the wisdom of not setting a higher price. Cancellation of conditional orders equaled 30 per cent, when ordinarily it does not exceed 10 per cent. One of the strongest markets canceled 7 out of 10 orders. Certainly a higher opening price would have proved disastrous by discouraging consumption. That the price was not too high is shown by the fact that cranberries began to advance shortly after the beginning of the season and continued to increase until all berries were sold.

To name a price which will coördinate demand with the existing supply requires the exercise of sound judgment based upon long experience in the marketing of the product in question. Here, then, is another advantage inherent in sound coöperative organization. Individually the growers are not able to avail themselves of this talent and experience. Collectively they are able to employ as efficient guidance as that with which they must compete in the sale of their product.

7. WILL FARMER POOLING CAUSE MONOPOLY PRICES?¹

The farmer may influence prices by organizing a nation-wide pool, operating much like a monopoly. Operating after the manner of a monopoly, so far as outward appearances are concerned, does not, however, identify an undertaking as a monopoly. For example, the raisin growers have for some years marketed the bulk of the raisins. A case was brought against them charging violation of the anti-trust act. The publicity afforded brings out the fact that the company has control of the bulk of the crop. It projects a price, or scale of prices, over the season of sales. This is what is superficially seen. It looks much like monopoly, and possibly for the season it may technically be such. However, that which is not so clearly seen is that the growers' company has no appreciable control over the supply which it puts from year to year on the market. A given quantity of goods during a season will bring about what the demand for the same will stand whether offered by a group of producers or a group of dealers, each acting in its own interest. The real question is who gets the money. There is no evidence to show that the consumers are paying more for raisins, prunes, or apricots than would be paid were the coöperative companies to disband and independent dealers take charge of the produce. The good prices which they may receive stimulate a further production, and the larger quantity must bring a lower price per unit.

The charge of a farmer monopoly was perhaps loudest against the milk producers. In a few instances the officers of milk producers' companies were put in jail. In other cases Attorneys General camped on the trail of the farmers with the persistency of crusaders. The law was to be vindicated. One is tempted to suggest that these law enforcers had not met with much success in former efforts. In hunting big game they had met with discouragements only. The farmers appeared as smaller game easily bagged and the chance of bringing home at least something in the way of trophies was stimulating.

The real question that required an answer was whether or not the farmers were to enjoy the privilege of collective bargaining. A law was recently passed granting that privilege, and great legal authorities have been disturbed over the prospect of exorbitant prices of foodstuff exacted by farmer monopolies. Every farmer monopoly, so-called, carries within itself effective antidotes to its own poison. It is of trifling importance that here and there a farmer marketing company

¹Adapted from B. H. Hibbard, "The Farmers' Influence Over Prices," *Journal of Farm Economics* (Jan., 1923), Vol. V, No. 1, pp. 10-11, 12-15.

may be able to get all the traffic will bear out of burley tobacco, raisins, or eggs; but that these organizations can have price-making power inimical to the interests of the public, or even price-making power beyond what would obtain through the operations of market forces, has not yet been demonstrated. That the farmers will be able to create a monopoly control of wheat, pork, beef, milk, or potatoes, comparable with the control now existing in the labor market, or in the anthracite coal business, is about as probable as peace in the Balkans.

The improbability of a genuine farmer monopoly, outside of a very few unimportant fields, is based on the very nature of the business. There are too many farmers, and immediately the interest of one runs contrary to that of the group. If the majority agree to grow few potatoes it is a signal to the minority to plant more. Again the weather is a factor as important as acreage, since the rain makers are not fully established and accepted, and no one has even attempted to stop the rain when there is too much. All of which spells disaster to the closing of the farmer-monopoly circle.

8. THE EFFECT OF PRICES ON THE PRODUCTION AND CONSUMPTION OF MILK¹

Price Changes and Consumption

Price is a matter of relationships of a bewilderingly complex nature. As an eastern editorial writer puts it, "the intricacy of price making in the New England markets is beyond the understanding of man." Price is the resultant of the action and reaction of supply and demand and of the complex forces lying back of each. It is generally understood that a shortage in supply will bring about high prices and that a surplus will in the same way result in low prices. On the other hand, it is not so generally realized that a change in the demand will also influence price, which is but the focal point of the forces of supply and demand, and that price actually influences demand. Thus a decrease in the supply of milk usually means an increase in the price. But dealers are keenly aware of the fact that such an increase in price will most surely mean a decrease in consumption. A Toledo firm reports that in the summer of 1918 an increase in the price of from 13 to 15 cents, amounting to a 15 per cent increase, caused a decrease of consumption of 8 per cent. Other instances have been reported where

¹ Adapted from H. E. Erdman, *The Marketing of Whole Milk* (1921), pp. 188-95. (The Macmillan Company.)

such decreases have amounted to 10 or 20 per cent. The decrease in consumption of milk owing to an increase in price varies widely with such factors as wage increases, rise of other prices, attitude of competitors, attitude of public officials, attitude of the newspapers, and the state of public sentiment in general. For example, during the period of the war there were many instances in which increases in price of milk resulted in very little decrease in demand because some public body or the public in general had satisfied itself that the increase in price was justified, and that milk was still a cheap food, since other prices had also been increasing. In other instances, however, it took a considerable amount of publicity to overcome the tendency to curtail consumption as price increased. The Chicago Health Department reported that in Chicago when milk was selling at 8 cents per quart, the daily consumption amounted to about one million quarts. When the price rose to 10 cents only about 800,000 quarts were consumed. An increase to 13 cents per quart reduced the consumption to about 584,000 quarts. This means, if the Department's estimates were correct, that Chicago consumers were actually paying out less for milk with the price at 13 cents than they had spent when the price was 8 cents per quart.¹ A similar experience was reported in Cleveland, where a leading dealer claimed to have lost more by raising the price from 9 to 10 cents per quart than he would have lost had it remained at 9 cents. In this case the demand did not come back to normal until the following spring. On the other hand, when prices are again lowered, it is often hard to bring consumption back to normal, because of the fact that milk consumption is so largely a matter of habit.² In Chicago, on the above mentioned occasion, consumption remained about 16 per cent below normal for some time after the price had been reduced to 12 cents.³

Price Changes and Production

Just as an increase in the retail price will cause a falling off in the consumption, so an increase in the price paid to producers usually means an increased supply, unless counteracting forces are also at

¹ C. S. Duncan, *Journal of Political Economy*, April, 1918, p. 333.

² This at first thought appears to be a case where a rule did not work both ways. That is, whereas an increase in the price of milk caused a decrease in the demand, a decrease in the price did not in the same degree cause an increase in consumption. What had probably happened was that milk prices had become customary. Then when these customary prices were disturbed in a way unfavorable to consumers, the latter became resentful, especially where their sense of injury was fanned by public statements and press dispatches. On the other hand, once a lower standard of consumption had become habitual, a fall in price did not of itself at once jar people out of the new habits, and hence the demand did not respond quickly to price cuts.

³ E. Davenport, *Hoard's Dairyman*, March 1, 1918, p. 234.

work, such, for example, as increases in costs or better opportunities along other lines. When prices are unusually good, producers are encouraged to increase supply. This they can do in several ways. Each farmer, for example, feeds his cows a little more grain. He may house them a little more comfortably—keep them in on cold days, etc. He feeds less milk to calves and pigs. He may even curtail consumption of milk in his home; perhaps he buys oleomargarine, for example, so as not to have to skim any of his milk in order to provide butter for the family. Finally, he may keep his cows longer, i.e., each farmer, instead of turning off some of the older cows, as he usually does, and replacing them with heifers, may milk both the old cows and the heifers, thus increasing the size of the herd. All of these influences would become operative with an attractive increase in price, some of them quickly, others more slowly. With a decline in price the reverse operation would take place. In addition to the above changes, of course, an increase in price in a given market will attract milk from other markets, whereas a general increase in the price of milk will attract milk from other uses. This last point is an important one, particularly in such sections as the milk sheds of New York, Milwaukee, or Toledo, where so large a proportion of the milk is manufactured into the various milk products.

By wholesale prices we here mean the prices paid to producers at country or city points receiving milk directly from producers. These wholesale prices and their determination are of particular interest to us because it is at that stage that price levels of milk are really determined. It is there that all the complex forces of supply and demand focus. Increased or decreased production is there quickly observed, and changes in demand for milk for any of its many uses are also quickly reflected. In general, the use to which a particular lot of milk is to be put must be decided upon within a few hours after it has been delivered at a receiving plant. True, condensed and powdered milks have many uses, and decision as to the particular use need not be made for months or years. But in the case of milk as it comes from the farm the perishability is so great that within a very short time after it is delivered at the plant definite decision must be made as to how much, if any, is to be used in butter manufacture, how much for cheese, how much for fluid consumption, how much for condensing, etc. Many plants, of course, make butter only; others make cheese only. Many, however, are so equipped that they can easily change from one line of production to another according as one or the other is more profitable. In the aggregate the number of plants which can thus

change from one line to another is sufficiently large to keep a fairly close balance between the various use-demands, and these use-demands focus on the various receiving points.

9. FACTORS DETERMINING THE PRICE OF POTATOES IN ST. PAUL AND MINNEAPOLIS¹

An extended study of the price of potatoes in Minneapolis and St. Paul appears to have resulted in the discovery of all the important fundamental factors determining the price of potatoes in these cities, and the extent to which each of these factors except one influences price. The exact effect of one factor, loss in storage, cannot be determined at present, because accurate data on the amount of loss in different years are not available.

The fundamental factors which influence the price of potatoes to a measurable extent are:

1. Production of potatoes in the entire United States.
2. Loss in storage.
3. Changes in the general price level.
4. A steady and uniform annual increase in the demand for potatoes.
5. Failure of the production of potatoes to increase as rapidly as the demand is increasing.

The following factors which are sometimes thought to exercise a fundamental influence on the price of potatoes have been found to have no measurable effect:

1. Production in the states adjacent to the market (except as it is part of the total United States production).
2. Imports and exports.
3. General business conditions (except to the extent to which they are reflected in the general price level).

A formula has been prepared for use in estimating the price of potatoes in Minneapolis and St. Paul from the available statistics. Ordinarily only two of the five factors influencing price vary much from year to year, namely, production and loss in storage. A third factor, general price level, usually does not change much from one year to the next, though its fluctuations in recent years have been great. Of the three factors which are the most important of the five, only two can be included in the formula directly, as there are no statistics on losses

¹Adapted from Holbrook Working, *Factors Determining the Price of Potatoes in St. Paul and Minneapolis* (1922), pp. 3-9, 15, 18, 24-25. (University of Minnesota, Agricultural Experiment Station, Technical Bul. No. 10.)

in storage. Even the production figures are unsatisfactory because inaccuracies in the estimates of changes in acreage of potatoes are so great that it has been found more satisfactory to assume a uniform annual increase instead of using the acreage figures issued by the United States Department of Agriculture.

Despite these limitations, it has been found possible to estimate the average annual price of potatoes in the Twin Cities with an average error of about 9.5 per cent—slightly less than 5 cents a bushel on the basis of the ten-year pre-war average price. Farmers and dealers making use of the formula can remove much of the possibility of error in the estimate by estimating the probable loss in storage and making the necessary allowance in the formula.

CONSIDERATIONS INFLUENCING DEALERS

The question of the factors influencing the price of potatoes in the Twin Cities is best approached by looking at it first from the point of view of the dealer in the Twin Cities. What determines the price for which he will sell potatoes?

First consider a common, but mistaken, answer. It is frequently said that a dealer will be willing to sell for a price that will give him a reasonable margin over what he paid. This is not the case. The good business man will sell potatoes for the best price he can get, irrespective of what he has paid for them. Sometimes it happens that a dealer makes much more than an ordinary profit on a car of potatoes, and again it sometimes happens that a dealer loses heavily on a car of potatoes. The truth is that the price a dealer will pay for potatoes depends upon what he thinks he can sell them for, always remembering, of course, that this is a maximum price; the dealer will gladly buy the potatoes for less if he can.

In the effort to get the highest possible price, dealers watch the markets carefully in order to make their sales to the best advantage. The market news service of the United States Department of Agriculture has done much to make it easy for dealers to keep informed regarding prices and supplies in other markets. Prospective buyers watch the markets in a similar manner in order to buy to the best advantage. The result is that prices in all the markets of the country are very closely related, the price differences being based on the expenses of moving the potatoes along the lines on which it is found most profitable to move them.

This close interrelation of prices all over the United States makes it apparent that the price for which any dealer can sell potatoes

depends chiefly on factors over which he individually has no control. Indeed, if dealers did not store potatoes, but merely formed a link in a chain passing the potatoes as rapidly as possible from producer to consumer, dealers would have practically nothing to do with determining the price of potatoes. Price would be determined directly by the willingness of the farmers to sell at the prices consumers were willing to pay.

Dealer Storage

In actual fact, many dealers are accustomed to store large quantities of potatoes whenever they think they can make money thereby. The dealer who has facilities for storing potatoes considers not only the prices which he can get now for potatoes in the various places where he can sell, but also the prices which he expects to be able to get in the future.

Because of this opportunity to profit by storing, most dealers are always on the alert to judge when prices are "too high" or "too low." If they think prices are lower than is justified by fundamental conditions of demand and supply they buy for storage, expecting prices to rise. Or if they think prices are higher than is justified by fundamental conditions, they work off any stocks they may have on hand and resell every lot as quickly as possible.

The dealer who lays in stocks of potatoes when he thinks prices are too low and sells when he thinks prices are too high and who is skillful enough to judge the market correctly most of the time, is assured good profits. Similarly, the farmer who uses good judgment in deciding when to sell his potatoes will get a better price than will the farmer who uses poor judgment. In fact, it may be laid down as a general rule that everybody engaged in buying and selling potatoes is concerned ultimately with judging what the price "ought" to be—that is, in determining what price is justified by fundamental demand and supply conditions. This is true of dealers, of farmers, and even of some consumers. The only exceptions occur in the cases of those dealers and consumers who make a practice of buying only for immediate needs. Such purchasers keep very small supplies on hand and need to study the market only for the purpose of knowing where to buy to the best advantage, and, perhaps of postponing purchases a few days at most, in case a temporary shortage develops.

It is apparent, therefore, that the chief force determining the price of potatoes at a particular time is the opinion of buyers and sellers (including chiefly dealers and farmers) as to what price is justified

by fundamental conditions of demand and supply. Every farmer and every dealer who plans to lay in stocks of potatoes at favorable times needs to understand these fundamental forces of demand and supply. It is only by understanding them that either farmer or dealer can correctly judge when prices are too low or too high. The remainder of this bulletin is devoted to explaining the operation of the fundamental forces which have been found to be important in determining the price of potatoes in the Twin Cities and to showing how the facts should be interpreted in order to be of use to farmers and to dealers.

Buyers and sellers of potatoes are frequently mistaken concerning the price which is justified by fundamental economic conditions. If such an error is general in the fall, it may happen, for example, that the price which results is too high. If the price is too high in the early part of the season, potatoes will not be consumed fast enough to dispose of the supply available. Farmers and dealers will then find that not all of the stocks on hand can be sold at existing prices. Since potatoes cannot be carried over from one year to the next, the price, under such conditions as have been mentioned, must be lowered enough to permit the supply to be disposed of before the end of the season. A properly adjusted price would remain the same throughout the season, except for a gradual advance to cover cost of storage, and would maintain a fairly uniform consumption throughout the season. But since an abnormally high price early in the season causes small consumption, it must be compensated by an abnormally low price during the remainder of the season, or not all the crop can be sold.

Similarly, if the price is abnormally low early in the season, the supply will be exhausted too rapidly and those who still have potatoes will find that they can get abnormally high prices for them during the remainder of the season. The result is that, although the price at any one time may differ from the normal price justified by demand-and-supply conditions, the average price for a season will come very close to the normal.

This fact makes it possible to consider the actual average price for a season as the price which was justified by the fundamental demand and supply conditions existing during the season. The price at the beginning of a season is the result of the opinions of buyers and sellers as to what price the fundamental conditions justify. If those opinions are mistaken, the error must be compensated later. The resulting average price may be considered as the effect of actual conditions rather than of mere opinions regarding conditions.

FACTOR NO. 1.—PRODUCTION OF POTATOES IN THE ENTIRE UNITED STATES

It is obvious that when the production of potatoes in the United States is large, prices must be low, or the potatoes cannot be sold. If production were the only factor affecting price, it would be easy to determine the relation between the two. A chart could be made from the statistics of a number of years showing the price which actually accompanied the production which was obtained in each of the years. These points would be found to lie along a smooth curve which could be drawn through them and used as a basis for determining the price which would accompany a crop of any size, within the limits of variation actually observed.

FACTOR NO. 2.—LOSS IN STORAGE

A moment's thought leads to the conclusion that loss in storage must necessarily be an important factor. A loss of 5 per cent of the crop from rot in storage should have approximately, if not precisely, the same effect on price as a decrease of 5 per cent in production.

The following factors have been studied with care to determine whether they should be considered in estimating price. As far as can be determined from a study of the data for 19 years, these factors have no measurable effect on the price of potatoes in Minneapolis and St. Paul.

FACTOR NO. 5.¹—FAILURE OF THE PRODUCTION OF POTATOES TO INCREASE AS RAPIDLY AS THE DEMAND IS INCREASING

The conclusion that the production of potatoes is increasing less rapidly than the demand follows from the fact that the price of potatoes is rising relative to the general price level.

The steady increase in the price of potatoes relative to the general price level is practically identical with the increase which has taken place in the price of almost all farm products. The chief cause appears to be the fact that it is no longer possible to increase production by settling new areas of highly productive farm land. Production may now be increased only by obtaining higher yields per acre or by making use of poorer land. Either method involves increased expense of production. Under these conditions, production can continue to increase only in response to higher prices for the product. The potato crop is only one of many farm products which are feeling the effect of the same forces.

¹ The discussion of factors 3 and 4 is omitted.—EDITOR.

PRODUCTION IN THE STATES ADJACENT TO THE MARKET

The production of potatoes in the states nearest Minneapolis and St. Paul constitutes part of the total production of the United States. To that extent, the effect of variations in the production in these states is allowed for when total United States production is considered. However, it is commonly thought that variations in production in the region surrounding Minneapolis and St. Paul have a much larger effect on price in those cities than similar variations in production in Maine or even in Michigan. It is natural to suppose that in any two years in which the production in the entire United States is normal, but in which the production in Minnesota varies widely, different prices in Minneapolis and St. Paul will result; that the effect of an excess production in Maine will not offset the effect of an equal deficiency of production in Minnesota, as far as the local price is concerned.

An investigation was made to determine the effect of variations in the production of Minnesota and Wisconsin taken together on the price of potatoes in Minneapolis and St. Paul. This investigation resulted in the discovery that variations in the production in Minnesota and Wisconsin had no measurable effect on the price of potatoes except to the extent that the production for the entire United States was affected.

Although the fact is surprising, it is very readily explained when once recognized. Consider the extreme case of an excess production in Minnesota exactly equaled by a deficiency of production in Maine. In order to take care of the deficiency in the supply for New York City, for example, an unusual quantity is shipped in from New York and Pennsylvania. Large quantities of potatoes having been shipped east instead of west from New York and Pennsylvania, their place is taken by Michigan potatoes. But since Michigan potatoes are being shipped somewhat farther east than usual, Minnesota potatoes can be sold without competition in what is ordinarily Michigan territory. The result is that the Minnesota potatoes sell at practically the same price that would have been obtained if production in both Minnesota and Maine had been normal.

IMPORTS AND EXPORTS

Although the statistical study showed no measurable effect of imports and exports on price, the results should be interpreted as indicating that such effect as they have is very small. The effect may be assumed equal to that of a corresponding increase or decrease in the total United States production.

10. GUARANTIES AGAINST PRICE DECLINE¹

The guaranty of the customer by the seller against decline in prices after orders are received or goods are sold, is very common in some lines of industry and may be made under any one of the following conditions:

(1) The guaranty against decline may hold good until the date of shipment of an order which has been received for future delivery. (2) The guaranty may extend until the date of delivery. (3) The guaranty may extend to a fixed date. (4) The guaranty may cover the period which must normally elapse until goods are sold. (5) The guaranty may sometimes refer, not to the selling price of the purchaser, but to the future selling price of the one who gives the guaranty.

Ordinarily this guaranty means that when a manufacturer disposes of a commodity at a stated price he obligates himself in the event of a decline in price to rebate to the purchaser, at some future date agreed upon, the difference between the stated price at the date of sale and the reduced price at which the purchaser may be obliged to resell between the date of sale and the agreed-upon date of settlement. When the practice is confined merely to a guaranty which shall end with the date of shipment or of delivery, no serious problems arise. When the guaranty extends beyond this date, however, it is obvious that the responsibilities of the guarantor may become of major significance.

Some of the customary arguments alleged in favor of the price guaranty practice are as follows:

1. Such guaranties are, from the manufacturer's standpoint, desirable because: (a) Sales are increased thereby. (b) Seasonal fluctuations can be avoided, due to the advance orders which are secured. (c) Goods can be shipped as soon as finished, thus avoiding warehouse expenses. (d) Larger orders can thus be secured. (e) Payment is frequently made at an earlier date than would otherwise be the case. (f) Cancellations are prevented in a falling market. (g) Market prices in general tend to be stabilized by this practice.

2. The arguments favoring the practice from the wholesaler's or retailer's point of view are such as follows: (a) The guaranty protects them against loss due to a falling market. (b) It encourages them to place their orders early and thus avoid delays in shipment. (c) It permits the handling of goods by the wholesaler on a smaller margin

¹ Adapted from Edmond Earle Lincoln, *Applied Business Finance* (1922), pp. 642-44. (A. W. Shaw Company.)

of profit because of the reduction in risk. This makes possible a lower price to the consumer.

Some of the opposing arguments are as follows: (a) It is unfair to the manufacturer to be expected to protect the wholesaler or retailer in this manner. Since the manufacturer himself is not protected, he cannot afford to assume the risk for those who purchase from him. (b) The practice may tend to keep prices high in a wholly artificial manner. (c) The manufacturer may, as a result of this practice, be encouraged to produce in excess of the probable demand for goods on the part of the ultimate consumer. Due to the readier sales to the middleman he may be wholly misled as to the actual market conditions. (d) The middleman, in turn, may recklessly over-buy because of the carelessness which results from price guaranties.

Obviously there are many sides to the problem, and it is interesting to find that there is wide disagreement on the question among manufacturers, even when engaged in the same line of industry. From the seller's point of view, the policy of guaranteeing against price declines is probably most feasible when the raw material cost is a very small part of the producer's selling price. Under such circumstances the fluctuations in market price will probably be less rapid or violent. However, the customer in such cases would have least need of the guaranty. On the other hand, it has been maintained by some manufacturers that prices should be guaranteed to customers in those products in which the fluctuation will probably be most rapid, as for example, in those commodities in which the cost of raw material plays a very important part. Naturally, the buyer of goods would particularly favor a guaranty under these circumstances.

No definite rules can be laid down with reference to this most interesting problem. Much will depend upon the nature and customs of the business itself, the type of customers served, and the usual terms of sale in the trade. The practice may possibly prevent violent price fluctuations in certain lines of trade. It may also lead to a more even distribution of orders throughout the year. In such cases, the policy would seem to be wholly desirable. In times of uncertainty, however, many new elements enter into the situation. If mutual benefit is received by buyer and seller, the practice justifies itself. If, on the other hand, the risks are all on the side of the guarantor, it will obviously be necessary for him to increase his prices in order to insure himself against losses which may be incurred through his guaranty to the buyer.

CHAPTER XXII

PRICE MAINTENANCE AND UNFAIR COMPETITION

1. RECENT CASES ON PRICE MAINTENANCE¹

The Supreme Court of the United States for reasons good or bad has committed itself to the doctrine that an attempt on the part of a manufacturer to control the resale price of his product by contract is an offense punishable under the Sherman Anti-trust Act; that such an attempt is unfair competition within the meaning of the Federal Trade Commission Act and can be prohibited by the Trade Commission; and that the contract itself is, of course, unenforceable and not entitled to the protection of the law. The theory of the Supreme Court underlying this conclusion seems to be that "where commodities have passed into the channels of trade and are owned by dealers," the dealers are privileged to sell them at their own prices; and that the factory having "sold its product at a price satisfactory to itself, the public is entitled to whatever advantage may be derived from competition in the subsequent traffic."²

It is not within the scope of this article to examine the fundamentals underlying the view of the Supreme Court in the *Miles* case, however unsound the decision may seem. But it should be noted in passing that Justice Holmes, that rare genius of the law, dissented from the conclusion of the court and recent cases indicate that he has not yet been converted to the view of the majority. Taking the conclusion of the Supreme Court in the *Miles* case as the starting-point and assuming the soundness of the decision, the purpose of this article is to trace the more recent development of the law in the Federal courts with respect to price maintenance and particularly to note a curious tangle into which the Supreme Court has apparently wandered.

When the Supreme Court outlawed price-maintenance contracts on the score that they suppress competition and are therefore contrary to sound public policy, it was perfectly natural that manufacturers should have immediately resorted to other means to protect their goods from what they considered unfair conduct on the part of price-cutters. Justice Holmes, in a dissenting opinion in the *Miles* case,

¹Adapted from W. H. Spencer, "Recent Cases on Price Maintenance," *The Journal of Political Economy*, Vol. XXX, No. 2 (April, 1922), pp. 189-200.

²*Dr. Miles Medical Co. v. Park & Sons*, 220 U. S. 373 (1911).

suggested one method of evading the effect of the decision—a consignment in fact instead of a nominal consignment of goods to an agent to be sold as the goods of the principal at prices to be fixed by the principal. This method gives the manufacturer the desired protection if he is in a position to incur the greater expense and inconvenience in utilizing it. Again, at least one manufacturer has notified the trade that he requires no dealer to observe a fixed price in the resale of his commodity, but that he does reserve the privilege of selling the article under its advertised trade name, and that he extends this privilege only to those dealers who do observe his suggested prices. This scheme, if legal and enforceable, defeats the purpose of the dealer who cuts prices on it for advertising purposes. Such a dealer will find that it is of little advantage to him to cut prices on an article unless he can sell it under its trade name and bring it in competition with the same article sold by other dealers at standard prices.

Another method to which manufacturers resorted to protect their goods from price-cutting for advertising purposes is the exercise of what one court has called their “undoubted right” to select their own customers. In the development of the doctrine of the invalidity of price-maintenance contracts, the courts from the beginning have assumed, and in some cases held, that the trader has the right to deal with whom he pleases; that he is under no obligation to sell to any particular person; that he may sell to one person and refuse to sell to another for any reason or for no reason; and that “we have not yet reached the stage where the selection of a trader’s customers is made for him by the government.”¹

THE “UNDOUBTED RIGHT” TO CHOOSE CUSTOMERS

The problem in the recent cases in the Federal courts has been how far a trader may in the exercise of his “undoubted right” to choose his own customers legally control the resale price of his goods.

This “undoubted right” is in a greater or less degree limited by the fact that the jury may be permitted to find from the evidence an implied contract to maintain prices.

In the case of *United States v. Colgate & Co.*,² the defendant company was indicted under the Sherman Act for forming and maintaining an unlawful combination. The indictment alleged that Colgate & Co. was setting, and by its activities, successfully maintaining, resale prices on soap and other toilet articles throughout the United

¹Lacombe, Circuit Judge, *Great Atlantic & Pacific Tea Co. v. Cream of Wheat Co.*, 227 Fed. 46 (1915).

²250 U. S. 300 (1919).

States. The company's activities, among other things, consisted of circularizing the trade showing uniform prices to be charged for its goods; urging all dealers to adhere to these prices; stating that no sales would be made to those who did not maintain the uniform prices; requesting information about dealers who departed from the published prices; placing price-cutters on "suspended lists"; requesting offending dealers for assurances and promises of adherence to the published prices in the future; refusing to sell to those who did not furnish such assurances and making sales to those who did. The District Court,¹ in construing the indictment, held that it did not allege that there was a contract, express or implied, between Colgate & Co. and its customers which obligated the latter to sell at published prices and accordingly decided that the defendant was not indictable under the Act. The Supreme Court on appeal said that it was bound by the construction which the District Court had placed on the indictment and affirmed its decision. Justice McReynolds, who delivered the opinion of the court, said in part:

We cannot wholly disregard the statement (of the District Court) that "the retailer, after buying, could, if he chose, give away his purchase, or sell it at any price he saw fit, or not sell it at all; his course in these respects being affected only by the fact that he might by his action incur the displeasure of the manufacturer, who could refuse to make further sales to him, as he had the *undoubted right*² to do.

It will be noticed that the court decided this case on a technical rule of procedure. It accepted the trial court's construction of the indictment and refused to go into the important issue, whether or not there was enough evidence to go to the jury from which the jury might have inferred an agreement or contract for the maintenance of prices. At the same time, however, the court used language which strongly indicated that mere acquiescence in prices fixed by a manufacturer was not to be taken as evidence of a contract to maintain prices.

The decision in the Colgate case gave great hope and encouragement to traders. If the "undoubted right" to choose one's customers meant what it was generally supposed that the Colgate case stood for, then traders could accomplish by voluntary coöperation with dealers what the court had previously said that they were not entitled to accomplish by contract. The court threw doubt upon the Colgate case in the Cudahy Packing Co.³ case by saying that an agreement

¹ 253 Fed. 532.

² Italics are the author's.

³ 41 Supreme Court Reporter 451 (1921).

might be implied from circumstances although in another part of the decision the court seemed to affirm the Colgate decision in spirit.

The situation just outlined is sufficiently doubtful and precarious but it remained for the Supreme Court in the case of the *Federal Trade Commission v. Beech-Nut Packing Co.*,¹ decided January 3, 1922, to hand down a decision which greatly adds to the confusion, makes impossible a satisfactory judicial solution of the problem and calls loudly for intervention by Congress.

The case originated in proceedings instituted against the Beech-Nut Co. for alleged unfair competition in interstate commerce under the Federal Trade Commission Act. The general charge made against the defendant was that it had been guilty of unfair competition in fixing and maintaining resale prices for its goods.

A general statement of the manner in which the Beech-Nut Co. carried on its business and the way in which it sought to control the resale price of its commodities is necessary to an understanding of the court's decision.

The company customarily marketed its goods through jobbers and wholesalers who in turn resold them to retailers. From time to time the company issued circulars and price-lists to the trade, showing suggested uniform prices, wholesale and retail, to be charged for its products; it selected customers whom it could trust to observe the suggested prices; it suggested and insisted that the selected customers should observe the published prices and not sell to retailers or to others who did not adhere to these prices; it asked for coöperation of all dealers in establishing and maintaining the prices; it refused to sell to anyone who disregarded the published prices or who sold to others who disregarded such prices; but sold freely to those who adhered to the suggested prices; it marked its goods with numbers and symbols so that it could trace the goods when it found that prices on them were being cut; it kept a record of all customers, indicating those to whom goods were to be sold and those to whom goods were not to be sold; the company frequently "reinstated" persons who had been previously "cut off" on their assurances that they would observe the published prices in the future.

The case was heard by the Federal Trade Commission on an agreed statement of facts, one stipulation of which was:

That the merchandising conduct of respondent heretofore defined and as herein evolved does not constitute a contract or contracts whereby resale prices are fixed, maintained, and enforced.

¹42 Supreme Court Reporter 150 (1922).

It will be remembered that in the Colgate case the Supreme Court accepted the construction placed by the District Court on the indictment and gave judgment accordingly. One would have expected the Supreme Court in the Beech-Nut case, in view of the stipulation of fact that there was no contract for price maintenance, to have arrived at the same result which the court reached in the Colgate case. But on the contrary, the Trade Commission held that the defendant's conduct was unfair competition and ordered its desistance in a very sweeping fashion. The Circuit Court of Appeals in accordance with its understanding of the Colgate case reversed the ruling of the Commission. The Supreme Court of the United States, by a vote of five to four, modified and affirmed the order of the Trade Commission.

The decision is startling and it is startling not so much because of what the court decided as because of the basis of the decision, some of the statements which the court makes, and the decree which the court ordered to be issued against the Beech-Nut Co.

On the one hand it seems that the court adopts the view that the circumstances of the case warranted a finding that there was a contract between the defendant and the dealers for the maintenance of resale prices.

From his course of conduct a court may infer—indeed, it cannot escape the conclusion—that competition among retail distributors is practically suppressed, for all who would deal in the company's products are constrained to sell at the suggested prices.

In arriving at this conclusion, however, the court had to fly in the face of the statement of facts on the basis of which the case was heard before the Federal Trade Commission.

Nor is the inference overcome by the conclusion stated in the Commission's findings that the merchandising conduct of the company does not constitute a contract or contracts whereby resale prices are fixed, maintained or enforced.

But the court does not stop here. It goes much farther. It adopts a view or principle, which, if established and followed, materially deprives the manufacturer of control over his goods and compels him to sell them to dealers whether he wants to do so or not.

The specific facts found show suppression of the freedom of competition by methods in which the company secures the coöperation of its distributors and customers, *which are quite as effectual as agreements express or implied intended to accomplish the same purpose.*¹ By these methods the company, although selling its products at prices

¹ Italics are author's.

satisfactory to itself, is enabled to prevent competition in their subsequent disposition by preventing all who do not sell at resale prices fixed by it from obtaining its goods.

Apparently the court is saying, contract or no contract, if the natural result of a manufacturer's activities is to prevent dealers from getting his goods, the manufacturer is guilty of unfair competition. This conclusion is strongly borne out by the decree which the Supreme Court directed the Commission to enter:

We are, however, of the opinion that the order¹ of the Commission is too broad. The order should have required the company to cease and desist from carrying into effect its so-called Beech-Nut policy by coöperative methods in which the respondent and its distributors, customers, and agents undertake to prevent others from obtaining the company's products other than at the prices designated by it— (1) by the practice of reporting the names of dealers who do not observe such resale prices; (2) by causing dealers to be enrolled upon lists of undesirable purchasers who are not to be supplied with the products of the company unless and until they have given satisfactory assurances of their purpose to maintain such designated prices in the future; (3) by employing salesmen or agents to assist in such plan by reporting dealers who do not observe such resale prices, and giving orders of purchase only to those jobbers and wholesalers who sell at the suggested prices and refusing to give such orders to dealers who sell at less than such prices; or who sell to others who sell at less than such prices; (4) by utilizing numbers and symbols marked upon cases containing their products with a view to ascertaining the names of dealers who sell the company's products at less than the suggested prices in order to prevent such dealers from obtaining the products of the company; or (5) by utilizing any other equivalent coöperative means of accomplishing the maintenance of prices fixed by the company.

Justice Holmes in keeping with his convictions on the subject of price maintenance dissented from the conclusion of the court on grounds more or less fundamental. Justices McKenna and Brandeis concurred with him in this dissent. Justice McReynolds, who delivered the opinion of the court in the Cudahy Packing Co. case, the Colgate case, and the Schrader case delivered a separate dissenting opinion.

¹"Now, therefore, it is ordered that respondent, the Beech-Nut Packing Co., its officers, directors, servants, employees cease and desist directly or indirectly recommending, requiring, or by any other means bringing about the resale of Beech-Nut products by distributors, whether at wholesale or retail, according to any system of prices fixed or established by respondent, and more particularly by any or all of the following means:

"1. Refusing to sell to any such distributor because of their failure to adhere to any such system of resale prices.

"2. Refusing to sell to any such distributor because of their having resold respondent's said products to other distributors who have failed to adhere to any such system of resale prices.

"3. Securing or seeking to secure coöperation of its distributors in maintaining or enforcing any such system of resale prices.

"4. Carrying out or causing others to carry out a resale price-maintenance policy by any other means."

He contended that the maintenance of resale prices by a manufacturer without resorting to contracts, express or implied, is not contrary to sound public policy and therefore unfair competition within the meaning of the Trade Commission Act; and that the agreement of facts on the basis of which the controversy was heard before the Federal Trade Commission precluded the existence of such contracts. He intimated, however, that but for this stipulation of fact a contract to maintain prices might have been inferred from the circumstances of the case.

PRESENT LEGAL STATUS

What then is the net result of the decisions of the Supreme Court on the subject of price maintenance? The *Miles* case establishes pretty firmly the doctrine that a contract to maintain resale prices is against public policy and therefore not entitled to any protection from the courts. The *Colgate* case really stands for nothing so far as the doctrine of price maintenance is concerned. The court in this case evaded the issue and said nothing more than that it was bound to accept the construction placed by the trial court on the indictment that no contract express or implied was alleged and that the trial court was right in not applying the Sherman Act. The *Cudahy Packing Co.* case says that an agreement to maintain resale prices may be inferred from circumstances, but that the publication of prices, the acquiescence in those prices by dealers, the granting and withholding of goods by a manufacturer in his attempt to control resale prices, is not enough evidence to warrant the jury in finding an illegal agreement to maintain prices. If the court had stopped at this point the doctrine of the Supreme Court, on the assumption that the *Miles* case is sound, would have been consistent and probably would have afforded ample protection to manufacturers. But the decision of the court in the *Beech-Nut* case seems to upset everything. The conclusion of the court in this case is difficult to explain and some of its implications are rather far-reaching and startling.

Is not the court assuming considerable power over the business of an ordinary private manufacturer when it forbids him to seek the coöperation of dealers in maintaining his suggested prices? Is not this in fact a substantial restraint on the use of logic by the manufacturer to persuade dealers that it may be for the best interest of all concerned, including the public, to maintain resale prices on goods?

Again, if the test of the legitimacy of a price-maintenance policy is whether it suppresses competition in the subsequent traffic in the goods, where will the court stop in the application of this principle?

Suppose that the manufacturer consigns them in fact to agents for sale at designated prices? Suppose, as suggested by Justice McReynolds in his dissenting opinion, that the manufacturer limits his customers to consumers? Has he not in both cases suppressed competition in the subsequent traffic in the goods? Has he not in both cases cut off the supply of his goods not only to the complaining dealers but to all dealers as well? Will the court hold under either hypothesis that the manufacturer is guilty of a punishable offense under the Sherman Law? Certainly not and yet the doctrine announced in the Beech-Nut case, if carried to its logical conclusion, would seem to condemn both of these practices. No one believes, however, that the Supreme Court will carry this principle to such an extreme in the event that either of the supposed cases arises. Perhaps the court will say that the trader can maintain any prices he pleases so long as he performs all the market functions in the distribution of his goods but that if he utilizes any of the existing market structures in selling his goods he must do nothing which will restrain subsequent traffic in them.

Finally, if the manufacturer cannot engage in the activities from which he is ordered to desist in the Beech-Nut case, what becomes of his "undoubted right" to select his own customers? He is forbidden from gathering information which will assist him in selecting his customers. He is forbidden to seek the coöperation of dealers as a basis of selection. In short, it seems, under the decree which the Supreme Court framed in the Beech-Nut case, that the manufacturer's "undoubted right" to choose his own customers is an empty one—a right in the abstract but not to be exercised if it accomplishes that which the right presumably was called into existence to accomplish.

Have we not then reached the stage where the government is proposing to select a trader's customers for him. Or have we merely reached the stage where the Supreme Court has blindly wandered into a hopeless entanglement from which it must be rescued by Congressional action?

2. THE OPEN PRICE ASSOCIATION¹

The open price association is an organization which provides a medium for the exchange of business information among members of a given industry whereby they may arrive at an intimate acquaintance with competitive conditions as they exist among themselves and in the whole industry. The business facts most commonly exchanged

¹ Adapted from Milton Nels Nelson, *Open Price Associations* (1922) pp. 9-13, 19-24. (University of Illinois Studies in the Social Sciences, Vol. X, No. 2.)

are those relating to prices actually quoted or charged, terms of payment, manufacturing and selling costs, purchases, stocks, production, orders, shipments, inquiries, bids, contracts, returned goods, cancellations, advertising, and credits.

The Open Price Association and the Ordinary Trade Association

There are discernible several points of difference between an open price association and the ordinary trade association. The ordinary trade association is very loosely organized and serves only certain general purposes. There is little or no attempt to systematically assemble, compile, and disseminate complete and accurate business statistics. Meetings are infrequent; members do not come much in personal contact at these meetings because the membership is usually large. Divergence of interests is more or less great, making it difficult to secure harmony of action. It is often found that the members of such an association do exchange price information. In so far as this is done, the association may be considered a kind of open price association, but it is not a typical one.

The typical open price association is a small, closely knit organization. Its members place heavy emphasis on the importance of assembling, compiling, and disseminating among themselves complete and accurate statistics. These statistics serve the purpose of putting each member in possession of business facts which will provide him with a basis for the intelligent direction and control of his business. If anything, even more emphasis is put upon the importance of securing frequent personal contact between members. This is accomplished by having frequent meetings. Where membership is relatively large, or where it is spread over a wide area of territory, it is customary to have group meetings. In these meetings members freely discuss all matters of interest bearing on the problems of their industry, including prices that have been received in past transactions. Discussions relating to future prices are not permitted.

EXTENT OF THE MOVEMENT

The open price association is an American institution.¹ How many of these associations exist in the United States is very difficult to determine. One estimate places the number at 250.² A prominent counsel for several open price associations, whose opinion bears weight, states, "It is probably true that no great industry in this country is

¹ Arthur J. Eddy, Address, *American Limberman*, Dec. 20, 1913.

² C. R. Rohrbach, *Printer's Ink*, Feb. 5, 1920.

entirely without some form of coöperation that meets at some point some principle of the so-called open price work. I have no doubt at all that there are as many as three hundred and possibly three times three hundred."¹ The writer is informed by one of the representatives of a prominent bureau doing open price work that the bureau in question has collected a list of four hundred and twenty-nine open price associations, and the opinion was expressed that there are in existence some four hundred and fifty of these associations.² However the informant did not know what percentage of this number represented associations which had adopted the open price plan in its entirety. Probably the number falling in the latter class would be considerably less.

Open price associations may be found in all parts of the United States. A large number of them, if not the largest, appear to have their headquarters in New York and Chicago. A glance at the appended list of associations reputed to be doing open price work³ will indicate how widely different are the lines of trade in which they flourish. The list, which is believed to be a representative one, also points to the conclusion that the open price movement in its most highly developed form is spreading most rapidly in lines of trade wherein the number of competitors is relatively small.⁴

The reasons for this would appear to be, in the first place, that groups of competitors in the smaller lines, not having the benefit of trade papers, feel a peculiar need of some medium for learning of conditions of trade. The open price system meets this need. In the second place it is, generally speaking, true that the more numerous the competitors in a given line are the more difficult it is to bring about effective coöperation between them. This is particularly true when the coöperation required is of a most intimate and unprecedented kind. Even the most intelligent of business men find it difficult to grasp the spirit of coöperation which makes men willing, for example, to lay bare before competitors vital statistics pertaining to their own businesses. Filled, as he is, with distrust and suspicion of the motives and actions of his competitors, the ordinary business man is not easily reconciled to a program which involves coöperation with them in this very intimate way. A long campaign of education

¹ Clark McKercher, *Letter*, Nov. 22, 1920.

² Armstrong Bureau of Related Industries, Chicago, Illinois.

³ Milton Nels Nelson, *op. cit.*, Appendix, Exhibit 1.—Editor.

⁴ One of the largest, if not the largest, open price association of the fifteen or sixteen organized by Mr. Eddy, i.e., The National Association of Finishers of Cotton Fabrics, has sixty-seven members. The average number seems to be no greater than twenty-five. Cf. Testimony of Wm. J. Mathews before the Joint Legislative Committee on Housing, Legislature of New York, Dec. 29, 1920, pp. 4602-3.

must ensue before these barriers can be cleared away. Even when he has reached the point where he is willing to coöperate, there is the difficult task of teaching him to be accurate, punctual, and regular in reporting such information as may be requested of him by the bureau gathering, compiling, and disseminating the information.

PURPOSES

The ultimate aim of all open price associations is to effect greater stability in business conditions, in order that profits may be made, if not greater, at least more steady, dependable, and calculable from year to year.

As for the immediate objects of these associations, it appears that among the associations that attribute their existence directly or indirectly to the influence of Mr. Eddy, there exists a very close harmony. On the other hand there appears to be little uniformity among associations that have worked out open price activity for themselves, or that have simply annexed open price work to other functions previously in existence.

The Eddy associations usually emphasize as their objects: 1. The promotion of publicity in the transaction of business; 2. The promotion of cordial and friendly relations among members; 3. The absence of secrecy at meetings, or in the operations of the association; 4. The non-existence of penalties of any kind in connection with operations; 5. The freedom of members to quote at all times such prices and terms as they please; 6. The collection and dissemination of statistics of importance to the industry, including prices actually quoted or charged, but excluding reference to future prices either in reports or meetings; 7. The correction by legitimate means of all "unintelligences," faulty standardization, and abuses in the trade. Some of them also specifically have for an object the devising of cost accounting systems suitable for the industry, and coöperation in the standardization of sizes and dimensions.¹ Other objects are sometimes mentioned but they are not peculiar to the operation of an open price association.

Open price associations that do not fall in the Eddy class show considerable variation in the number and nature of the objects set forth. The Ohio Millers' State Association, for example, expresses its objects in a sentence, to wit: "The object of this association is the cultivation of commercial good will and fellowship among millers,

¹ *Constitution*, Leather Belting Exchange; American Hardwood Manufacturers' Assn.; Salt Producers Assn.; Tap and Dye Institute; Society of Manufacturing Confectioners; The National Coal Assn.; Knit Goods Manufacturers of America.

the encouragement and protection of their trade, the promotion by every expedient and lawful means of the interests of their business, and to legally acquire and disseminate valuable mercantile and economic information of interest to its members, thus securing by fair and lawful means the benefit of coöperation."¹ There is very little hint here of the existence of open price activity. In fact, open price work in this instance is confined to a weekly report of prices received which members mail to the secretary, who in turn tabulates these prices and mails them in mimeograph form to the contributing members.

Another constitution, typical of the lumber industry,² sets forth nine objects, but only one of these mirrors to any extent the purposes usually associated with open price work. This is the second object and reads as follows: "To gather, compile, and disseminate data, reports, statistics, and information relative to the properties, uses, values, production, transportation, distribution, and consumption of and markets for lumber and other forest products in all markets, and the best and most economical methods of manufacturing, handling, transporting, and disposing of said forest products; to gather, compile, and disseminate information as to the taxation of forest products and of timber lands and the cultivation, protection, and conservation of forests."³

The "Eddy" Associations

Returning to a more detailed consideration of the objects as set forth by the typical Eddy association, it is found that no one object receives more emphasis than that which aims to promote cordial and friendly relations among members. The ordinary trade association also makes this one of its objects, but the open price association aims to make its accomplishment more certain by having meetings at frequent intervals. Members of the ordinary trade association usually meet once or twice a year. The motive in promoting cordial and friendly relations among members is to remove so far as possible misunderstandings and ill feelings due to the spreading of false reports and baseless charges and ignorance of conditions prevailing in the industry.⁴

A second object, of little less importance, is that which refers to the collection and dissemination of accurate information relating to

¹*Constitution*, Ohio Millers' State Assn.

²*Constitutions* of the Southern Pine Assn. and the American Hardwood Manufacturers' Assn. resemble more those of the Eddy Associations.

³*Constitution*, West Coast Lumber Manufacturers' Assn.

⁴*Constitution*, Society of Manufacturing Confectioners,

the industry, including statistics of prices. The National Association of Finishers of Cotton Fabrics puts it this way: "To collect and disseminate accurate information relating to the finishing of cotton fabrics, to the end that each finisher, however small his output, may be placed, in so far as data for the intelligent conduct of his business goes, on a footing of equality with other finishers."¹ It may be worth noting, in passing, that it is here considered a valuable object to help put the small competitor on a footing of equality with the larger competitor in the matter of knowledge of business conditions. The fifth object of the Bridge Builders' Society is "to establish frankness regarding terms, bids, prices actually made."² With reference to prices, nearly always there is to be found a provision which prohibits members from discussing what their future prices are to be. This provision is intended to make it clear that there is to be no attempt to control the trend of future prices, but merely to record past prices. To attempt to control future prices would be illegal.

Provisions that there are to be no penalties of any kind in connection with the operation of the plan are of course put in in order to show the clear line of separation that exists between open price associations and combinations that attempt to enforce agreements to control output of prices by means of penalties. The only penalty usually provided, if it may be called such, is that those who do not file the information called for by the reporting plan get no information. Those who file only part of the information called for get like information in return, and no more. One association has an additional penalty to the effect that a failure to report for twelve days and six months will cause the member failing to be dropped from membership. The laxness shown in reporting has made provisions of this kind necessary.

The further provision, that members are to be free at all times to quote such prices and terms as they please, also aims to show clearly that the open price association has nothing in common with illegal combinations of one kind or another that attempt to put price restraints upon members. It may be said in this connection that some open price associations, at least, expect members who have made a particularly low price to explain in meeting the reasons that prompted them to make this low price. Others merely provide the opportunity for such explanations to be made. As a rule no one but the secretary

¹ *Constitution, National Association of Finishers of Cotton Fabrics*, quoted by H. R. Tosdal, "Open Price Associations," *American Economic Review*, June 17, 1917.

² *Constitution, Bridge Builders' Society*, quoted by H. R. Tosdal, "Open Price Associations," *American Economic Review*, June 17, 1917.

knows the identity of the persons that have made this price. Without actually making their identity known he will invite such persons to make an explanation if they care to do so.

The promotion of publicity in all business transactions and absence of secrecy in meetings and in association operations is insisted on by those associations that endeavor to follow strictly the principles laid down by Mr. Eddy. Mr. Eddy writes as follows: "There is no reason why the American manufacturer should not throw his shop open to customers, why he should not mark everything he makes in plain figures and let everybody know what those figures are; changing them as he pleases, but changing them to all alike, making such discounts as he pleases on large orders, but making them openly."¹ Inquiry develops that few of the open price associations are willing to go to the length of inviting buyers to utilize information that has been collected in the central office. The Hardwood Manufacturers' Association is a notable exception. In this case the Manager of Statistics encouraged buyers to make inquiries, for example, regarding the location of items of stocks of lumber and the quantities available. Some of the associations permit members to invite customers to attend meetings; others do not. The American Hardwood Manufacturers' Association was very free in permitting outsiders to attend meetings, and hardly a meeting passed that was not attended, either by customers, representatives of the press, or other outsiders. It is evident that few members of open price associations have yet reached the point where they are willing to confide their business affairs to the public. This is not to be wondered at. The idea that business should be conducted in secret has so long had possession of the business man that it will take years of education to persuade him to adopt the policy of full publicity. In the retail trade, "it has taken a century to grow into the one-price-plainly-marked policy."

The object which calls for the correction of all "unintelligences" is in line with the idea that ignorance of competitive conditions is a millstone to industrial prosperity. In this connection, the purpose as expressed by the American Hardwood Manufacturers' Association is "to disseminate among members accurate knowledge of production and marketing, so that each member may gauge the market intelligently instead of guessing at it."

Coöperation in devising cost accounting systems and coöperation in the standardization of sizes and dimensions are not functions that are peculiar in any sense to open price associations. These are very

¹A. J. Eddy, *New Competition*, 1912, p. 108.

common activities of the ordinary trade association. Knowledge of costs makes an intelligent competitor out of an ignorant one. Open price associations can therefore not afford to ignore this function. Although only a few associations give the special mention of cost accounting that its importance warrants, yet it will be found that practically all open price associations are engaged in cost educational work. It is noteworthy that one association states that its purpose in devising a uniform system of cost accounting "is not to impose upon any member any cost items, or to use in any manner the cost system as a means for controlling prices." Coöperation in standardization of sizes, dimensions, and processes, et cetera, is an integral part of the work of all open price associations, because prices cannot be intelligently compared unless the products subject to price quotation are comparable in size, shape, and quality.

Other objects of open price associations, such as the exchange of information relating to contracts, returned goods, cancellations, advertising, and credits are not usually given specific mention in constitutions but are provided for by some such clause as "the collection and dissemination of statistics of importance to the industry."

3. THE EFFECT OF OPEN PRICE ASSOCIATIONS ON PRICES¹

The open price association is of too recent origin and other influences during the past few years have been too numerous and confusing to permit a study of the price movement in industries affected to have any value. *A priori* one would expect that the interchange of information placing in the hands of each seller the same market data, the accuracy of which is unquestioned, would have a tendency to stabilize prices. That this has been an actual result is asserted by members and officers of open price associations. Stability of prices is desirable; but only if the level is not unreasonably high. There seems to be no reason to believe, if associations confine their activities to study and discussion of past transactions, that the level of prices would be raised to an extent which could be said to be injurious from the standpoint of public policy.²

¹ Adapted from H. R. Tosdal, "Open Price Associations," in *The American Economic Review*, Vol. VII, No. 2 (June, 1917), pp. 351-52.

² It is conceivable that by long association the competitors in a given line might be led to regard as normal or desirable a higher margin of profit than that to which they had been accustomed; and in making prices individually act so as to bring this about. In the absence of some basis for monopoly, this condition of higher than normal return would not continue indefinitely. New competition would be attracted and eventually the rate of return would be restored to normal.

There are advantages both to consumer and producer of the spread through cost accountancy of a knowledge of costs of production. Study and comparisons of costs make for an increased efficiency resulting eventually in higher profits to the producer or lower prices to the consumer, perhaps both. Price-cutting due to ignorance of costs is eliminated, to the immediate benefit of producers and to the ultimate good of consumers. Nevertheless, it must be recognized that in a well-developed industry, the costs of production in competing plants will not show great variations and that when prices are made upon the basis of costs ascertained by a uniform system, differences will often be less than before, although competition is not restrained.

Information as to competitors' business affairs, actual sales and transactions, does not prevent the free play of competitive forces. Each concern is as anxious to sell and to increase its sales as before and is as free to quote whatever prices it desires to secure its object. Such knowledge is little different in character from the information given out by our stock or produce exchanges as to bids, offers, and actual transactions; in fact, the furnishing of this information is an important and legitimate function; yet no one would deny the existence of a competitive market in wheat or cotton.

The open price association as an organization which endeavors to increase the profitableness of an industry by placing information as to past transactions at the command of members for consideration and analysis in individually deciding upon future prices has, therefore, potentialities both beneficial and injurious to public welfare. The coöperation of competing concerns in securing and distributing this information appears to be legal as well as economically desirable. Yet the open price organization is peculiarly susceptible of abuse. Whether the advantages of the new type of association will outweigh the disadvantages in actual operation is a question to be answered when the fund of experience and amount of reliable data available is greater and more conclusive than at present.

4. FAIR AND UNFAIR COMPETITION¹

COMPETITION AND EFFICIENCY

To the individual organization which chances to be eliminated through competition, the result of the process undoubtedly appears extremely harsh. Yet as long as competition continues to be regarded

¹Adapted from W. H. S. Stevens, *Unfair Competition* (1917), pp. 6-9. (University of Chicago Press.)

as an economically sound principle, as long as society accepts and countenances it, there can scarcely be said to be either unfairness or injustice involved in the results which it logically brings to pass, i.e., the elimination of inefficient organizations. The justification of the principle of competition must always be found in the benefits which its operation confers upon society. The interests of society lie in the highest possible utility at the lowest possible cost.¹ In essence this simply means that society is interested in procuring at the lowest possible prices those goods best adapted to the satisfaction of its wants, since, generally speaking, the lower the price the less the total labor-pain cost of acquisition and the larger the total surplus of satisfactions which society obtains. To secure this result it is necessary that efficient units of organization shall be preserved; and it is equally desirable that inefficient units shall be destroyed. The latter constitute an unnecessary burden to society, and no economic justification for their existence can be found. Economically fair competition brings to pass both results. Under its operation every organization has an opportunity to survive and continue in business which is conditioned solely upon productive and/or selling efficiency, and only those units which are lacking in these qualities are eliminated.

Unfortunately competition has not always been so conducted that the logical results of the competitive process have appeared. Efficient concerns have by no means always survived. All too frequently they have been destroyed, not by superior efficiency, but by methods against which their own efficiency afforded little or no protection. Again and again methods and practices have been employed which destroy the freedom of the market, which restrict and hamper the efficiency of other units, and which prevent potential competitors from becoming actual rivals. Such artificial arrangements are clearly unjustifiable from an economic standpoint. As already indicated, the essence of fair competition is the preservation of the efficient and the destruction of the inefficient. Where unfair methods are used, the normal consequences of the operation of the principle of competition may be reversed. The efficient are frequently destroyed and the inefficient not infrequently preserved. The use of such practices has therefore no economic justification, and, in consequence, all methods of this character must be regarded as unfair. In other words, so far as competitive business is concerned, the final test of the fairness of a given method should be whether or not it restricts actually, or

¹ Cf. Robert Liefmann, "Monopoly or Competition as the Basis of a Government Trust Policy," *Quarterly Journal of Economics*, Vol. XXIX (February, 1915), p. 311.

potentially, the normal operation of the law of competition with the resulting survival of efficiency. Any method used in competition which hinders or prevents the normal results ensuing from the free operation of the competitive principle must be adjudged unfair.¹

Occasional instances of the use of economically unfair competition are found in the history of small and relatively unimportant organizations. But it is at once interesting and significant that in perhaps the majority of cases the greatest development and diversification of such methods have been attained by the most highly monopolistic organizations. While such methods are not always easy of classification, it is still possible, by selecting what appear to be their most fundamental characteristics, to distinguish the following twelve classes of "unfair methods of competition":

- I. Local price-cutting.
- II. Operation of bogus independent concerns.
- III. Fighting instruments.
- IV. Conditional requirements.
- V. Exclusive arrangements.
- VI. Black lists, boycotts, white lists, etc.
- VII. Rebates and preferential arrangements.
- VIII. Engrossing machinery, or goods used in the manufacturing process.
- IX. Espionage.
- X. Coercion, threats, intimidation, etc.
- XI. Interference.
- XII. Manipulation.²

¹The reader should clearly understand that this discussion has no reference to the legality or illegality of various methods of competition. That is a matter for the decision of the Trade Commission and the courts. This volume attempts merely to show the economic basis for regarding certain methods as unfair.

²These twelve forms of competition are not always so clearly distinguishable one from another that exact differentiation is possible. Occasionally one method so overlaps another, or one so supplements another, that it could be discussed equally well under either of two classes. When this occurs, the difficulty of accurate classification is increased. The writer's allocation, therefore, may not always be regarded as satisfactory.

CHAPTER XXIII

THE RELATION OF THE STATE TO MARKETING

1. RECOMMENDATIONS OF THE JOINT COMMISSION OF AGRICULTURAL INQUIRY¹

(1). That the Federal Government affirmatively legalize the coöperative combination of farmers for the purpose of marketing, grading, sorting, processing, or distributing their products.

(2). That the farmer's requirements for credit corresponding to his turnover and having maturity of from six months to three years, which will enable payment to be made from the proceeds of the farm, be met by an adaptation of the present banking system of the country, which will enable it to furnish credit of this character. It is expected that a concrete proposal to carry out this recommendation will be made in Part II of this *Report*.

(3). That there should be a warehousing system which will provide a uniform liability on the part of the warehousemen and in which the moral and financial hazards are fully insured. To this end the commission suggests the extension of the existing Federal warehouse law and the passage by the several states of uniform laws regulating the liability of warehousemen and the services rendered by them.

(4). The commission believes that an immediate reduction of freight rates on farm products is absolutely necessary to a renewal of normal agricultural operations and prosperity and recommends prompt action by the railroads and constituted public authority to that end.²

(5). That there should be an extension of the statistical divisions of the Department of Agriculture, particularly along the lines of procurement of livestock statistics.

(6). That provision should be made by Congress for agricultural attachés in the principal foreign countries producing and consuming agricultural products.

(7). The development by trade associations and by state and Federal sanction of more accurate, uniform and practical grades of agricultural products and standards of containers for the same.

¹ Adapted from Joint Commission of Agricultural Inquiry, *Report*, Part I, *The Agricultural Crisis and Its Causes* (Oct., 1921).

² Since this recommendation was agreed to, certain reductions in freight rates upon agricultural products have been made.

(8). That adequate Federal appropriations should be made for the promotion of better book and record keeping of the cost of production of farm products on the basis of the farm plant unit, as a basis for the development of more efficient methods of farm management.

(9). Provision for an extended and coördinated program of a practical and scientific investigation through state and national departments of agriculture and through agricultural colleges and universities directed toward reducing the hazards of climate and weather conditions and of plant and animal diseases and insect pests.

(10). More adequate wholesale terminal facilities, particularly for handling perishables at primary markets and a more thorough organization of the agencies and facilities of distribution of the large consuming centers of the country.

(11). The development of better roads to local markets, joint facilities at terminals connecting rail, water, and motor transport systems and more adequate facilities at shipping points with a view to reducing the cost of marketing and distribution.

(12). That greater effort be directed to the improvement of community life.

(13). The renewal of conditions of confidence, and industrial, as well as agricultural prosperity is dependent upon a readjustment of prices for commodities to the end that prices received for commodities will represent a fair division of the economic rewards of industry, risk, management, and investment of capital. These conditions can not be brought about by legislative formulas but must be the result for the most part of the interplay of economic forces. The Government and the states within their respective spheres should do by legislative and administrative action what it may be possible to do, based upon sound principles to facilitate this readjustment.

In making the foregoing recommendations it must be understood that the jurisdiction of the Federal Government is limited and that it cannot directly regulate production, marketing, or transportation, not the subject of interstate commerce. Therefore the foregoing recommendations contemplate, in addition to legislation within the jurisdiction of Congress, action by state authorities within their respective jurisdictions and local and private interests, in order to achieve the objects sought.

2. THE RELATION OF GOVERNMENT TO MARKETING¹

1. The public generally looks to the government as a means of promoting improvement in marketing. The greatest service of the government in response to public confidence is to act as an unbiased umpire of competition among middlemen supported by adequate, impartial facts and the effective enforcement of decisions.

2. The government owes to its constituency assistance in the things related to marketing which individuals cannot do alone or by voluntary organization. These things may be classified as having to do with (1) maintenance of equality of opportunity; (2) securing by investigation or experimentation full facts about marketing; (3) establishment of minimum standards of competition; (4) enforcement of established standards of competition; and (5) education of the public to a comprehension of the economics of marketing.

3. Competition if unregulated does not necessarily mean the survival of the fittest in the sense of being the most helpful to society. It means the survival of the strongest for the moment because of some temporary advantage. Equality of opportunity means the chance for all to survive who give promise both of working efficiently and in harmony with the welfare of others. None other than the government is able to guarantee this essential condition of progress.

4. Economic progress in marketing depends upon the character of ideas more than physical realities. These are generally concealed and come to light only after investigation. General public welfare requires the government to specialize upon this fundamental task in order to promote constructive changes.

5. Competitors generally do not voluntarily come together to set standards to eliminate undesirable or reprehensible practices. For this reason the government is obliged to assume this duty in order to protect not only the middleman but the farmer and consumer as well.

6. Private authority is powerless to enforce standards throughout the field of marketing. For this reason compulsion is necessary. Under civilized conditions government is the only power to which the privilege of compulsion is granted. Hence government must enforce the standards of competition.

7. If standards are to mean anything they must rest upon fundamental economic fact and principle and must apply impartially to

¹ Adapted from Theodore Macklin, *Efficient Marketing for Agriculture* (1921), p. 390. (The Macmillan Company.) This is the summary of Chapter XIX, "Government Authority in Relation to Marketing."

all agencies utilizing similar methods in the rendering of the same kind of services.

8. If education instead of propaganda is to be the basis of public sentiment as a force for improvement in marketing, the government must not only promote education in marketing lines but do so much more vigorously than in the past. To provide facts for education it must develop unbiased investigation of marketing conditions, systems and motives hitherto largely unappreciated.

3. THE GOVERNMENT AND THE PACKING INDUSTRY¹

I think it is particularly essential that we give heed to the future relationship between the government and the meat-packers. Our theory of government is undergoing a great change. Whereas earlier legislation was largely of an affirmative nature, today's legislation is primarily restrictive. The desire of Americans to unite for the promotion of the interests of the country as a whole is being supplanted by the desires of separate classes to acquire rights, privileges, or properties at the expense of other classes. The result is an increasing number of laws calculated to hamper individual and business progress and to discourage outstanding business success.

The continuing inroads of government officials into the operation and general conduct of business are symptoms of insecurity to our welfare and original ideals of Americanism that we cannot afford to disregard. Our nation's foundation is based on the principle that everyone shall have free, equal, and unlimited opportunity, but the trend of the day is toward limitation of opportunity and a leveling of businesses and men to a point where the less competent and the less willing acquire the same rewards as do the most competent and the most willing.

Labor and agriculture and various other elements of our body politic have organized leaders in Congress and, in the two cases specified, a secretary representing them in the president's cabinet. Congress appropriates annually to promote the interests of these classes, and they possess able, if not always constructive, leadership. Business in general and the packing industry in particular has never in the past had government contact except restraint. With the single exception of the Federal Meat Inspection Act, the packing

¹ Adapted from F. Edson White, *The Distribution of Meat Products* (1923), pp. 355-57. (Lecture VIII of a series of lectures on *The Packing Industry*, given under the joint auspices of the School of Commerce and Administration of the University of Chicago and the Institute of American Meat Packers. Copyright by the University of Chicago.)

industry has never had a governmental order other than one limiting our facilities and opportunities. A hopeful sign for the future is seen in the announced policy of Secretary Hoover to build up a constructive service for commerce in general and to coöperate with existing organizations for business promotion.

Clear-thinking and forward-looking governmental leadership is needed; the government must help instead of hinder the efforts to acquaint the voting public with the necessity for concentration of capital in national industries. It must be made apparent to the public that a nation of our size and scope requires commensurate size and scope in its business and industrial activities, and it must further be made apparent that big businesses are in the interests of the people and absolutely essential to a progressive public policy.

The commercial and industrial progress of this nation hinges on ever improving distributive facilities, and it should be the function of the government to aid in bringing about these necessary improvements. Excellent as is the distribution of meats afforded by the packing industry, there is still opportunity to make it better. That is the aim of our industry, and in that purpose it should have the helpful coöperation of the producers, the consumers, and the government.

4. FUNCTIONS OF THE FEDERAL TRADE COMMISSION¹

The Federal Trade Commission was created by an act of Congress approved September 26, 1914. The act was the final culmination of several years of study and agitation for such a law and was enacted with practically the unanimous approval of the House of Representatives and with but five dissenting votes in the Senate. The commission was formally organized and began to function March 16, 1915.

Five commissioners appointed for terms of seven years each by the President and approved by the Senate are authorized to administer the law. The commission is nonpolitical. No more than three members of one political party can serve simultaneously.

The principal functions of the Federal Trade Commission are:

(1). To prevent persons, partnerships, or corporations (except banks and common carriers) from using unfair methods of competition; administration of sections 2, 3, 7, and 8 of the Clayton Anti-trust Act.

(2). To gather, compile, and publish information regarding the organization, business, conduct, practices, and management of corpo-

¹ Adapted from Federal Trade Commission, *Functions of the Federal Trade Commission* (1922), pp. 1-5.

rations or associations (except banks and common carriers) engaged in interstate or foreign commerce; and

(3). Administration of the Webb-Pomerene Export Trade Law.

The aim of the commission is to aid all honorable and honest business by keeping competition fair and open to all, instead of unfair and oppressive. Within its field of power lies the trade of the whole country in its larger (interstate and foreign) aspects, i.e., the extraction of raw materials, their manufacture, sale, and distribution. Railroads are not under the jurisdiction of this commission, nor are banks; but all other manifold activities of interstate commerce except meat-packing companies are within its sphere.

The work of the Federal Trade Commission is divided into three main divisions—the Legal Division, the Economic Division, and the Export Trade Division.

LEGAL DIVISION

On the legal side of its work the commission is charged with the multitudinous duties of correcting unfair methods of competition in interstate commerce.

In creating the commission Congress wrote a single sentence which sums up the ideals of American business and is at once the Constitution, the Bill of Rights, and the Declaration of Independence of American business. These are the words: "Unfair methods of competition in commerce are hereby declared unlawful." This phrase was interpreted to mean that trickery and chicanery; the rule of might as opposed to right; that unfairness, meanness, unsportsmanlike conduct, ruthlessness, dishonesty, and all such things have no place in American business; that no American business institution can be done to death by a more powerful or a less scrupulous competitor; and that an American business institution shall be safeguarded in liberty of acting to extend its proper activities and to grow and thrive so long as it recognizes the similar right of life and liberty in other business institutions.

Section 5 of the Federal Trade Commission Act reads as follows:

Unfair methods of competition are hereby declared unlawful. Whenever the commission shall have reason to believe that an unlawful method of competition is being used, or has been used, it shall issue its complaint, the public interest appearing.

It "shall issue" its complaint; the law is mandatory. Thirty days after the issuance of the complaint the party complained of makes written answer. Trial of the issue is then had with the production of

documentary and oral evidence, examination and cross-examination of witnesses. Thereafter the commission considers all the facts brought out at the hearing, and if the commission then has facts which confirm its original reason to believe, the commission issues an order to the man using the unfair method of competition ordering him to cease and desist such practice.

Unfair Methods

Among the many "unfair" methods of competition may be mentioned the following:

False advertising.

Misbranding of articles as regards the materials or ingredients of which they are composed, their quality or their origin or source.

Adulteration of various products, misrepresenting them as pure, or selling them under such names and circumstances that the purchaser would be misled into believing them to be pure.

Bribery of buyers or other employees of customers, with money, valuable presents, etc., to secure new customers or induce continuation of patronage. The payment of specified percentages of the purchase price of commodities to employees of customers who practically control the purchases through their recommendations, has been and still is deplorably prevalent in some industries. These industries are constantly appealing to the commission to clean them up. The commission has suggested to Congress that a Federal criminal law against commercial bribery should be passed and this suggestion has been vigorously approved by many great associations of business men.

Procuring the business or trade secrets of competitors by espionage on their plants, by bribing their employees, or by similar means.

Procuring breach of competitor's contracts for the sale of commodities by misrepresentation or by other means.

Making of false or disparaging statements respecting competitor's products, his business, financial credit, etc.

Sale of rebuilt articles of various descriptions—for example, rebuilt automobile tires and of old motion-picture films slightly changed and renamed—as and for new products.

Giving away of goods in large quantities to hamper and embarrass small competitors.

Sales of goods at or below cost to accomplish the same result.

Sales of goods at or below cost, as "leaders," coupled with

statements misleading the public into the belief that they were sold at a profit by reason of the seller's superior facilities for manufacturing, purchasing, etc.

Bidding up the prices of raw materials to a point where the business is unprofitable for the purpose of driving out financially weaker competitors.

Tampering with and misadjusting the machines sold by competitors for the purpose of discrediting them with purchasers.

Trade boycotts or combinations of traders to prevent certain wholesale or retail dealers or certain classes of such dealers from procuring goods through the usual channels.

Passing off of the products of one manufacturer for those of another by imitation of product, dress of goods, or by simulation of advertising or of corporate or trade names.

Experience has shown that about two out of three of the complaints which are brought to the commission's attention are not such as to warrant any formal proceedings and those matters are dismissed without annoyance to the respondent, without publicity, and without public knowledge.

Since the organization of the commission, and up to July 1, 1922, more than 3,000 applications for complaint have been docketed and have passed through or are passing through the procedure above outlined.

Countless other applications made by one business man against another have been dismissed without docketing, after a preliminary inquiry has plainly shown no cause of action.

Clayton Act Functions

In addition to the substantive provisions contained in the Federal Trade Commission Act with reference to unfair methods of competition, the Clayton Act contains certain prohibitions, the enforcement of which is confided to the Federal Trade Commission, as to corporations under its jurisdiction. The provisions of the law are very minute and only the broad features are specified herein.

Price discrimination.—Section 2 prohibits, in certain cases, price discrimination where the effect may be to substantially lessen competition or tend to create a monopoly in any line of commerce.

Tying contracts.—Section 3 prohibits, in certain cases, so-called "tying contracts," that is, contracts whereby, as a condition of sale or lease of commodities, the seller or lessor exacts from the purchaser

or lessee an agreement that he shall not use or deal in other commodities except those furnished by the seller or lessor, where the effect may be to substantially lessen competition or tend to create a monopoly in any line of commerce.

Holding companies.—Section 7 prohibits, in certain cases, so-called “holding companies,” or the ownership by one company of the stock of another, where the effect may be to substantially lessen competition between the companies concerned or to restrain interstate commerce or tend to create a monopoly.

Interlocking directorates.—Section 8 provides that two years after the enactment of the law no person at the same time shall be a director in any two or more corporations engaged in interstate or foreign commerce, other than banks or common carriers, any one of which has more than \$1,000,000 capital, surplus, and undivided profits, if they are or shall have been theretofore, by virtue of their business and location of operation, competitors, so that the elimination of competition by agreement between them would constitute a violation of any of the provisions of any of the anti-trust laws.

Enforcement of the prohibitions of the Clayton Act.—The authority to enforce the foregoing provisions of the Clayton Act is vested in the Federal Trade Commission, as to all corporations which come within its jurisdiction, by section 11 of the said act.

THE ECONOMIC DIVISION

One of the functions of the Federal Trade Commission is to find the facts relating to the great basic commodities—what the situation surrounding those basic commodities is in truth. It is a very difficult task and is sometimes accompanied by criticism from those into whose business the commission has been directed to inquire.

The commission has already gathered and published for the use of Congress, the departments, and the public a great deal of information regarding many of the essential industries of the country. Practically all of the economic inquiries have been made at the request of Congress or the President to whom reports have been or are now being made, or were undertaken in coöperation with other departments of the Government.

One of the largest tasks of the economic division was during the three years of the war period.

Embraced in the cost investigations and in the general economic inquiries were the principal mining and quarrying industries, including coal, iron ore, copper, and other nonferrous metals; petroleum,

clay, sand, and gravel, and various mineral materials; the principal manufacturing industries, including iron and steel and their products, machinery and engines, cement, brick, tile, and other mineral building materials; acids, alkalis, and other chemicals; paper and paper products; lumber and its products; refined mineral oils, glycerin, vegetable oils, meat and its by-products, flour and bread, canned vegetables, fruits and fish, textiles and garments, leather and shoes, etc., besides various purely trading activities, such as in coal, grain, hides, wool, rags, cloth, food products, etc.

5. DIVISIONS OF THE U. S. BUREAU OF AGRICULTURAL ECONOMICS

ADMINISTRATIVE DIVISIONS:

1. Office of Chief, Associate and Assistants.
2. Information, Editorial and News Service.
3. The Economics Library.

PRODUCTION DIVISIONS:

4. Farm Management.
5. Cost of Production.
6. Crop and Livestock Estimates.

MARKET DIVISIONS:

7. Cotton, including Cotton Futures Act.
8. Grain, including Grain Standards Act.
9. Fruits and Vegetables, including Standard Container Act.
10. Hay, Feed and Seeds.
11. Dairy and Poultry Products.
12. Livestock, Meats and Wool.
13. Warehousing, including Warehouse Act.
14. City Markets; Administration of Washington Center Market.
15. Cost of Marketing.

GENERAL DIVISIONS:

16. Statistical and Historical Research in Production and Marketing.
17. Agricultural Competition and Demand in Foreign Countries.
18. Agricultural Finance, including Credit and Insurance in Production and Marketing.
19. Agricultural Coöperation, in Production, Buying, and Selling.
20. Land Economics and Land Utilization.
21. Farm Population and Rural Life.

6. POWERS AND DUTIES OF THE STATE MARKET COMMISSION OF CALIFORNIA¹

There is hereby created the "state market commission," a state organization for the following purposes, to wit:

¹For a further discussion of this act see Carl C. Plehn, "The State Market Commission of California," in *The American Economic Review*, Vol. VIII, No. 1 (March 1918). This is quoted from pp. 10-11 of that article.

First.—To act as advisor for producers and distributors when requested, assisting them in economical and efficient distribution of any such products at fair prices.

Second.—To gather and disseminate impartial information concerning supply and demand, prevailing prices, and commercial movements, including common and cold storage of any such products.

Third.—To promote, assist and encourage the organization and operation of coöperative and other associations and organizations for improving the relations and services among producers, distributors and consumers of any of such products, and to protect and conserve the interests of the producers and consignors of such products.

Fourth.—To foster and encourage coöperation between producers and distributors of any such products, in the interest of the general public.

Fifth.—To foster and encourage the standardizing, grading, inspection, labelling, handling, storage and sale of any such products.

Sixth.—To act as a mediator or arbitrator, when invited by both parties, in any controversy or issue, that may arise between producers and distributors of any such products.

Seventh.—To certify, for the protection of owners, buyers or creditors, when so requested, warehouse receipts for any such products, verifying quantities and qualities thereof, and to charge for such services fees sufficient to make the service at least self-supporting.

Eighth.—To issue labels bearing the seal of the state market commission on request of the producer, packer, canner or distributor, for any such products, for which state labels have not otherwise been authorized by law, under such rules and regulations as the director may deem necessary and to charge for such labels such fees as in the judgment of the state market director may be proper.

Ninth.—To act on behalf of the consumers of any such products in conserving and protecting their interests in every practicable way.

Tenth.—To improve, broaden and extend in every practical way the distribution and sale of any such California products throughout the markets of the world.

Eleventh.—To promote in the interest of the producer, the distributor and consumer, economical and efficient distribution and marketing of all or any agricultural, fishery, dairy and farm products produced, grown, raised, caught, manufactured or processed within the state of California.

CHAPTER XXIV

THE ELEMENTS OF MARKETING EFFICIENCY

1. ARE THERE TOO MANY DEALERS?¹

The following table presents the number of retailers, wholesalers, or manufacturers in certain essential lines and the relation of their number to the population they serve:²

Item	Number of Retailers	Population per Dealer	Families per Dealer	Number of Wholesalers	Number of Retailers per Wholesaler
Groceries.....	334,212	315.3	72.6	5,950	56.3
Men's Furnishings.	40,399	2,616.6	602.7	*5,247	* 7.6
Boots and Shoes...	141,867	745.1	171.6	*1,450	*97.8
Dry Goods.....	35,207	3,002.5	691.5	2,780	12.6
Hardware.....	37,032	2,854.5	657.5	933	39.6

* Manufacturers.

NOTE.—Table includes exclusive stores and all sources from which commodities may be purchased at retail.

The figures contained in the foregoing table would indicate that there are a greater number of retail dealers in each line than can be successfully supported by the average number of families served.

The question develops as to whether or not a duplication of service adds to the cost to the community for the support of an unnecessary number of distributors.

The great number of people who engage in retailing find it easy to open a store with small capital and little or no experience. This is particularly true in retail groceries, as is evidenced by the fact that there is a retail grocery to serve every 72.6 families in the United States. That ambitious men should have a right to enter business goes without saying, nevertheless the mortality tables in business indicate that the majority do not attain success. The situation can only be improved through development of better educational opportunities in preparing for business.

¹ Adapted from The Joint Commission of Agricultural Inquiry, *Report*, Part IV, *Marketing and Distribution* (1921), pp. 206-7.

² The population of the United States, according to the 1920 Census, was 105,710,620; the number of families, 24,351,676. The table was compiled from the Census and various commercial sources.

2. DO PRINCIPLES OF LARGE-SCALE PRODUCTION APPLY TO MERCHANDISING?¹

Economists have considered the problem of large-scale production mainly in connection with manufacturing enterprise. They have also referred to transportation, mining, and agriculture. They have found that there has been a decided tendency toward larger and larger production units in the industrial field. They point out that some forms of enterprise, like custom tailoring and artistic work, are exceptions. Agriculture is also an exception. They tell us about the economies of large-scale production, and how, in many important industries, the expense decreases as the size of the business unit increases. They also point out modifications, such as the principle of diminishing returns after a certain point is reached in the application of labor and capital, and how in most industries there is a most efficient size unit.

But the application of these principles to the selling end of business, a field of economic activity which includes millions of merchants and investments of hundreds of millions of dollars, has had very scant attention. This is only one instance of the neglect that this important field has suffered at the hands of economists.

COSTS OF LARGE-SCALE MERCHANDISING

Briefly stated, the "principles of large-scale production" are taken to mean in this paper merely the fact that there is a tendency for expenses to decrease as the size of the industrial unit increases. Do these principles apply to the selling process? This is an important and fundamental question, and one on which there appears to be some difference of opinion.

From *a priori* reasoning, one would naturally expect that costs would decrease with size. Professor Taussig had to use this method of reasoning when he wrote his *Principles of Economics* because there were practically no data available. He said:²

Mercantile operations themselves, and especially wholesale operations, are carried on more economically when on a large scale. Expenses for clerk work, rentals of office premises, and the like, which constitute the main outlays of the wholesale dealer, are no greater for large transactions than for small.

¹ Adapted from L. D. H. Weld, "Do Principles of Large-Scale Production Apply to Merchandising?" in *American Economic Review*, Vol. XIII, No. 1 (March, 1923), *Supplement*, pp. 185-97; Discussion, pp. 219-22, by Fred E. Clark.

² Vol. I, p. 54.

Again, he says, in speaking of the disposal of a manufacturer's output:

All the apparatus for drumming up custom—traveling salesmen, trade catalogues, and the like—is the more effective, and the less costly per unit of product, in proportion as it operates on a large scale.

Although there is much that is sound in these remarks, Taussig would undoubtedly have modified them considerably if he had had available certain figures on operating costs that have been collected since he wrote his book. And this leads to the consideration of certain indications that operating costs are larger for big wholesalers and retailers than for small ones. Department stores, for example, have heavier operating costs than small specialty stores. Figures on various kinds of retail stores indicate that expenses are higher for large stores than for small ones. Most of the wholesale figures that are available indicate higher expenses for large houses than for small ones. In fact, Nystrom, one of our leading authorities, said in his *Economics of Retailing*,¹ written in 1915:

Retailing is different from most other businesses in this respect, that the small store can usually be conducted at a lower cost than a larger store. Unless other advantages, such as in buying or in advertising, may be gained to offset the increasing expense of the large establishment, there is nothing to be gained by increasing the business of a store beyond a certain point that keeps a small institution busy.

When Nystrom wrote this he commented on the serious lack of data on retail expenses, and if he were to rewrite this part of his book today, he also would undoubtedly introduce many modifying statements. But Clark, in his excellent book, *Principles of Marketing*, published in 1922, although he refers to the advantages of large-scale retailing, and suggests the possibility of lower operating costs if there were fewer stores, each with a larger volume of business,² also says:

Again, it is not at all evident that large-scale retailing is more efficient in so far as the costs of operation are concerned. In fact, the costs of selling in department stores and large stores generally, with the possible exception of chain stores, are thought to be greater than the costs of small competing stores when efficiently operated.

COMPLEXITY OF THE PROBLEM

Furthermore, recent data that have become available emphasize the complexity of the problem. Retail operating costs in some trades

¹P. 334.

²Chaps. 11, 12, and 25.

show a tendency to decline as volume increases from small stores to medium-sized stores, and then to increase for very large stores. There seems to be a tendency toward rising costs for bigger stores in some retail trades, as, for example, in men's clothing stores; and a tendency toward lowering costs in other trades, as, for example, those shown by the Department of Agriculture study of the retail meat trade. The A. W. Shaw Company for 1917 showed higher costs for the larger houses in four wholesale trades, including groceries, whereas the Harvard Bulletins on wholesale groceries show a slight tendency toward decreasing costs for 1920, and a slight tendency in the opposite direction for 1921.

The writer fears that by this statement of the complexities of the problem he is placing himself in the position of the dramatist who concocts an absorbing plot, replete with complicated and unusual situations, but who allows the play to fall flat in the last act because of his inability to unravel the situation with a logical and satisfactory denouement. As a matter of fact, there are not enough reliable data at hand to come to a final solution on this question. On the other hand, the writer will hazard conclusions on some points, which he thinks will stand, whereas on other points he will utter more or less tentative conclusions, hoping that other students will continue research work on this subject.

First, let us limit our problem by confining it to a comparison of operating costs in different units of a given trade and system of marketing. This eliminates all consideration of the merits of chain stores and mail-order houses as compared with the ordinary type of merchandising through individual stores. It also eliminates comparison of department stores with individual shoe stores, grocery stores, etc. Likewise, large coöperative marketing organizations will not be compared with individually owned marketing agencies. In other words, the question we shall consider is whether, in any given trade or type of merchandising, there is a tendency for costs to decrease as the volume of business increases.

Volume and Costs in Retail Stores

Now let us examine some of the figures on retail stores and see what we can make of them. The cost of doing business is expressed as a percentage of net sales.

The most striking features of these figures are as follows:

1. Department stores show practically a continuous increase in expense as the size of store increases.

Sales		Cost of Doing Business	
Department Stores 1921 ¹			
Less than	\$ 250,000	26.6	
\$ 250,000 to	500,000	27.6	
500,000 to	1,000,000	28.3	
1,000,000 to	2,500,000	28.7	
More than	2,500,000	28.5	
Retail Jewelry Stores 1920 and 1921 ¹			
1920			
Less than	\$ 25,000	34.1	
\$ 25,000 to	50,000	32.6	
50,000 to	100,000	30.1	
More than	100,000	32.8	
1921			
Less than	\$ 20,000	47.1	
\$ 20,000 to	50,000	41.6	
More than	50,000	40.6	
Retail Shoe Stores 1920 ¹			
Less than	\$ 30,000	25.0	
\$ 30,000 to	50,000	24.3	
50,000 to	100,000	23.5	
100,000 to	250,000	26.6	
More than	250,000	29.6	
Retail Grocery Stores, 1919 ² (Madison, Wis.)			
Less than	\$ 20,000	14.6	
\$ 20,000 to	50,000	10.6	
50,000 to	100,000	9.8	
More than	100,000	13.1	
Retail Meat Stores 1919 ³			
Less than	\$ 25,000	18.11	
\$ 25,000 to	50,000	17.41	
50,000 to	100,000	15.33	
100,000 to	200,000	15.55	
More than	200,000	14.47	
Retail Clothing Stores 1919 ⁴			
Less than	\$ 40,000	19.00	
\$ 40,000 to	80,000	18.12	
80,000 to	180,000	20.52	
More than	180,000	24.03	

¹ Harvard figures.² Macklin and McNall, "What the Retailer Does With the Consumer's Dollar."³ Preliminary Report of the U. S. Department of Agriculture.⁴ Northwestern University figures.

2. All classes of stores except department stores show an unmistakable decrease in expense as the size increases from very small stores to medium sized stores.

3. All classes of stores except meat shops show a definite increase in expense for very large stores, as compared with medium sized stores. The turning point from decreasing expense to increasing expense appears to be when sales exceed \$100,000 a year. For clothing stores the turning point is reached in a smaller size group.

4. In only one trade, the retail meat trade, do expenses decrease without interruption as the size increases.

What conclusions may be drawn from these facts?

First, it seems safe to conclude that in ordinary retail stores there is a marked tendency for expenses to decrease as we advance from small stores to medium-sized stores, but that a point is soon reached where the expense begins to increase with the size of the store. This is in keeping with the general idea about large-scale production, namely, that after a certain size is reached unit expenses increase rather than decrease. But there is one important question to ask in this case: Are we sure that the higher operating cost in the largest stores is due to size alone? May it not be due to a different kind of service rendered?

Superior Service as a Cause for High Costs

To throw light on this, we must examine itemized expenses for different sized groups. This is not so easy to do, because there is a lack of data. But some generalizations can be made.

For example, it appears that in retail shoe, jewelry, grocery, and meat stores, the expense for wages and salaries per \$100 of sales tends to decrease for larger stores. In clothing stores and department stores, it tends to increase. In those trades for which there are figures, advertising expenses increase with the size of the store. So do delivery expenses, and supplies, such as boxes and wrapping paper, although only a few figures on this item are available. Buying, management, and office salary expenses also tend to increase. Rent and interest both tend to decrease, except that in some trades rents for the very large-size groups show an increase.

These facts, together with others brought out below, suggest that the higher cost of doing business in large retail stores is due in large part to superior service, in the form of better salesmen, better selection of merchandise, better wrapping and packing, more attractive and convenient locations, better and more extensive delivery, greater liberality in the way of returns and allowances, etc. Closer examination of the available data seems to bear this out.

In the first place, consider the clothing trade, on which we have far more complete data than on any other trade, thanks to the Northwestern University Bureau of Business Research. Expenses and other items that increase with the size of the store are as follows: Average price of suits sold; charge sales; value of outstanding accounts; value of returned goods; general expense (which includes many items such as delivery, office supplies, wrappings and containers, allowances, elevator expense, etc.); advertising; rate of stock turnover; and gross trading profit. Average sales per full-time salesperson also increase, but so do wages and salaries, indicating that perhaps a higher class of personnel is employed. Some items that decrease with size are rent, cost of merchandise, inventories, and net profit (considered in terms of sales).

It will be observed that many of the items that show increases for the larger store groups have to do with service. Analysis of the Harvard department store figures suggests the same thing. On the other hand, the figures on retail meat shops, where there is no marked increase in quality of service in large stores, show a continuous decrease in expense as we pass from smaller to larger stores.

Support is also gained from the Harvard figures on retail shoe stores,¹ where expenses are given for three groups of stores—those handling low-priced, medium-priced, and high-priced shoes. The cost of doing business for stores handling high-priced shoes is nearly 8 per cent of sales higher than for the other two groups. It also appears that these three groups comprise groups of different size. The common figures for volume in stores handling low-priced shoes were \$20,000 a year; in stores handling medium-priced shoes, \$30,000 a year; and in high-priced shoe stores the volume ranged from \$175,000 to \$500,000 a year. One might infer that the higher operating cost in the high-grade shoe shops was due to volume; but there is such a pronounced increase in salaries of sales force, buying expense, delivery expense, and losses from bad debts, that one is forced to conclude that the higher cost of operating the large, high-grade shoe store is due to higher-grade salesmen, who spend more time on each customer, better selection of stock, and more elaborate service in general. One only needs to call to mind some of the high-grade, high-priced shoe stores in our large cities to realize that this explanation is plausible.

It appears, therefore, that the stores in different sized groups are not necessarily comparable with each other at all. It is surely impossible to compare a small, ordinary neighborhood store with a large store giving elaborate service, and conclude that the higher cost of

¹"Management Problems in Retail Shoe Stores."

doing business in the large store is due to its size. These facts point to the conclusion that the principle of decreasing costs applies to retail merchandising to a much greater extent than our first examination of costs by size groups seemed to indicate. In fact, it is probably safe to say that of two stores in similar locations, carrying the same variety of stock, giving the same quality of service, and delivering over the same area, the store having the larger volume of business will have the lower operating cost. This is borne out by a statement obtained from a chain-store company to the effect that the operating cost for stores within the system decreases as volume increases.

Buying Advantages of the Large Store

Figures on operating costs, expressed as a percentage of sales, fail to throw light on one important advantage that a large store may have over a small one, namely, its ability to buy merchandise at lower prices. It is difficult to get a statistical measure of this advantage, although the Northwestern study on retail clothing stores shows definitely that there is a decrease in the cost of merchandise for large stores as compared with small stores. The Harvard figures on department stores and the Northwestern figures on clothing stores both show a substantial widening of the gross margin between purchase price and selling price for large stores as compared with small ones, indicating that they either sell at higher prices or buy at lower prices than small stores. There is no doubt but that this wider margin is due in part, if not almost wholly, to lower buying prices. There are also figures which show that the large stores take cash discounts more frequently than small stores. At any rate, the fact that large stores can buy at lower prices than small stores indicates that the principles of large-scale production apply to merchandising more than analysis of figures on operating costs would indicate.

Other Causes of High Costs

But it must not be inferred from what has been said that the higher cost of doing business in large stores is due entirely to more elaborate service. The increase in advertising expense, as well as the increase in buying, management, and office salary expense, suggests that there is something inherent in mere size which results in heavy expenses. It must be remembered that on the whole the retail business is one of relatively small units, and that it must always remain so because most stores must be located within convenient reach of customers. This means that if a retail store is to increase its volume it must do

something to attract trade from a wider area, or procure a site in the heart of a city, where prospective customers in large numbers are available. Even in such a location more or less advertising is necessary, but this tends to decrease other selling expenses, and to increase the average sales per salesperson. It also appears that in conducting such a store a higher quality of managerial ability is necessary. Furthermore, when a business becomes large enough to require departmentization, more expense must be incurred for supervision, and there is probably greater difficulty in maintaining efficiency among the employees.

The head of a well-known department store says on this point: "In the large store the heads of the business are so far removed from the actual operations in most instances that it is necessary for them to employ supervision for the different branches of the work, and then supervision of the supervision, and so on in a long chain of responsibility." He says that this not only adds greatly to the cost of doing business, but that efficiency of subordinates is more difficult to maintain, because they naturally do not have a vital personal interest in the success of the business. He believes that the principal advantage of the large department store is its ability to purchase merchandise at lower prices than the small store.

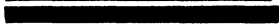
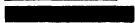
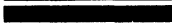
It must also be remembered that superior service is in many cases a necessary concomitant of volume. In other words, in order to get volume, it is necessary to give more elaborate service. This is not always true, as is indicated by the success of many large department stores and food shops, which do not go in for elaborate service. But the giving of such service is one way of attracting customers and has been one reason for the growth of many of our leading department stores.

These considerations, therefore, modify our conclusions up to this point. We have seen that within certain limits there is a definite tendency for operating costs to decrease as the size of the retail unit increases, and that the tendency for operating expenses to increase in very large stores is due in part to rendering of superior service. Large stores also have an advantage in purchasing. There is a point, however, beyond which a retail store cannot go without incurring additional expenses in order to attract customers and to provide proper management and supervision in a departmentized business. The point where overhead costs begin to increase with the size of the store is apparently reached in relatively much smaller units in retail trade than in most manufacturing industries. It may pay a retail store to go considerably beyond this point because it has an advantage

in lower buying costs, and large stores invariably have a more rapid rate of turnover than small stores. Even though their net profit per sale may be small their return on capital investment may be fully as large if not larger.¹

VOLUME AND COSTS IN WHOLESALE TRADE

In the wholesale trades the principal figures available are as follows:

Sales		Cost of Doing Business	
		<i>Wholesale Hardware 1917²</i>	
Less than	\$ 500,000	17.8	
\$ 500,000 to	1,000,000	19.2	
More than	1,000,000	23.5	
		<i>Wholesale Clothing 1917²</i>	
\$ 500,000 to	\$1,000,000	16.1	
More than	1,000,000	17.8	
		<i>Electrical Goods 1917²</i>	
Less than	\$ 500,000	17.0	
\$ 500,000 to	1,000,000	18.1	
		<i>Wholesale Groceries 1917²</i>	
Less than	\$ 500,000	7.2	
\$ 500,000 to	1,000,000	9.0	
More than	1,000,000	10.3	
		<i>Wholesale Grocers 1920³ and 1921⁴</i>	
		1920	
Less than	\$ 500,000	9.5	
\$ 500,000 to	1,000,000	8.9	
1,000,000 to	1,500,000	8.6	
1,500,000 to	2,000,000	8.6	
More than	2,000,000	9.3	
		1921	
Less than	\$ 500,000	11.1	
\$ 500,000 to	1,000,000	11.4	
1,000,000 to	1,500,000	11.8	
1,500,000 to	2,000,000	11.8	
More than	2,000,000	11.8	
		<i>Wholesale Shoes 1919⁵</i>	
		(Percentages based on cost of merchandise)	
Less than	\$ 100,000	16.4	
\$ 100,000 to	500,000	19.5	
500,000 to	1,000,000	16.5	
More than	1,000,000	13.2	

¹Professor Converse points out that the cost of operating a retail store increases with the size of the city in which the store is located. Since many of the largest stores are located in big cities, their higher operating expenses may therefore be due in part to their locations in such cities, rather than to the mere fact that they are large stores. This suggests that a complete study of this problem should include an examination of operating cost of different sized stores in cities of uniform size.

²A. W. Shaw figures taken from "How to Run a Wholesale Business at a Profit."

³Harvard Bulletin No. 26.

⁴Harvard Bulletin No. 30.

⁵Federal Trade Commission *Report on Shoe and Leather Costs and Prices*, p. 113.

It will be seen at once that the figures are scant and to a certain extent they are contradictory. They are also for years that were more or less abnormal. All of the A. W. Shaw figures, which are for the war year 1917, show larger expenses for the larger houses. The Harvard figures for wholesale groceries show smaller costs for larger houses in 1920, except for the very largest houses, but progressively higher costs for larger houses in 1921. The Harvard Bureau explains that this may be due to the fact that smaller houses were able "to readjust their expenses somewhat more rapidly" to slumping business conditions than were the large ones with more elaborate organizations.

Larger Houses Have High Operating Costs

It is probably safe to draw certain conclusions from these figures, however. In the first place, there is no such marked tendency as there is among retail stores for expenses to decrease for medium-sized houses and then to increase for very large houses, although the Harvard figures for wholesale grocers show this tendency for 1920. It is also safe to conclude that the large houses have higher expenses than small houses, to a more marked degree than in the retail trade. The Federal Trade Commission's figures on shoes are the only exception, but the small number of establishments covered in this study, and the unusual method of expressing expenses as a percentage of merchandise cost, make one wary of these figures.

Why do large wholesale houses have higher operating costs than small houses? The answer appears to be similar to the answer given above with regard to retailers, but with a shifting of emphasis. More elaborate service and greater variety of goods probably account for it in part. Some of the larger wholesale grocers, for example, brand their goods, pack olives, mix flour, grind spices, and roast coffee, so that they have taken on manufacturing operations, which naturally increase their expenses.

But the more important reason is probably to be found in the extra effort that a large wholesale house must exert in order to increase volume. A wholesale house is different from a retail house, in that it gets its business largely by sending out traveling salesmen. The larger houses cover the wider territories. Sending salesmen to distant localities increases traveling expenses, requires careful packing, and means more expense for administration and supervision. At least, the itemized expenses for four trades, as published by the A. W. Shaw Company, bear out this statement.

The importance of greater administrative expenses for large wholesale houses is brought out by a leading authority on wholesaling, who says that when a wholesale house does a business of over a million or a million and a half, it can not be operated successfully under individual management, and that departmentization becomes necessary, and that this carries added expense all along the line, in order to maintain volume. He also says that when a jobbing house goes outside of territory directly tributary to its location, it does so at a sacrifice of profit, and at a greater selling cost. This explains why there are so few national distributors among wholesalers. Those that do distribute over an extensive area usually handle quality goods primarily, have their own brands, and to a large extent perform manufacturing functions.

An increase in expenses as the size of a jobbing business grows does not necessarily mean a smaller net profit. In addition to savings through lower purchase prices, there is the possibility of specializing on goods that carry wide margins. Another authority on wholesaling relates his experience. He managed a wholesale hardware house for ten years, and during that period the sales increased from \$1,500,000 to \$12,000,000. The cost of doing business increased, but the profits of the company also increased. This was accomplished by getting the salesmen to concentrate their efforts on sporting goods, fishing tackle, etc., which carried good margins, instead of on nails, wire, etc., which are staple goods with small margins. Salesmen were taught to carry and display samples, and specialty salesmen were also sent out, carrying trunks of samples. Compensation of salesmen depended on the profits made from their sales, and they were rewarded liberally for brilliant work. The system naturally resulted in greater expenses, because the character of the business was changed, but it also resulted in increased volume and in greater profits.

Conclusions

From the foregoing facts we may conclude that the principles of large-scale production do not apply so definitely to wholesaling as to retailing. An increase of volume means the covering of a wider area, and greater departmentization and supervision. It is undoubtedly true, however, that of two wholesale houses carrying the same variety of goods, covering the same territory with salesmen, and in every other respect giving the same quality of service, the larger house will have the lower operating cost. But probably even this is true only to a certain point, when intensive cultivation of a given sales territory

may cause a rise in costs greater in proportion than the increase in sales. In other words, the law of diminishing returns becomes operative.

Having in mind the data on both wholesaling and retailing, it is probably safe to conclude at this point that although the principle of large-scale production applies to merchandising, it does not apply in the same degree as it does to most kinds of manufacturing. This is not hard to believe when we consider the principal economies that result from large-scale production in manufacturing. These are better and more extensive use of machinery, division of labor, better buying, and utilization of by-products. A large mercantile house can economize through better buying, and to a certain extent through division of labor, but the use of automatic machinery is extremely limited, and there are no by-products to utilize. Marketing necessarily involves a large amount of personal service and personal contact that can not be reduced to machine operations. The economies claimed for large-scale production, therefore, do not apply in full to the merchandising process.

MANUFACTURERS' COSTS

A complete study of this problem would also cover the selling activities of manufacturers, but there are practically no data on this subject. It seems reasonable to suppose that when a manufacturer sells through his own regional sales houses, those having the larger volume of business would also have the lower unit selling costs. In fact, it is only when a manufacturer can sell a sufficient volume in any one part of the country that it becomes possible for him to establish a branch selling house. This general principle is borne out by figures taken from the books of Swift & Company showing the cost per hundred pounds for branch houses in different sized groups. The average for all houses considered is called 100, and the average for each group is expressed as an index number. There are ten branch houses in the group of each different size, selected at random, except that care has been taken to have them comparable in the matter of functions performed. The figures are as follows:

Average Pounds per Week	Index Number of Expense
25,000-50,000	121
50,000-75,000	108
75,000-100,000	99
Over 100,000	94

These branch houses are engaged in wholesale selling, and the fact that costs decrease with volume bears out the conclusion expressed before, that when two wholesale houses cover the same territory and give similar service, the larger will have the smaller expense.

COSTS VARY WITH VOLUME AT DIFFERENT TIMES

It is more or less obvious that the operating expenses of an individual store would increase and decrease from month to month according to volume of business done. To verify this fact, however, figures have been obtained from a well-known department store showing the cost of doing business for each month.

The monthly cost is expressed as an index number of the average cost for the whole year, which is called 100, and the percentage of total volume done each month is also shown. The figures are as follows:

Month	Per Cent of Year's Sales	Index No.
January.....	7.1.....	113.9
February.....	6.0.....	138.0
March.....	7.9.....	102.7
April.....	10.0.....	84.2
May.....	9.2.....	92.3
June.....	9.1.....	92.7
July.....	6.0.....	131.0
August.....	6.6.....	131.3
September.....	6.8.....	114.5
October.....	9.3.....	85.3
November.....	9.1.....	94.6
December.....	12.9.....	73.5

FARMERS' ELEVATORS

There are very few figures on costs of marketing farm products which show the relation between volume and expenses. Figures obtained from farmers' elevators in Minnesota before the war,¹ however, show that the cost of handling grain decreased from 2.5 cents per bushel for very small houses to only a little over a cent for the very large houses. The tendency toward decreasing costs was very marked. Very likely the same would be true of potato warehouses, tobacco warehouses, and the like. Also, it is generally assumed that commission firms in the grain and livestock trades, which handle large volumes of consignments, have lower unit operating costs than small houses.

These scattered instances suggest two very important considerations that have a bearing on this general problem.

¹Weld, *The Marketing of Farm Products*, p. 33.

The first is that there is apparently a more pronounced diminution of costs for larger volume in marketing agencies which handle only one or a small number of commodities in bulk. This means a better utilization of the physical facilities and of the time of the personnel of the organization. A grain warehouse is akin to a manufacturing plant in these respects.

It also looks as though expenses decrease faster with volume for a marketing agency which does not have to send out salesmen to solicit trade. A country elevator, for example, merely ships grain in car lots to one or two commission men in distant markets. Practically no expense is involved in finding a buyer, and it makes little difference how far away the ultimate market may be. Compare this with a retail store which has to rely on customers coming to the store, or with a wholesale house which has to pay the expenses of salesmen to go out and drum up trade. Grain and livestock commission houses also have this advantage in that their goods are sold in a restricted and organized market place by relatively few salesmen.

FINAL CONCLUSIONS

Although this does not pretend to be a complete study of the problem, owing principally to lack of adequate data, it may be safe to hazard the following conclusions:

1. The principle of decreasing costs does apply to merchandising, but not to the same extent as to most kinds of manufacturing.

2. In the retail and wholesale trades, points are soon reached both in the intensive cultivation of territory already covered and in the extensive cultivation of additional territory, where costs begin to rise.

3. The advantages of large-scale merchandising are greater than figures on operating costs seem to indicate, because these figures do not measure the better purchasing power of large companies, nor the greater profit on capital that may result from more rapid stock-turn.

4. The higher operating costs of large stores are due in great part to more elaborate service performed; but this more elaborate service in many cases may be a necessary accompaniment of size.

5. The available data seem to indicate that the principle of decreasing costs does not apply as much to wholesaling as to retailing.

6. The principle of decreasing costs applies to different marketing agencies in varying degree, depending on number of commodities handled; whether they are handled in bulk; whether volume can be increased substantially without increasing plant or personnel; whether

salesmen have to be used; and whether salesmen can sell on premises (as in a retail store) or whether they have to travel in search of buyers (as in a wholesale house).

DISCUSSION

It is the purpose of this discussion¹ merely to emphasize some things which Dr. Weld has discussed, and to point out certain angles of interpretation of the data which he has used.

The first point concerns the difficulty of making statistical comparisons between large and small stores.

As Dr. Weld has suggested, it is a question how far the figures he has used can be made to support a thesis concerning large-scale operations in merchandising. This is because in many cases large and small units of stores of certain types are not really comparable. Large stores, for example, not only do a larger business than do small stores handling the same general type of merchandise, but they draw business from a much wider area. They have, moreover, a different clientele—a clientele which expects excellent service and a wide variety of merchandise from a large store. Even the commodities handled are not entirely comparable. Large grocery stores often deal in higher priced specialties than do their smaller competitors, and they may even ignore almost entirely the staple business of the ordinary grocery store. Again, it was shown in the paper under discussion that, in the shoe business, for example, corresponding to the varying volumes of business, there is usually a difference in the grade of the shoes handled.

The problem of obtaining a correct statistical analysis of the economy of larger-scale merchandising is particularly apparent in the case of large wholesale houses. Large wholesalers not only sell over a wider area than do smaller houses but they brand and sometimes manufacture many of their own products, so that in some cases they have, in addition to a manufacturer's problems of production, a manufacturer's problem in *selling* his product—for a large wholesaler must create the entire demand for his own brands, usually by sending salesmen to the retailers. The small jobber, on the other hand, commonly takes orders for staple goods, and for specialties and branded staples for which the manufacturer has already created a demand through his consumer advertising or through "missionary" salesmen sent to the retailer. Since no such demand has been created for the

¹Dr. Weld's article was read at the Thirty-fifth Annual Meeting of the American Economic Association. This is a discussion of his paper, by Fred E. Clark.

goods on which the large wholesaler places his own brand, his marketing problem corresponds, in a sense, to the combined sales problems of the manufacturer and jobber of many of those products which are handled by the small jobber. An analysis of the selling costs of large jobbers as compared with small jobbers seems to show that the former have larger costs. But, when this difference in their market problem is considered, the case is not clear, since the corresponding sales work of the manufacturer is partly assumed by the large jobbers when they brand their own merchandise.¹

Dr. Weld states that "of two stores in similar locations, carrying the same variety of stock, giving the same quality of service and delivering over the same area, the store having the larger volume of business will have the lower operating cost." This seems to be a correct conclusion. Nevertheless, we have not, so far as we know, any figures which cover such cases. As has just been indicated, the large and small stores and the large and small wholesale houses do not compare with each other on all of these points. The nearest comparisons of this nature seem to be the comparisons of the branch houses of Swift & Company, and of department store operations by months, which Dr. Weld gives in his paper.²

Among other things, Dr. Weld concludes that the most economical size of the individual plant is sooner reached in merchandising than in manufacturing.³ All of the available facts seem to point to this conclusion. It is, in fact, borne out indirectly by his statement that grain elevators and potato warehouses have routine operations, in which economies in operation appear as the volume of business increases.

IMPORTANCE OF FUNCTIONAL ANALYSIS

This particular illustration brings us to a recognition of the importance of the functional approach to an analysis of the problem. The business of the average merchandising house is of a twofold nature. It involves the work of exchange, including the functions of buying and selling and certain aspects of standardization, and it involves the operations connected with the physical supply of the com-

¹This is, of course, not conclusive so far as the other reason for large expenses given by Dr. Weld is concerned, viz., difficulties in administration may also be present.

²But the latter illustration tends to confuse the issue, since it concerns varying volumes within a single store organization, which has many fixed expenses. It cannot be used to illustrate a tendency as between *different* stores of varying size.

³We are prone to speak thus, as though there were in each industry some one most economical unit. But it is particularly true of merchandising that the ability of individual entrepreneurs varies so greatly that whereas the average size of greatest efficiency may be found, many larger stores will be operated as economically, and, of course, some of this average size will not be effectively operated. The more one observes business, the more he comes to realize the large degree to which general conclusions may be vitiated because of differences in administrative abilities.

modity, including transportation and storage. The operations of physical supply are largely routine and often mechanical in their nature. Consequently, they are closely comparable to the manufacturing operations in the performance of which the greatest economies of large-scale operation have been realized. Thus in the case of the grain elevator and potato warehouse previously mentioned, little sales effort is needed to bring trade to the house. The exchange rests on a price basis, and hence little selling is possible. The several operations are routine and mechanical in their nature, and, consequently, the economies from large-scale operation show particularly in their cost figures. In the great retail stores and in the large wholesale houses, on the other hand, the great need is to *sell*, in order to get volume. This increases the cost of selling to such an extent that (1) it is likely to offset any economies in the routine and mechanical operations of the unit, and (2) it may even offset the buying advantages which are possessed by large organizations.

The reading of Dr. Weld's paper and the study of such additional material as I have been able to find lead me to emphasize the following general points concerning the advantages and disadvantages of large-scale operations as they apply to merchandising:

1. The large merchandising organization seems clearly to have certain buying advantages. In the first place there is the advantage of specialization. The volume in which the business is done makes it possible to hire or to develop and use to advantage the services of skilled buyers. In the second place, the large house has a certain power in purchasing which arises from the volume which it buys. Because it buys in large quantities it is commonly able to force supply houses to grant lower prices or better terms than those commonly received by smaller competitors. It is likewise able to demand better service from sellers—quick deliveries, for example.

2. There are, on the other hand, certain difficulties of supervision which arise from the mere size of the business. These first two points have been adequately covered in Dr. Weld's paper.

3. The third important point refers to the disadvantages which a large merchandising organization suffers because of the difficulties it has in getting a sufficient volume of sales, and in keeping the trade it has. The large store, the large wholesale house, and the large factory, must each draw on a large clientele in order to get volume. And it is in this connection that I wish particularly to discuss the superior service which large merchandising organizations sometimes render. Perhaps Dr. Weld overemphasizes service as a *difference* be-

tween large and small units—a difference making them incomparable. It seems, however, that we should also consider the extent to which this service is a *necessity* due to the size of the merchandising unit, and consequently a *weakness* of the large establishment. Service, as Dr. Weld shows, is really a part of the sales effort which is made in order to get volume. This will be seen by an examination of the figures he quotes from the expense data in the retail clothing trade, as gathered by the Northwestern University Bureau of Business Research. Of those expenses which increase with the size of the business, practically all may be considered as charges which increase because of the necessity for using extra sales effort or extra service to get volume. Among these items are charged sales, volume of outstanding accounts, and the value of goods returned to the store. All of these are service elements, the extent of which probably can be explained by the need to sell. That is, the large store must be generous in such matters in order to get volume. Such general expense items as delivery, wrappings and containers, allowances, and elevator expense may likewise be excessive because of the need for service as a means for obtaining volume. Advertising is obviously a sales expense, as is the higher-grade personnel which the large stores seem uniformly to have.

In summary, I wish to emphasize five general conclusions concerning the problems stated:

1. The large merchandising establishment has certain buying advantages, due to its ability to hire specialized and skilled buyers, and to its buying power, which enables it to require lower prices and superior service from supply houses.

2. When a large part of the operations are mechanical and routine in their nature—as in the case of storage and elevation—the large house may gain the economies from the division of labor and the use of machinery which are so important in the economy of large-scale manufacture.

3. To the extent that large merchandising establishments must make special efforts to sell their services in order to get volume, they are likely to have higher unit costs for selling than do their smaller competitors. The “excessive service” of the large sales organizations must be considered a weakness due to this necessity of getting volume through rendering superior service.

4. Problems of supervision become greater as the establishment increases in size, but these problems become peculiarly difficult when selling is a major activity. This is because, briefly, the human element

is more important to selling than to production, and its operations and interactions are not easily routinized. The ordinary methods of controlling routine matters are, consequently, ineffective, or at best, their use becomes more expensive.

5. The balance which determines the relative economy of operation of large and small merchandising would, thus, seem to turn largely on the extent to which the economies found in operating the routine and mechanical functions of the business, and in purchasing on a large scale, are offset by the increased costs for selling and service, and for the administration thereof, which arise from the need to obtain a large volume of sales.

CHAPTER XXV

THE COST OF MARKETING

1. THE MIDDLEMAN'S TOLL—HANDLING CASH GRAIN —TYPICAL EXAMPLES¹

Example No. 1.—One Car of Corn.

Shipped from Elk Point, South Dakota, July 5, 1921.

Grade No. 2 Yellow corn, 1,960.20 bu.

Paid to farmers by local elevator, 42c per bu.

Sold to Chicago consumer, July 8, @ 63⁵/₈c per bu.

Paid by Chicago Consumer.....	\$1,247.28		Per Cent
Farmer received.....	823.31	or	66.00
Railroad freight.....	334.83	or	26.85
Local elevator.....	56.91	or	4.56
Commission merchant, Chicago.....	19.60	or	1.57
War tax on freight.....	10.04	or	.81
Car inspection.....\$0.30	2.59	or	.21
Grain inspection.....1.00			
Weighing.....1.00			
Interest......29			
			100.00

Example No. 2.—One Car of Wheat.

Shipped from Clearmont, Missouri, July 30, 1921.

Grade No. 1 Hard Yellow Wheat, 1,472.40 bu.

Sold to Chicago consumer, August 12, @ 120¹/₂c per bu.

Paid by Chicago consumer.....	\$1,774.56		Per Cent
Farmer and local elevator received.....	1,506.97	or	84.90
Railroad freight.....	234.15	or	13.20
Commission merchant.....	22.08	or	1.25
War tax on freight.....	7.02	or	.40
Car inspection.....\$0.30	4.34	or	.25
Grain inspection.....1.00			
Weighing.....1.00			
Interest.....2.04			
			100.00

¹ Adapted from James E. Boyle, *Cost of Marketing Grain* (1922), pp. 7, 11. (Copyright by J. E. Boyle.)

2. EXPENSE OF MARKETING TYPICAL COMMODITIES

TABLE 19.—EXPENSE OF MARKETING A BARREL OF CRAN-
BERRIES, 1920-21.¹

Items	Marketing Expense ²	Per Cent of Total Expense
Grower.....	\$9.713	54.0
Coöperative marketing associations ³	.627	3.5
Advertising.....	.275	1.5
Transportation.....	1.333	7.4
Jobber.....	1.899	10.5
Other wholesalers.....	.125	.7
Retailer.....	4.032	22.4
Realized on barrel at retail.....	18.004	100.0

¹ From Asher Hobson and J. Burton Chaney, *Sales Methods and Policies of a Growers' National Market Agency* (1923), p. 34. (U. S. Department of Agriculture, Bul. 1109.)

² Based on a retail price of 18 cents a pound.

³ Both local and central.

TABLE 20.—DIVISION OF THE CONSUMER'S DOLLAR PAID FOR
CALIFORNIA ORANGES.¹

Items ²	Amount per Box	Per Cent
Fruit on tree.....	\$2.301	30.6
Harvesting.....	.188	2.5
Packing.....	.601	8.0
Selling.....	.090	1.2
F.O.B. California.....	3.180	42.3
Transportation ³	1.67	22.2
F.O.B. Market.....	4.85	64.5
Jobber's margin.....	.61	8.1
Jobber's price.....	5.46	72.6
Retailer's margin.....	2.06	27.4
Consumer paid.....	7.52	100.0

¹ Adapted from R. G. Phillips and Samuel Fraser, *Wholesale Distribution of Fresh Fruits and Vegetables* (1922), p. 80. (The Joint Council of the National League of Commission Merchants of the United States, The Western Fruit Jobbers' Association, and the International Apple Shippers' Association.)

² Dec. 1, 1920, to Nov. 15, 1921.

³ In addition to the line haul, charge includes refrigeration, diversion, demurrage, heater service when incurred and transportation tax.

TABLE 21.—DIVISION OF CONSUMERS' DOLLAR PAID FOR BREAD.¹

	1913	1916	1921
PRODUCTION	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>
Producer receives.....	28.0	32.7	28.1
Transportation.....	2.8	2.3	2.6
Elevator margin and profit.....	1.1	2.3	2.8
Flour manufacture.....	.6	.7	.6
Transportation.....	2.4	2.8	4.4
Cost of bread manufacture.....	8.7	9.5	12.3
Total.....	43.6	50.3	50.8
DISTRIBUTION			
Manufacturer's cost of selling.....	15.7	15.2	16.4
Overhead.....	12.2	8.8	8.5
Profit.....	7.0	4.4	5.7
Retailer's operating expense.....	13.8	15.4	15.7
Profit.....	7.7	5.9	2.9
Total.....	56.4	49.7	49.2

¹Taken from the Joint Commission of Agricultural Inquiry. *Report*, Part IV, *Marketing and Distribution* (1922), p. 210.

TABLE 22.—DIVISION OF CONSUMERS' DOLLAR PAID FOR CORN FLAKES.¹

	1913	1916	1921
PRODUCTION	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>
Producer receives.....	16.2	29.1	21.0
Transportation.....	2.9	3.5	5.9
Elevator margin and profit.....	4.5	3.9	1.6
Cost of manufacture.....	5.9	7.8	8.1
Total.....	29.5	44.3	36.6
DISTRIBUTION			
Manufacturer's cost of selling.....	10.2	11.1	7.3
Advertising.....	11.1	5.6	4.5
Transportation.....	6.8	8.6	9.1
Taxes.....	2.8	2.2	7.0
Profit.....	4.9	.5	8.3
Wholesaler's operating expense.....	6.7	6.9	8.3
Profit.....	2.0	1.7	² 4
Retailer's operating expense.....	14.6	10.8	13.3
Profit.....	11.4	8.3	6.0
Total.....	70.5	55.7	63.4

¹Ibid., p. 212.

²Loss.

TABLE 23.—DIVISION OF CONSUMERS' DOLLAR PAID FOR MEN'S SHOES.¹

	1913	1920	1921
Production:			
Raw materials.....	40.8	44.2	38.5
Cost of manufacture.....	17.7	13.6	18.3
Operating overhead and selling...	9.6	10.9	10.9
Taxes.....	.....	1.1	.9
Profit.....	3.2	1.7	3.1
Distribution:			
Retailer's operating expense.....	24.1	25.3	26.9
Profit.....	4.6	3.2	1.4

¹The Joint Commission of Agricultural Inquiry, *op. cit.*, p. 223.

TABLE 24.—DIVISION OF CONSUMERS' DOLLAR PAID FOR FURNITURE.¹

Item	1920		1921	
	Detail	Total	Detail	Total
Manufacturer:				
Materials.....	\$0.233	.....	\$0.216	.....
Labor.....	.139	.....	.174	.....
Factory overhead.....	.029	.....	.038	.....
Selling and general expense....	.075	.....	.099	.....
Profit.....	.083	.....	.042	.....
Factory price.....	.....	\$0.559	.....	\$0.569
Railroad—Freight.....	.021	.021	.033	.033
Dealer:				
Expense.....	.287	.....	.329	.....
Profit.....	.133	.....	.069	.....
Mark-up.....	.....	.420	.....	.398
Total, or consumer's dollar...	1.000	1.000	1.000	1.000

¹ Adapted from Federal Trade Commission *Report on House Furnishings Industries*, Vol. I, *Household Furniture* (1923), pp. 137-38.

3. ADVERTISING EXPENDITURES

TABLE 25.—PERCENTAGES OF SALES EXPENDED FOR ADVERTISING:
BY MANUFACTURERS¹

Arrow Collars.....	3.5
Baker-Vawter System.....	3.5
Berry Brothers' Varnish.....	4
Cadillac Automobiles.....	1
Champion Spark Plugs.....	7
Cloth-craft Clothes.....	1.5
Colgate's Preparations.....	2
DePree Chemical Company.....	6
Evinrude Motors.....	8
Fatima Cigarettes.....	5
Globe-Wernicke Cabinets.....	3
Great Northern Railroad.....	1.8
Hudson Automobiles.....	1.3
Ivory Soap.....	3
Kewanee Boilers.....	2.5
Kodaks.....	3
McCray Refrigerators.....	7.5
Markham Air Rifles.....	5
Northern Pacific Railroad.....	1.9
Old Dutch Cleanser.....	10
Packard Automobiles.....	1.1
Phonographs.....	5
Reo Motor Cars.....	1
Ruud Heaters.....	2.5 to 3.5
Santa Fe Railroad.....	2.5
Saxon Automobiles.....	2.6
Sears, Roebuck & Co.....	10
Sherwin-Williams Paint.....	3.5
Stromberg Carburetors.....	3.5
Studebaker Automobiles.....	2
Union Pacific Railroad.....	2.5
Universal Portland Cement.....	2
Velvet Tobacco.....	6
Welch's Grape Juice.....	10
Wooltex Clothes.....	2
The median expenditure is 3%.	

¹From Daniel Starch, *Principles of Advertising* (1923), p. 49. (A. W. Shaw Company.)

TABLE 26.—PERCENTAGE OF SALES EXPENDED FOR ADVERTISING:
RETAIL LINES*

(Based on over 1,000 retail stores.)

Groceries.....	.83	Drugs.....	1.76
Hardware.....	1.12	Furniture.....	2.72
Vehicles and implements..	1.22	Jewelry.....	2.85
Variety goods.....	1.52	Clothing.....	3.16
Shoes.....	1.65	Department stores.....	4.01
Dry goods.....	1.67	Mail-order houses.....	7.21

* Daniel Starch, *op. cit.*, p. 51.4. DOES ADVERTISING INCREASE THE COST OF SELLING?¹

Kirsch Manufacturing Co. (Curtain Rods.).—For the first seven years of its existence, the Kirsch Manufacturing Company did not advertise. For the past three years it has advertised. During the non-advertising period a business of about a quarter of a million dollars a year was built up. In the last three years, this volume has swelled to a figure approaching four times that figure.

The number of salesmen used in making the increased volume of sales is about a fourth more than that which produced the business of three years ago. The number of retail dealers handling Kirsch flat rods has been increased only some 25 per cent. Yet the business has grown almost fourfold.

The first national campaign in February, March, April, and May issues of six women's publications in the spring of 1915 used space costing approximately \$7,000.

In 1916 about double that amount was appropriated, while for the spring and fall campaigns of 1917 approximately \$20,000 was put into advertising.

The space necessarily was modest in size at the outset—56 lines single column and 112 lines double column being the units used. The second and third year the space was increased and 112-line, single- and double-column ads were used.

The appeal in the advertising has been based each year upon the research and field work of the company's sales department. Thus it is kept in harmony with the latest information on the subject and is directed to overcome sales resistance in the most efficient manner.

The response to the advertising has been most generous. Over

¹ *Ibid.*, pp. 60-63, 91, 95-97.

10,000 inquiries were secured the first year, over 30,000 the second, and between 30,000 and 40,000 from the spring campaign of 1917. Most of the inquiries came from women who wanted the Kirsch Rod and Drapery Style Book. Some were from dealers.

Three years of advertising has cost under \$50,000—it has been directly and indirectly responsible, in a measure, for a fourfold increase in the business—it has definitely interested several hundred thousand women in the story of what the flat rod does; it has made the company name practically synonymous with flat rod.¹

California Fruit Growers' Exchange.—The various coöperative agricultural organizations have used advertising apparently to good advantage in developing the sale and consumption of farm products. The California Fruit Growers' Exchange was organized in 1905. About 1907 it faced the problem of a very greatly increased production of citrus fruits during the near future. The problem, therefore, was to increase the consumption of these products. An advertising campaign was inaugurated in 1907–1908.

Table 27 shows the shipments of boxes of Sunkist oranges over a period of 19 years.

TABLE 27.—SHIPMENTS OF BOXES OF SUNKIST ORANGES, 1903–1921

Season Ended October 31	Boxes	
1903	8,094,720	
1904	10,246,656	
1905	10,225,908	
1906	8,973,342	
1907	10,290,729	Advertising begun
1908	10,742,944	
1909	13,441,016	
1910	11,187,792	
1911	15,645,168	
1912	13,680,612	
1913	6,346,692	Poor crop year
1914	17,986,482	
1915	15,857,856	
1916	15,490,399	
1917	20,167,846	
1918	7,862,757	Poor crop year
1919	18,066,368	
1920	16,658,525	
1921	22,116,776	

¹ *Printers' Ink*, Aug. 9, 1917, p. 8.

Twenty-seven years ago, when California shipped about 2,000,000 boxes of oranges a year, the growers thought they were overproducing. The supply was so far in excess of the demand that at times the returns were less than the costs. By coöperation they reduced expenses, minimized decay, and increased the efficiency of their distributing machine until by 1906 they had pushed up their annual sales to 10,000,000 boxes. But in response to the stabilizing influence of organization thousands of new acres had been planted and with the big possibilities for making economies and increasing efficiency practically worked out, they faced the problem of overproduction once more. This time they turned to advertising to widen their basic market by educating the public to the delicious and healthful qualities of oranges and suggesting new ways to serve this fruit in the American home. In the 12 years since the first Sunkist campaign was launched in Iowa, the consumption of California oranges has doubled. The American consumer has been taught by coöperative advertising to eat nearly twice as many oranges as before.¹

It would of course be false reasoning to say that the sale and consumption of oranges was doubled from 1907 to 1919 entirely because of the publicity carried out. The fact apparently was that fruit growers began to raise oranges in increasing numbers and something had to be done to sell the prospective crops in order to save the growers from financial disaster. The publicity effort made and the establishment of the brand-name "Sunkist" have no doubt played an important part as one potent factor. It may nevertheless be regarded as a distinctive achievement to have succeeded in selling the greatly increased crop and in developing the consumption of it.

Hart Shaffner & Marx.—When this house began advertising, the business amounted to about \$1,500,000 a year; there were at that time a number of clothing concerns doing a larger business than that. Today our gross sales amount to more than \$15,000,000; we are the largest clothing manufacturers in the country.

We believe our business would have grown without advertising. We do not think it would have reached anything like its present volume, nor that the growth would have been accomplished with anything like the same speed.

Volume alone would have enabled us to decrease the cost of the goods; but advertising has undoubtedly decreased also the cost of selling. It costs to sell our goods only half as much as it cost

¹Don Francisco, Advertising Manager, California Fruit Growers' Exchange, *Printers' Ink*, June 10, 1920, p. 33.

fifteen years ago; we figure the advertising as part of the cost of selling.¹

Men's Clothing Stores.—The Bureau of Business Research of Northwestern University made a study of the operating expenses of a considerable group of men's retail clothing stores covering the years 1914, 1918, and 1919. One of the problems studied was the relation between advertising and selling costs. These results are set forth in Table 28.

TABLE 28.—RELATION OF ADVERTISING TO SALES AND TO EXPENSE REDUCTION *

I

(Data based on stores with sales from \$40,000 to \$60,000 in 1918)

Advertising per \$100 of Total Net Sales 1918	Number of Stores	Total Net Sales Per Cent In- crease, 1919 over 1918	Selling Expense Per Cent In- crease 1919 over 1918	Selling Expense per \$100 of Total Net Sales—Per Cent Decrease 1919 from 1918
Average	60	Actual 44.8	Actual 34.5	Actual 7.1
Under \$1.....	23	45.2	41.0	3.0
\$1 to \$2.....	22	46.5	34.4	8.2
\$2 and over.....	15	41.7	28.8	8.9

II

(Data based on stores of all sizes).

Advertising per \$100 of Total Net Sales 1914	Number of Stores	Total Net Sales Per Cent In- crease, 1919 over 1914	Selling Expense Per Cent In- crease, 1919 over 1914	Selling Expense per \$100 of Total Net Sale—Per Cent Decrease, 1919 from 1914
Average	154	Actual 126.4	Actual 106.0	Actual 9.1
Under \$1.....	27	98.1	84.4	6.8
\$1 to \$2.....	52	114.6	100.9	6.4
\$2 to \$3.....	36	112.7	93.1	9.3
\$3 and over.....	39	151.9	117.6	13.7

* Data compiled from *The Clothing Survey*. (Bureau of Business Research, Northwestern University School of Commerce, Horace Secrist, Director.)

Referring to this table, the report says:

Two groups of stores are used, one in which sales in 1918 range between \$40,000 and \$60,000 and another in which stores of all sizes in 1914 available for study are included. In the first group, the stores

¹*Printers' Ink*, Jan. 22, 1914, p. 3.

are classified according to the amounts spent for advertising per \$100 of sales in 1918. The chart indicates that the larger the amount spent for advertising in relation to sales in 1918, the greater the percentage of *decrease* in selling expense per hundred dollars of total net sales in 1919. For those which spent least, the decrease between the two years is 3.0 per cent, while for those which spent most, it is 8.9 per cent.

When all stores the records of which are available for 1914 are classified by the amounts spent for advertising per \$100 of total net sales in that year, it is found that selling expenses expressed in sales decreased in 1919 over 1914 by 6.8 per cent for those which spent least for advertising, and by 13.7 per cent for those which spent most for this purpose.

Without assigning a causal relationship between the decrease in selling expense and the increase in advertising expenditures, it is safe to conclude from the chart that a direct relationship obtains between these two factors. Obviously, there is a limit beyond which one can hope to reduce his selling expense through increasing his advertising. What this limit is the chart does not show. It does, however, indicate from the experience available an interesting association between selling expense and advertising and suggests to merchants the wisdom of closely scrutinizing their advertising expenditures and of observing in the light of these data their own experience from year to year.¹

¹Horace Secrist, Northwestern University Bureau of Business Research, Series II, No. 3, pp. 16-18.

CHAPTER XXVI

FINAL CRITICISM

1. THE ALLEGED "PLANLESSNESS" OF PRODUCTION¹

With technical experts to guide the making of goods, business experts to guide the making of money, lenders to review all plans requiring large investments, and government to care for the public welfare, it may seem as if the money economy provides a staff and a procedure adequate to the task of directing economic activity. This impression is strengthened by observing that each class of business leaders is spurred to efficiency and deterred from recklessness by danger of pecuniary loss. The engineer who blunders is discharged, the enterpriser who blunders goes into bankruptcy, the lender who blunders loses his money. Thus the guides who misdirect the industrial army are always being eliminated from the number of those who lead. On the other hand, those who succeed are always being promoted to posts of wider power. The successful engineer is trusted with larger commissions, the successful enterpriser uses his profits to extend his business, the successful investor has more money to lend.

With this powerful stimulation of individual efficiency, the money economy unites an opportunity for coöperation on a grand scale. By paying money prices, the leaders can enlist the aid of laborers who contribute work of all kinds, of expert advisers who contribute special knowledge, of landlords who contribute the uses of their property, and of investors who contribute the uses of their funds. And all these classes can be made to work in disciplined order toward the execution of a single plan.

This union between encouragement of individual efficiency and opportunity for wide coöperation is the great merit of the money economy. It provides a basis for what is unquestionably the best system of directing economic activity which men have yet practiced. Nevertheless, the system has serious limitations.

1. The money economy provides for effective coördination of effort within each business enterprise, but not for effective coördination of effort among independent enterprises.

¹Adapted from W. C. Mitchell, *Business Cycles* (1913) pp. 37-40. (Published by University of California Press, copyright by W. C. Mitchell.)

The two schemes of coördination differ in almost all respects. Coördination within an enterprise is the result of careful planning by experts; coördination among independent enterprises cannot be said to be planned at all; rather is it the unplanned result of natural selection in a struggle for business survival. Coördination within an enterprise has a definite aim—the making of profits; coördination among independent enterprises has no definite aim, aside from the conflicting aims of the several units. Coördination within an enterprise is maintained by a single authority possessed of power to carry its plans into effect; coördination among independent enterprises depends on many different authorities contending with each other, and without power to enforce a common program except so far as one can persuade or coerce others. As a result of these conditions, coördination within an enterprise is characterized by economy of effort; coördination among independent enterprises by waste.

In detail, then, economic activity is planned and directed with skill; but in the large there is neither general plan nor central direction. The charge that “capitalistic production is planless” therefore contains both an important element of truth and a large element of error. Civilized nations have not yet developed sufficient intelligence to make systematic plans for the sustenance of their populations; they continue to rely on the badly coördinated efforts of private initiative. Marked progress has been made, however, in the skill with which the latter efforts are directed, and also in the scale on which they are organized. The growth in the size of business enterprises controlled by a single management is a gain, because it increases the portion of the field in which close coördination of effort is feasible.

2. But, as pointed out above, the managerial skill of business enterprises is devoted to making money. If the test of efficiency in the direction of economic activity be that of determining what needs are most important for the common welfare and then satisfying them in the most economical manner, the present system is subject to a further criticism. For, in nations where a few have incomes sufficient to gratify trifling whims and where many cannot buy things required to maintain their own efficiency or to give proper training to their children, it can hardly be argued that the goods which pay best are the goods most needed. It is no fault of the individual business leaders that they take prospective profits as their own guide. On the contrary, they are compelled to do so; for the men who mix too much philanthropy with business soon cease to be leaders. But a system of economic organization which forces men to accept so artificial an aim

as pecuniary profit cannot guide their efforts with certainty toward their own ideals of public welfare. The business management of single enterprises may be admirably systematic in detail; but it is controlled by no large human purpose.

3. Even from the point of view of business, prospective profit is an uncertain, flickering light. For it has already been shown that profits depend upon two variables—on margins between selling and buying prices and on the volume of trade—related to each other in unstable fashion, and each subject to perturbations from a multitude of unpredictable causes. That the system of prices has its own order is clear; but it is not less clear that this order fails to afford certainty of business success. Men of long experience and proved sagacity often find their calculations of profit upset by conjunctures which they could not anticipate. Thus the money economy confuses the guidance of economic activity by interjecting a large element of chance into every business venture.

4. The hazards to be assumed grow greater with the extent of the market and with the time which elapses between the initiation and the fruition of an enterprise. But the progress of industrial technic is steadily widening markets, and requiring heavier investments of capital for future production. Hence the share in economic leadership which falls to lenders, that of reviewing the various chances offered them for investment, presents increasing difficulties. And, as has been shown, a large proportion of these lenders lack the capacity and the training for the successful performance of such work.

These defects in the system of guiding economic activity and the bewildering complexity of the task itself allow the processes of economic life to fall into those recurrent disorders which constitute crises and depressions. Much patient analysis, however, is required to discover just how these disorders arise and why, instead of becoming chronic, they lead after a time to the return of prosperity.

2. ON THE DESTRUCTION OF FOOD TO ENHANCE PRICES¹

Charges that fruits and vegetables are destroyed by the wholesale trade for the purpose of enhancing the value of the remainder are utterly false in every respect. On the contrary, every possible effort is put forth to prevent loss and waste.

¹ Adapted from R. G. Phillips and Samuel Fraser, *Wholesale Distribution of Fresh Fruits and Vegetables*, (1922) p. 225. (Published by the Joint Council of the National League of Commission Merchants of the U. S., The Western Fruit Jobbers' Association of America, and the International Apple Shippers' Association.)

Honorable Sydney Anderson, Chairman of the Joint Congressional Commission of Agricultural Inquiry, in an interview given to the press June 10, 1922, said:

Our investigation pretty thoroughly disposes of the constantly recurring popular myth about wanton destruction of perishable produce in order to boost the price. In almost every city of size the rumor starts every now and then that the produce men are throwing away fruits and vegetables when the market is glutted. So far as the commission has been able to determine, there is no ground for believing that such willful destruction has occurred.

Let no one imagine that merely because a commodity is stored its value is enhanced or that a profit is assured. Time after time heavy losses are incurred. In apples, for example, 1907, 1909, 1913, 1915, and 1920 may be cited. At other times any advance in the market is often barely sufficient to cover the storage charge and very frequently not enough. The storage of these commodities could not be abused even if attempted, and for the following reasons:

First, fresh fruits and vegetables contain inherently their own limitations as to the length of storage. They can be kept a limited time only.

Second, they speak for themselves as to condition and quality. They cannot be adulterated, mixed with something else or re-made. A decayed apple, for example, is self-evident.

Third, there is the keenest competition in the wholesale trade distributing fresh fruits and vegetables. There are no monopolies or combinations. The channels of trade are wide open and governed only by the law of supply and demand.

3. DEFECTS OF THE MARKETING SYSTEM: FARM PRODUCTS¹

It is convenient to classify the weaknesses of the marketing system under four heads: (1) those connected with marketing at country shipping points; (2) those connected with the wholesale trade; (3) those connected with transportation; and (4) those connected with the retail trade. It should be borne in mind that the defects enumerated below do not by any means exist in the marketing of all products and at all places. Very high degrees of efficiency have been attained with regard to all the points mentioned in many cases, and what is

¹ Adapted from L. D. H. Weld, *The Marketing of Farm Products* (1916), pp. 446-48 (The Macmillan Company.)

true of one commodity may not be true of another. In a general classification of this sort, it is perhaps better to say that the following weaknesses *frequently* exist, or exist in some cases.

The principal weaknesses of marketing at country points may be enumerated as follows: (1) insufficient attention to varieties produced, to sorting and grading, and to quality of goods marketed; (2) careless packing and lack of uniformity in packages; (3) lack of knowledge of market conditions and prices on the part of farmers; (4) an unnecessary number of local buyers; (5) abuse of monopoly power when there is one buyer, and price agreements when there are several buyers; (6) poor business management on the part of local buyers, country stores, and farmers' organizations; (7) lack of honesty on the part of both farmers and local buyers; (8) poor roads from farms to country shipping points.

The principal weaknesses in connection with the wholesale trade are as follows: (1) opportunity for fraud and sharp practices, including a general infraction of the principles governing the relations between agents and principals; (2) lack of adequate inspection systems; (3) congestion of wholesale districts and poor location with regard to transportation terminals; (4) lack of adequate price-quotation systems; (5) insufficient means of securing and disseminating information with regard to crop conditions, crop movements, market conditions, etc.; (6) lack of uniformity of methods, customs, grades, packages, trade terms, etc., in different markets; (7) control of auction companies by cliques of traders who handle commodities sold at auction.

Some of the weaknesses of the transportation system are: (1) delays in transit, causing late arrival of perishables in market; (2) lack of refrigerating and other facilities for handling perishables at freight terminals; (3) ill-adjustment of rates between localities and between commodities; (4) carelessness in handling; (5) insufficient car supply during seasons of heavy movement; (6) lack of uniformity in adjusting and delay in payment of claims for damage; (7) unfair icing charges; (8) lack of attention to the development of trolley freight service.

The defects in the retail system, the most expensive element of the marketing system, are more difficult to enumerate, but the following may be mentioned: (1) dishonesty in weights and misrepresentations as to quality; (2) unsanitary conditions; (3) overstocking of commodities with consequent deterioration in quality before sold; (4) too liberal a policy with regard to granting credit to consumers; (5)

delay in payment for goods bought from wholesalers; and (6) unnecessary duplication of delivery and other equipment and services. There are many other weaknesses in connection with poor business management. Certain reasons for the high cost of retailing can hardly be laid at the doors of merchants, but rather are due to the desire of consumers for expensive service, including prompt deliveries of small orders, etc.

4. SOME PROBLEMS OF A SEASONAL-STYLE MANUFACTURING BUSINESS¹

It is safe to say that more money is wasted in the sales department than in any other department of the clothing industry. However, it was stated by numbers of manufacturers interviewed on the subject, that it would not be possible to reduce selling expenses without a complete revolution of selling methods. On account of fierce competition and the rapid growth of the industry in recent years, certain evils have been allowed to creep into the business which are almost impossible to eliminate, and the manufacturer who stands out alone against these evil practices will find himself in a very difficult position.

Many remedies have been suggested, and the National Association of Clothiers has taken steps that have accomplished good results. However, until the manufacturers get closer together and there is more coöperation between manufacturers and retailers, it is hard to see that much economy can be effected in selling costs, or that the numerous evils will be eliminated from the industry.

The principal evils in the industry, with which the manufacturers seem unable to cope, are the following: cancellations, returns and allowances, revisions, indiscriminate extending of credit, extra discounts and dating, buying on one basis and settling on another, concessions to secure new accounts, consignment shipments, memorandum orders, long future delivery, etc.

CANCELLATIONS, RETURNS, AND ALLOWANCES

The most insidious of these evils are cancellations and returns and allowances. One of the principal causes that leads to cancellation is long future delivery. With three to six months elapsing from the time the order is taken to the time when delivery is made, many things may come up that will cause the buyer to change his mind and revise or cancel the order. The buyer may decide he has made too heavy

¹ Adapted from *The Men's Factory-made Clothing Industry* (1916) pp. 246-51. (United States Department of Commerce, Bureau of Foreign and Domestic Commerce, Bul. No. 34.)

a purchase, or he may see some goods he likes better, or some financial difficulty may intervene of which he had no knowledge when he gave the order, or any one of a number of contingencies may arise which will lead to cancellation.

The buyer, knowing that, as a rule, the manufacturer will stand for cancellation, is not slow to take advantage of the fact, and any pretext is considered sufficient excuse to cancel an order accepted in good faith. This has led to reckless ordering, and it can be said that the manufacturer is not always blameless. Often salesmen in their eagerness to take orders and earn commissions will induce retailers to buy more than they can possibly use, hoping that if any cancellations are made, they will be on orders from other houses.

There are a few manufacturers who claim that they will not accept cancellations, but the number is very small. The extent of competition in the industry leads manufacturers to accept cancellations and returns and allowances. They know that the customer will turn to the numerous concerns in the industry that will stand for such practices, and, rather than lose the account, they will put up with demands that are often entirely unreasonable.

Among some manufacturers it is the custom to delay making up goods until the retailer has an opportunity to revise his order. Sometimes they delay long enough to allow time for two revisions, and then start in to manufacture with more certainty that the order will not be canceled. This practice of delay for protection, however, is a great inconvenience to the manufacturer, as it causes "rush work" and prevents an even distribution of production over the manufacturing season. In speaking of these trade abuses a manufacturer said:

The extent of the trade abuses of cancellations and returns in this industry can hardly be exaggerated. Manufacturers seem unable to cope with the situation, and retailers apparently can practice these abuses at will. The manufacturer claims that retailers make claims of defects or any excuse for returning the goods. Very often at the end of the season when they find they have stock left over they return it to the manufacturer. The fact that competition is so very keen causes this, as manufacturers know that if these demands are not met, of whatever nature they may be, a customer is lost, and some other manufacturer will obtain him. As a result, almost any demand a retailer makes is agreed to.

Revision of orders is often the cause of loss to manufacturers. If the order is revised before the goods have been cut, or are in work, there is of course no loss, but late revisions after the goods are in process of manufacture cause "left overs."

INDISCRIMINATE CREDIT; EXTRA DATINGS AND DISCOUNTS

Indiscriminate extending of credit, next to cancellations and returns and allowances, is perhaps the greatest evil in the industry. This condition is entirely due to the tremendous competition in the business and the desire of manufacturers to secure new accounts.

The reckless extending of credit not only leads to losses due to failures, bad debts, and slow payment, but is one of the causes of cancellations and returns and allowances.

Demands for extra discounts and datings on the part of retailers are generally complained of by manufacturers. These concessions are often granted to hold an account, and it is said this evil is more prevalent in the industry than ever before. Often, it is said, retailers buy on one basis and wish to settle on another. The order is taken in good faith on the part of the manufacturer and after the goods are delivered, the customer makes certain demands for extra concessions, which the manufacturer has to grant in order to prevent a return.

Concessions to secure new accounts are common in the industry. To secure a new account, salesmen often give the customer advantages in the way of discounts, datings, etc., or tell him that the house will stand for returns or cancellations. This practice works against the manufacturer every time. A new account secured in this way always proves uncertain and unsatisfactory. The customer, having been granted these concessions in the beginning, will always expect the same terms and will continually make unreasonable demands.

**CONSIGNMENTS AND MEMORANDUM ORDERS; LONG FUTURE
DELIVERY**

Consignment shipments and memorandum orders, while good methods of disposing of left-over goods, are, on the other hand, a distinct disadvantage to the manufacturer. Retailers, knowing that they will be able to replenish their stock near the end of the season at reduced prices through these shipments, place smaller initial orders at the regular terms. It is without doubt a fact that consignment shipments and memorandum orders are an evil in every industry.

Long future delivery, as previously stated, is the principal cause of cancellations, returns, and allowances, and other evils in the business. The manufacture of men's clothing is necessarily a slow process, considering the time taken to get cloth from the woolen mills and the time consumed in making up the goods. However, manufacturers are, in a way, to blame for long future delivery. In consequence of the desire

of some manufacturers to get their lines before the retailers ahead of their competitors, salesmen start out on the road earlier each year. This of course has the effect of causing a longer time to elapse between the time the order is taken and the date of delivery.

For instance, salesmen will start out in October to take orders for the following spring and summer season, when the retailers have not yet begun to move their winter goods. It can readily be seen that the retailer is not in a position at that time to know exactly what he will need for the following season. As yet he has sold only a small part of his winter stock and he is unable to know how this stock will move, which is necessarily a factor in placing spring and summer business. It should further be considered that it is not always the first salesman in the field that secures the orders. The retailer may wish to have the chance to look over several lines before he determines where he will buy. In the event that the early salesman secures an order, the next salesman who comes along may have a line that in the estimation of the retailer is more attractive, or he may offer better terms, either of which may lead to a cancellation of the first order.

Without doubt the manufacturers would do a better and more satisfactory business if they would give the retailer a chance to get rid of at least some of one season's stock before they tried to sell him the next. There would be fewer cancellations, returns, allowances, and revisions, and the retailer would be in a better position to give an intelligent order than when he is approached so early in the season.

While it is hardly possible to eliminate these evils from the industry, some means should be found by which the manufacturer can protect himself to some extent from practices that are each day becoming a greater menace.

While the percentage of cancellations is over twice as large as that of returns and allowances, the loss on returns and allowances is greater than on cancellations. This condition is due to the fact that a large percentage of cancellations are made before the goods have been cut, entailing a small loss, while returned garments thrown on the hands of the manufacturer are hard to dispose of and are frequently sold at considerable sacrifice.

WHAT SHOULD BE DONE?

The consensus of opinion among manufacturers is that before the existing evils in the industry can be eliminated there will have to be closer coöperation between the manufacturers and retailers. It has

been suggested that a joint committee composed of members of the National Association of Clothiers and the National Association of Retail Clothiers could do much toward bringing about such coöperation. Disputes of all kinds between manufacturers and retailers could be referred to this committee for arbitration and without doubt much good could be accomplished. An agreement covering the following headings should be drawn up and adhered to between manufacturers and retailers, and it should be the duty of the joint committee to adjust claims made under the agreement:

There should be no cancellations except under conditions that would make it absolutely necessary.

No cancellations, revisions, or alterations should be accepted after the goods have been cut.

No goods should be returned without proper cause, such as the merchandise not coming up to specifications, inferiority of workmanship, late delivery, etc.

Demands for allowances should be granted only with good reason and after thorough investigation.

Manufacturers should be required to deliver goods at the time specified in the order, otherwise the retailers should have the option of returning the merchandise.

Where the manufacturer has not lived up to the order and has substituted styles or materials not called for, the retailer should have redress.

This committee should also go into the matter of cut-price sales, where fraudulent advertising is resorted to, misrepresenting merchandise and prices.

Closer coöperation among manufacturers will also do much toward eliminating trade abuses in the industry. Recommendations by the National Association of Clothiers in regard to manufacturers keeping uniform cancellation records and interchanging cancellation and credit information are excellent, and, if adopted throughout the industry, would eventually lead to a great reduction of losses.

5. ON DISHONESTY IN TRADE: AND A PROPOSED REMEDY¹

Scarce indeed are the innocents who are unaware of the fact that goods—and especially foodstuffs—are frequently debased, but few who know of the evil realize its extent or the subtlety of the methods

¹ Adapted from E. P. Harris, *Coöperation, the Hope of the Consumer* (1918), pp. 24-28, 31-36, 78-82. (The Macmillan Company.)

employed. Dr. Harvey W. Wiley,¹ of Washington, is authority for the statement that the problem, even in its larger aspects, is still a very considerable one. Dr. Lewis B. Allyn,² of Westfield, Massachusetts, points out that from 8 to 15 per cent of the foods sold are debased, while Alfred W. McCann, food editor for the *New York Globe*, says of adulteration and misbranding, "The evil is an epidemic. It never seems to abate." Mr. McCann adds that probably three million people are made ill in this country every year by adulterated foods.

Gaston G. Netter, president of the International Pure Food Association, says:

"If you took all the food in New York City today and put it in a big tent down in Texas, I would throw away 40 per cent. The people here in New York City are being hourly poisoned by food labeled as absolutely pure. I buy it and test it every day and I know."

The *New York Globe* stated in 1913 that spoiled meat was sold by the ton in New York City.

Examples of adulteration and its allied evils press almost daily on our attention, and thus far no adequate and permanent remedy has been found. Let us consider critically some of the methods now being tried.

EXISTING REMEDIES

When the Federal Pure Food Law was passed, it was hailed by many as a source of complete cure for the trouble. Some of the more public and blatant food poisoners and debasers have been caught and treated as outlaws, and others have been frightened and put on their guard. Indeed, the statute has proven itself of great value, a smart steel trap for the large and clean-cut offenders. But while the Federal law went into effect in June, 1906, so far as it was permitted to become operative after shunting its execution away from the Bureau of Chemistry of the Department of Agriculture,³ there are still thousands of cases of violation of even its liberal provisions which are taken cognizance of by the Federal law department.

Again, the Federal law and inspection can only reach such foods as are shipped from one state to another. In the case of meat, for instance, it has no jurisdiction over animals killed and sold in the same state. Caroline Bartlett Crane, an expert investigator, finds that the Federal inspection is not so rigorous in its inspection of meats for use

¹ See Dr. Wiley's book, *1001 Tests*.

² Dr. Allyn is the compiler of the well-known "Westfield List" of pure foods.

³ While the original act placed the direction of the work in the Bureau of Chemistry of the Department of Agriculture, a special provision was later made whereby this work was placed with the so-called Remsen Board.

in this country as for those sent abroad; some animals used here would be rejected in Europe.

In any case, the law does not go far enough. The Government stamp does not indicate how old the animal was nor how long it has been killed, but only that it was not diseased when slaughtered.

Neither can any law reach the subtler forms of food debasement. It is not, perhaps, coarse, poisonous adulterations that the consumer needs most to fear. It is the hundreds of ways of debasing and cheapening a product which the consumer is unable to detect.

Qualities shade off into one another by gradations which are imperceptible to the layman, and abuses are too subtle and too concealed to be reached effectively by law.

There is considerable activity in the health departments of numerous states and cities, but the question of pure foods is still a serious one and what remains to be done is perhaps even more difficult than what has been accomplished.

Local regulation of sanitary conditions is valuable, but to make it thorough and complete is hopeless. It costs money to keep things clean and sanitary. And since most handling is not under the eye of any inspector, how can the customer expect the average tradesman to incur the expense of exercising care for which he will get no credit or profit, and for the omission of which he gets no blame; since the test tubes of a chemist fail to detect uncleanness.

The situation is indeed a trying one. Our Federal, state and municipal governments are commendably awake to the importance of these matters. We have the Federal Government with its Pure Food and Drug Act and Meat Inspection Law; forty-eight states enacting and trying to carry out pure food and correct measure laws; and numerous cities passing ordinances with great inconsistency in the various acts and lack of uniformity in their enforcement. But when we realize what really effective inspection would involve, it seems a hopeless task to bring about the needed reforms under the present conditions, and the only one who is always happy about the quality and measure of what he buys is the one who forgets it.

For the housewife to exercise eternal vigilance as to the quality, cleanliness, and quantity of everything she buys means a technical knowledge, willingness to spend endless time and energy, and a critical attitude on her part which is rare. Moreover, in an age when most of our foods are prepared out of sight, and we see them only in the last of a long series of stages, inspection by the individual housewife is bound to be superficial; and even if such painstaking inspection could

be really effective, how socially wasteful it is for *each* family to devote so much of the thought and energy of its household head to this purely negative business.

Are we then to conclude that these impure food and short weight evils, because they have not been adequately reached by the negative methods of legislation and inspection cannot be reached in any fundamental way?

There is an old story of a green servant girl who for hours mopped up the water which overflowed from her kitchen sink before it occurred to her to turn off the faucet. Many of us seem to be taking a similar attitude in this matter.

Now the sole responsibility for the evils of adulterated, debased, and diluted goods and for short measure in all its forms is inherent in the underlying principle of our present distributive system.

The producer has no incentive to produce a thing which appears to be what it is not. It is only when the producer becomes seller and thus initiates the process of distribution that the temptation to deceive begins.

To the perpetual temptation to do things which are not to the interest of the consumer few dealers fail to yield more or less. There are those who would return to you accurately a quantity of uncounted money, who, nevertheless, conform to customs of the trade by which the consumer is the loser. And the worst of it is, the pace is set by the dealer who gives the purchaser least for his money, and this pace the competitor must follow or lose out.

Our governments can furnish the instruments, the weapons, but so long as our foods are prepared out of sight, and the competition for profit is so sharp, complete security of the consumer seems far away. When the processes of preparation go on in the dark, and the profits are to the least scrupulous, are not our foods for a long time destined to cause doubt and disquiet? Shall we be happy to feed our families upon foods each step of whose preparation has invited degrading? How confident can we be that we have beaten the food poisoner at his own game? Is it not inherently obnoxious to permit the manipulator with wrong motives to come between the original source of our food material and our tables?

So, for the injury to health of the million who eat debased foods, for the vast machinery of regulation, for the eternal vigilance necessarily exercised by the awakened buyers, and for the immense losses sustained by buyers, we have the present distributive system to blame.

SHORT WEIGHTS

When we turn to the subject of correct measure there is the same melancholy story. The *Interstate Grocer*, the most widely circulated grocery weekly, constantly carries in bold face type, at the head of its editorial page, "Weigh, Count, Measure or Gauge Everything You Buy."

Fraud and trickery in weights and measures are decreasing, says former Superintendent William L. Waldron of the New Jersey Department of Weights and Measures.¹ But it is still found necessary to condemn and confiscate thousands of pieces of equipment each year. Mr. Waldron found 11,545 druggists' weights wrong out of 42,251 tested.²

The bureaus of weights and measures of the various states confess that they can do little to protect the consumers against false measures except to place the law in their hands and expect the housewives to take the initiative in watching and reporting violation. Books and pamphlets³ are issued containing many and minute instructions all based upon the assumption, apparently, that women can be brought to assume the attitude of distrust implied in the directions and also that they will be willing to spend the time, care, and anxiety, and undergo the disagreeable experiences incident to carrying them out.

Here are some samples of the pages of "don'ts" included in these booklets. These examples are quoted from Joseph Hartigan, former Commissioner of Weights and Measures of New York City:

"SOME DON'TS FOR SHOPPERS"

Don't let your butcher weigh the paper.

Don't forget to look for the weight label on bread.

Don't let the butcher put his body against the balance arm of the scale.

Don't be careless, but watch the computing scale closely.

Don't neglect to see that the weight of flour and sugar packages is marked on the container.

Don't let the dealer remove the goods from the scale until it comes to a balance.

¹ Report of the Department of Weights and Measures, State of New Jersey, 1915.

² This deception is not always intentional, however; Mr. Waldron thinks most of these weights were used through ignorance.

³ "What Every Housewife Should Know," issued by the New Jersey State Department of Weights and Measures.

"What the Purchasing Public Should Know," issued by the Mayor's Committee on Food Supply, New York City, 1914.

Don't forget to keep a scale in the kitchen and test the weight of all you buy.

Don't allow the dealer to weigh in the wooden butter dish. This is important, for some have fancy tin edges and weigh from one to three ounces.

Don't let fancy packages fascinate you, for you are frequently paying heavily for the container and getting less of the product.

Don't ask for a cupful, 5 cents' worth, a package, a handful, a glass, a bag, a bucket, or a bucketful of any product. Ask for a known weight or measure. Other terms mean nothing in the law.

Don't buy in small quantities if you can avoid it.

Don't misunderstand cheapness for economy.

Don't be afraid to carry a bundle.

Don't gossip with your dealer while he is weighing your purchases. This is one of the many practices resorted to in a dishonest shop.

Don't be ashamed to do your own shopping or to ask questions.

Don't hesitate to notify the Bureau of Weights and Measures if you have any suspicions whatever.

One especially depressing thing about false measures is that from them the poor suffer most since they are most likely to seek "bargains" where they are apparent but not real, from those who are unscrupulous enough to resort to fraudulent practices.

An examination then of the present distributive system shows that it has a fundamental defect, the removal of which is necessary in order to eliminate its evils. The shortcomings of present distribution are all the logical results of one cause, namely, *the quest for concealed competitive profits*. The distributive machinery is run not in the interest of the consumers whom it is supposed to serve, but in that of the dealer whose interests are opposed to their interests. In order to survive, the dealer must continually seek his own profit. Thus the distributive system is wrongly motivated, and so long as this is unchanged there is little hope of relief from better physical facilities for handling goods, terminal warehouses, and the like, nor in new mercantile systems—the chain store, public market, or other innovation. Of better facilities and methods there is certainly great need, but the advantages of these are not at all sure nor even likely to reach the consumer so long as they are in the hands of interests which have no incentive to pay the producer more or charge the consumer less. At present, with the machinery of distribution under the control of the profiteer, there is and will be incentive to invent more economical

methods *only so far* as the advantages accruing therefrom can be appropriated by the middlemen. This effectually cuts off all hope of radical reform in this quarter.

THE FUNDAMENTAL REMEDY

Is it not therefore evident that the only way out is to get the distributive machinery out of the hands of a third party with alien interests and into those of the consumer public? How is this to be done, and is it feasible?

Let consumers build and own the machinery of distribution and operate it in their own interests. Here is the thoroughgoing remedy for the distributive problem of the consumer. By these means wiser selection is facilitated, pure goods are assured. The very lowest costs are made possible and the consumer is sure he is not exploited.

When, through coöperation, the push of the profitmaker is superseded by the pull of the normal balanced demand of the consumer, he will no longer have forced upon him through well-nigh hypnotic influences the many things which he would be better off without; nor have his choice deflected to the buying of wrong things. Each normal need and desire of the consumer will have a fair hearing since there will be no profit motive incessantly to obtrude certain pushed articles. The removal of the din of aggressive advertising and salesmanship and the relegation of these agencies to their proper place will make for a better "balanced ration" for the whole man. With the disappearance of the profit motive and its disproportionate pushing of certain articles, facilities for wiser selection will be evolved to the immense advantage of the consumer.

How the problem of debased goods and short measure will be solved by an agency run for and by consumers is obvious. Such an agency, under the direction of salaried, professional buyers freed from the bias of private profit is the solution offered by the coöperative buying system.

"In my opinion," says Dr. Wiley, "the desire for profit is the sole motive for adulteration and debasement. If that principle could be eliminated from the food trade, all adulteration and debasement would naturally cease."

In a coöperative store where private profit is unknown, there can be no temptation to debase goods in any way. For the purchasers at the store are also the owners.

The coöperative manager is the professional purchasing agent, hired and retained by the store society to do its buying, run its store,

and act as its impartial goods expert. He is a buyer, an executive, and, most of all, a trained food specialist capable of carrying his inspection further than that of the housewife, however careful she may be.¹

The manager and his staff cannot defraud their clients, the consumer-owners, except by plain stealing or receiving bribes from parties of whom they buy, which is a wholly different matter, rarer, more easily detected and punished than the crime of debasing goods, and because it is clean-cut, a far less insidious influence.

The manager's interests are identical with those of consumers; he buys for them as a trust with rights and duties clean-cut, and he is free from all incentive to the practice of petty deceptions.

With the successful establishment of the coöperative system will automatically come the end of the short measure and impure food problems.

6. REMEDIES: MARKETING FARM PRODUCTS²

It will be observed from this enumeration of defects in the marketing system that they are not only very numerous, but that they are of great diversity.³ Intensive studies of marketing individual commodities will reveal many more shortcomings, most of them of a special nature. A sane program for remedying these defects must be based on careful, dispassionate investigation of various practices involved in the handling of individual commodities. A remedy which will cure weaknesses in the marketing of butter will not be applicable to the system of marketing hay. It follows that there is no single or simple universal remedy, or no revolutionary process which may be applied effectively. Numerous examples have been given in preceding chapters of steps that have been taken to improve conditions; the remedies that have been and may be applied in the future may be classified broadly under four heads: (1) coöperation among farmers and among consumers; (2) associative effort on the part of middlemen; (3) education; (4) Government regulation. The development of direct marketing through public markets and by parcel post and express might also be included, in spite of the limitations which render this method practically impossible for the great bulk of farm products raised in the country.

¹ No longer warned to "let the buyer beware," she is freed from anxiety and in a position to exercise her choice of goods unafraid of debased goods or unjust prices.

² Adapted from L. D. H. Weld, *The Marketing of Farm Products* (1916), pp. 448-51. (The Macmillan Company.)

³ See Reading 3, pp. 667-69.

COÖPERATION AND ASSOCIATION

As for coöperation among farmers, it has been pointed out that farmers' organizations are of special benefit in overcoming the defects of marketing at country points; coöperation on the part of consumers through coöperative stores or through informal arrangements to buy in large quantities offers some hope of reducing the cost of living, although it has been shown that the savings made possible by coöperative stores are not sufficient to attract city consumers to assume the responsibility and give the time necessary to their development as yet. The suggestion to reorganize the whole system of marketing from producer to consumer along coöperative lines is impracticable and fanciful. On the whole, the wholesale trades have reached a high degree of efficiency, and there is no reason to believe that that efficiency can be increased, or even approached, by applying the coöperative principle. Furthermore, the defects of the present system can be remedied much more easily in other ways than by attempting any such revolutionary methods. Coöperation has its place, and deserves propagation and direction along business lines, but let us not be misled as to its possibilities.

One of the most potent factors in the development of marketing efficiency has been the associative action of wholesale traders through their produce exchanges and general trade organizations. The functions of these organizations in furnishing market places, in adopting rules to govern trade practices and to eliminate dishonest dealing, and in acquiring and disseminating market prices and information, have been described in detail. It is not generally realized how beneficial these organizations really are, and partly because of misinterpretation of their objects and functions by certain classes of people, they have never received the credit due them. It is true that many of the large exchanges are too self-satisfied and too contemptuous of public opinion to lead them to bring about certain reforms demanded of them, and that some of them have resorted to monopolistic practices which have brought them into ill-repute, but on the whole they represent the highest type of marketing efficiency that has been reached, and they are constantly increasing this efficiency as well as raising the standard of commercial honesty.

EDUCATION

Education as a remedy for marketing deficiencies should take a large variety of forms. In the first place the general public should be

taught about the methods of marketing and functions of middlemen so as to disabuse their minds of the gross absurdities frequently voiced. The fundamentals of marketing should be taught in every elementary economics course, and there should be special courses in all colleges and universities which aim to offer a comprehensive treatment of this field of economics. Courses in marketing are now being given in many agricultural colleges, but on account of a lack of scientific literature on the subject, and judging by the opinions expressed by some of the teachers, it is not certain that valid principles are being taught in all cases. Special courses should be given to educate managers for farmers' organizations, and our educational institutions, especially schools of commerce, etc., should also undertake to teach the principles of retail merchandising. Consumers must be educated to the fact that the elaborate services that they encourage and demand from retail stores add to the cost of marketing and to the prices of goods. But most of all—or as the first step—the truth about the marketing system must be made available to the public so as to destroy the misconceptions that have arisen through ignorance and through the writings and preachings of ill-informed reformers.

GOVERNMENTAL ACTION

Finally, we come to the question of Governmental action as a remedy for the defects of the marketing system. Numerous instances of laws passed by the states and Federal Government indicate the extent to which Government control is now exercised and suggest many fields for possible extension. State laws governing the grain trade, cold-storage warehouses, the grading of apples, etc., have been referred to, and it has been seen that the Federal Government has enacted legislation governing future trading in cotton, establishing a standard barrel, etc. There are also many laws and city ordinances which, although intended primarily for other purposes, have direct bearings on the methods and costs of marketing various commodities. The internal revenue taxes on oleomargarine, renovated butter, and adulterated butter, the pure-food laws, city ordinances controlling milk supply and distribution, and the supervision of weights and measures, and many other laws are cases in point. Special state laws for the control of commission merchants, the activities of state marketing commissions, and the activities of the Federal Government through the Department of Agriculture, however, deserve more than passing notice in this place.

7. SOME WAYS TO IMPROVE MARKETING¹

1. Improvement in the marketing system requires that consolidation of uneconomic and therefore inefficient middlemen and their plants be brought about wherever needless duplication exists. Only by such action will it be possible to reduce operating expenses at local country points.

2. Larger income for farmers hinges upon the development and maintenance of working relations between farmers and the private or coöperative middleman serving them. The purpose of establishing working relations between farmers, middlemen, and consumers is to increase the proportion of products of high quality and to impress each farmer with the fact that he must decide for himself whether he can afford to produce more or less of a given commodity for the price which his organization is able competitively to secure for him.

3. Efficient distributing organizations depend upon local units for commodities to supply the market. To develop the greatest efficiency requires the employment of the most expert management obtainable for building up country-wide marketing relationships. Management of this sort is not justified unless the volume of business is large enough to stand the expense. Hence to insure adequate volume the organization should include as many as possible of the farmers growing the given commodity. No more assembling or processing plants should be operated than are required to render services most efficiently to all those requiring such services. Similarly, the fewer distributing organizations there are the better, provided none is either oversize or undersize.

4. Organization on the commodity basis for a large part or the whole of a given agricultural industry tends to eliminate hazards in farming and in marketing which were inherent results of the old unorganized scheme of marketing. In other words, greater stability is assured because organization represents the kind of machinery required to cope with a problem of this magnitude. No individual produces a large enough quantity to enable him efficiently to distribute products over a whole nation. Most middlemen at present do not handle a volume great enough to accomplish this task very well. These are the reasons why industry-wide agricultural organization is essential to efficient marketing.

¹ Adapted from Theodore Macklin, *Efficient Marketing for Agriculture* (1921), p. 371. (This is the Summary of Ch. XVIII, "Organization the Basis of Improvement in Marketing.") (The Macmillan Company.)

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