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MARKETING
THE
TECHNICAL PRODUCT

BY

ERIC N. SIMONS

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PREFACE.

It is characteristic of our modern industrial system that it functions without plan, without conscious purpose, and with an almost sublime disregard of certain needs and urgencies of the present time. Too often, in consequence, it is assumed that the driving-force behind all industry, all organised manufacture, all the thinking and making and doing that go on in a large industrial city, is the accumulation of private profit. Unless the stimulus of private profit existed, it is said, there would be no industry.

The writer is not here concerned with the political and sociological aspects of this suggestion, but it may be as well for him to point out at once that, in his opinion, the origin of modern industry lies not in the facilities it affords for personal gain, but in the expanding requirements of a populous and developing world. Industry exists not to supply profit, but to supply goods to consumers. If private persons shirked the manifold responsibilities of supplying public needs, the public would, for its own sake, have to step in and arrange for the carrying on of industry, or starve and perish. This is not rhetoric, but sound common-sense. The world must have goods, as good and as cheap as possible. That matters far more than the question of who supplies those goods, the private person or the State.

It is claimed that under the existing capitalistic system goods are supplied more expeditiously, efficiently, and cheaply than under any other system that the wit of man can devise. This may be so, but not even the staunchest defender of existing methods could or would, if pressed, maintain that industry is as scientifically and completely organised as it

might be. Production methods in many large works fall far short of perfection. In not a few, plant and personnel are alike mediocre. As a cynical Yankee once said, "In the States they have the scrap-heap outside, in England it is often inside."

Of late years, and notably since the Great War, there has been a marked improvement in the organisation of our national productivity. But the equally important, equally vast question of efficient distribution has been left largely untouched by manufacturers and reformers alike. It is of no use to have a sound heart if the lungs are diseased, or to have sound lungs if the heart is diseased. Similarly, efficient production is, if not useless, at least incomplete if distribution is inefficient.

The neglect of this question of distribution is as marked among the sociologists as among the business men of whom one hears and reads so much. The writer has searched vainly in most of the great Utopias for some outline of the ideal scheme of distribution. Even the modern Utopias make little or no attempt to grapple with a problem so immediate and vital. In all the ideal states presented for our inspection as models of a perfectly functioning civilisation, this problem of getting goods from the works of the manufacturer into the hands of the consumer is left to the reader's imagination to solve, except for a vague gesture in this direction or in that. Bellamy makes some attempt in his *Looking Backward* to outline a solution from the consumer's point of view, but he stands practically alone in this respect.

However good a product may be, the world will not buy it until the world knows about it. Distribution is not fully efficient until those who can afford the product know about it, and those who ought to have it, whether they realise this or not, know about it also and have some chance of getting it. Similarly, manufacturers must get to know far more about their markets than they do at present. Whoever in the years to come is responsible for supplying the community

with goods, whether it be individual manufacturer, big combine, State, municipality, or industrial guild, will have to face this question of getting those goods into the right market, at home or abroad, with the greatest possible efficiency.

In view of its aim, the present volume—the substance of which originally appeared as a series of articles in the *Mechanical World*—accepts the existing industrial system and its methods, and tackles the problem of distribution entirely from the present practical point of view. It is specific, definitive, at times dogmatic ; but its aim throughout is the purely patriotic one of helping British manufacturers to obtain, by tried and tested distributive methods, that share of the world's trade that the excellence of their products deserves.

Mr. H. G. Wells once said : " Manufacture well organised is as beautiful and poetical a thing as there can be in the world. It's the chief triumph before young Englishmen to see that it *is* well organised." If this little book has helped, in however slight a degree, to improve the existing organisation of manufacture, it will have amply repaid the labour of its compilation.

ERIC N. SIMONS.

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MARKETING THE TECHNICAL PRODUCT.

CHAPTER I.

§ 1. *Scientific Distribution.*—The success of any industrial enterprise rests upon two things: successful production and successful distribution. It is axiomatic that successful distribution cannot take place without successful production. What is less frequently appreciated is the effect of good distribution—or marketing—upon production methods. To give an example: if the demand for a product is suddenly doubled by effective sales work, the factory producing it has to meet the demand by extending its acreage, which usually means installing up-to-date and economical machinery; by improving its plant; or by working its existing plant, for perhaps the first time, at full pressure. Extended acreage or improved plant should result in cheaper and more scientific production. Where plant is left untouched but is worked at full pressure, the overhead charges on each single article manufactured are reduced, since each shop or machine is turning out much more work in the same time, and the losses due to idle plant are cut out. There is, in consequence, a greater profit on each article sold. Part of this profit can, at discretion, be applied to the reduction of selling price, thereby stimulating demand still further; and part to the improvement of plant or the furthering of research, with an inevitable reaction on production methods. So that if, as is admitted, the continued success of any manufacturing works depends upon maximum efficiency in production, then quick and effective distribution of its products by efficient marketing is no less essential, if only because of its effect on production methods.

The general problem of distribution, so far as it affects the maker of technical products, can be resolved into the development of successful sales and marketing methods. More and more, with the increase in size of engineering establishments, does it become a matter of urgency for the manufacturer to study how he can get his goods out of the factory into the works of the user. The old way of making a product speculatively and trusting to a handful of hard-working salesmen to sell it, was wasteful and ineffectual, except where the product actually met an unsatisfied need and more or less sold itself. Industry to-day needs bigger schemes than that. Marketing plans must be as well arranged, as scientific and complete, as production plans; otherwise, plant will stand idle for want of orders, and profits will be lost.

The purpose of this book is to outline, briefly and clearly, the essentials of good marketing, with special reference to technical products. Every phase of methodical selling is dealt with in turn, and although suggestions and advice are generalised so that they can be applied to any engineering product, examples of methods that have proved their worth in actual practice are, wherever possible, given.

It may be as well to begin by defining the technical product. This is necessary, because the considerations that govern the marketing of technical articles differ widely in some respects, as will be explained later, from those that govern the marketing of ordinary goods, and confusion between the two classes is to be avoided if possible. Roughly, then, the technical or engineering product is one manufactured for use in connection with some specialised engineering or technical purpose. It is bought by technical men, or by technically-minded men, such as engineers, manufacturers, mechanics, mine-managers, shipbuilders, etc. It is not intended for ornament or show. Thus, tool-steel, files, lathes, overhead travelling cranes, electric trucks, are all technical products; starch, fountain-pens, motor-cars, fruits, silks, cotton, are not. Classification

is always dangerous, however, and there are a number of products that do not fit easily into the above definition, such as whale-oil for hardening steel, cotton-waste, etc. These are certainly manufactured for specialised engineering purposes, and are bought by technical men ; yet the writer hesitates to describe them as technical products in his interpretation of the phrase, although literally they comply with it. Yet in so far as they are sold to technical men for technical purposes, they need to be marketed in pretty much the same way as the technical product proper, and may therefore temporarily be considered as such.

As has been stated, the considerations that govern the marketing of technical products are dissimilar in many respects to those that govern the marketing of such articles as fountain-pens or motor-cars. And it is important, if full benefit is to be derived from this book, that some knowledge of wherein these differences lie should be acquired by the reader.

In the first place, the market for technical articles, in contrast to that for most general products, is limited. A single example will illustrate this : anyone who can write—man, woman, or child—may be considered a prospective fountain-pen buyer ; but the proportion of fountain-pen " prospects " likely at some time or other in their lives to buy a lathe is small. The general product has a national, sometimes a world-wide, appeal ; the market for it is limited only by the size and distribution of the population. The technical product has a specialised appeal only, and its market does not wholly depend on the size of the population, nor does it necessarily lie where the population is thickest.

Secondly, the market for the general product is, broadly speaking, uniform in character, whereas the markets for technical products are often dissimilar. For instance, tool-steel may be sold to the following industries : shipbuilding, coal-mining, general engineering, automobile manufacture, etc. In each of these industries it may be bought on different

principles and put to a different specialised use. But a fountain-pen—to adhere to the example chosen—can only be used for writing. Nobody uses it for poking the fire, or for knocking in nails. The maker of a technical product has to familiarise himself with the requirements of many different markets, whereas the maker of the general product has usually to study but one—the public at large.

Thirdly, technical products are usually bought by men, and by men who select not as individuals following their private tastes, obeying personal idiosyncrasies, or satisfying personal needs, but as intelligent agents for their particular unit of an industry. (One has to exclude from all serious discussion the inefficient buyers—fortunately fewer than of yore—who allow themselves to be unduly influenced in their buying by motives of personal friendship or personal gain.) For this reason, emotional appeal, one of the strongest forces in selling general products, can seldom be employed in connection with those of a more technical character. The technical product, more than any other, has to be sold by appeal to pure reason—by closely worked out argument and convincing proof. For instance, when selling a lathe to a steel-foundry one is compelled to use strictly utilitarian arguments. It is of little use to talk about the handsome appearance of the lathe, or to appeal to the pride-of-possession motive, so useful in selling pianos. And although the buyer of the lathe might, in the same week, also buy a piano, the arguments influencing his choice would in each case be different. He would buy the lathe *for his firm*, and in doing so would exercise his powers of critical inquiry, would examine it in the light of his technical knowledge and experience, and would judge its value by its design, what it would do, what it would save in hard cash, and so on. On the other hand, he would buy the piano as an individual, gratifying all sorts of private whims ; he would judge it, not so much by how it was designed, as by how it looked and played, what his wife thought about it, how much room it would take up, and so

forth. Furthermore, in an engineering works the buyer stands or falls by the purchases he makes. A few bad blunders may mean dismissal, and all that dismissal in this age of economic insecurity implies. He dares not, therefore, allow himself to be too strongly influenced by extraneous appeals. But in buying for himself, he can take more risks. Bad judgment may mean inconvenience, but not catastrophe. Hence, emotional appeal has here more play.

Lastly, while the market for—*i.e.*, the number of possible buyers of—technical products is comparatively small, the question of cheapness or dearness, of hard cash, is more important than in the case of the general product. For instance, a man will buy a player-piano whatever its price if he wants it badly enough. He will deny himself other things in order to get it ; in other words, he will make sacrifices for it. But no man will sacrifice in order to buy an overhead-travelling crane ; he will only install one if the actual economies he can effect in using it make it worth his while. This does not mean that price is all-important in marketing technical products, but only that practical considerations outweigh all others in the long run. This is not so with the general product. High-speed steel is much dearer than carbon tool-steel, but it has a large sale, since every high-class manufacturer who really needs it buys it because of the saving in time and money it enables him to make.

This brief summary by no means exhausts the differences in marketing considerations that separate the two kinds of product ; but those that remain are of a minor character, and can be dealt with incidentally as they become relevant.

It is obvious that these differences must, of necessity, be reflected in every phase of marketing the goods. They will have to be taken into account when organising a sales department ; when considering a sales policy ; preparing a sales campaign ; designing advertisements and sales literature ; drawing up sales letters ; instructing salesmen ; and so on. Not only is it necessary, therefore, for the sales manager of

every engineering firm to understand general marketing principles, but he must also be thoroughly conversant with their special application to the technical side. He must know just when and where the exigencies of the special market demand a departure from generalised methods, and how these departures are to be carried out. It is here that many quite efficient advertising men and sales managers, accustomed to selling in general markets only, fail when they undertake the marketing of technical products.

The scientific distribution of technical products, or of any product for that matter, means their transference from manufactory to place of consumption, or use, at maximum speed with minimum cost. This sounds like a traffic problem, but in reality it is a problem of sales, the successful solution of which depends upon five things : first, the article's efficiency and suitability to the various markets ; secondly, the detailed analysis and steady extension of these markets ; thirdly, bringing the product to the notice of the consumer or user by means of salesmen, advertising, circularising, publicity literature, etc. ; fourthly, the cost of selling each individual article ; fifthly, the rate at which sales are made.

Failure to study these five points at every end and turn is the surest cause of waste in selling. To sell haphazardly is as suicidal as to produce haphazardly. Perhaps nothing will illustrate this more clearly than a list of selling mistakes that, to the writer's personal knowledge, are being made daily by manufacturers of technical products.

Manufacturer No. 1 is spending hundreds of pounds to advertise his product in a market for which it is, at present, wholly unsuitable because of a certain feature of design. (The suitability of the product to the market is not sufficiently studied.)

Manufacturer No. 2 is regularly circularising buyers in an industry that has no use for his product. (Imperfect market-analysis.)

Manufacturer No. 3 has just seen important orders go to a

rival because, not having realised that the development of wireless telegraphy opens up a new market for his product, he has not catered for the demand. (Failure to study, explore, and strive for the extension of, markets.)

Manufacturer No. 4 does not advertise. (Failure to inform the market of his product.)

Manufacturer No. 5 is spending twice as much in selling his product as is economically justifiable. (Imperfect analysis of sales-costs.)

Manufacturer No. 6 does not know accurately how much of his product he can expect to sell in a given time, and has overproduced. (Imperfect knowledge of the market's saturation-point.)

These mistakes are all so many sources of actual or potential waste, and, as indicated above, wastes in selling are as costly as, if not more costly than, wastes in production. None is essential, and all could be eliminated without much trouble. They must sooner or later be eliminated if British engineering industries are to retain their grip on the world's markets.

It has been said that the future of any industry lies in its research-laboratory. It might be added that it lies also in the sales-laboratory. However great the improvements in production carried out as a result of research, they will have little effect upon the sale of the product unless, by efficient marketing methods, they are made widely known in the way most likely to stimulate sales.

The modern engineer must pay as much attention to his sales department as to his laboratory. He must be as well organised in the one as in the other; must be prepared to cast his bread upon the waters that it may return to him sevenfold. A stinted sales department is unlikely to be effective. Nevertheless, it is important to remember that there is a limit which sales expenditure should not exceed. Unfortunately, much misleading nonsense is talked by certain professional advertising men about the impossibility of spending too much money on selling. The manufacturer must

bring a practical mind and consistent common-sense to bear upon this question. If the results of his expenditure do not adequately recompense him, he must go into the reasons for this thoroughly and without sentiment, as if he were examining production-costs and balance-sheets. He must not too readily conclude that he is spending more than he ought. The probability is that he will discover something wrong—not with the amount of his expenditure, but with the manner of it. Nevertheless, if careful, thorough, and patient investigation fails to reveal any defect in his general marketing methods, he is probably spending too much. For example, a manufacturer who takes advertising space in a dozen similar technical journals may be over-saturating his market—*i.e.*, conveying his message too many times to the same persons—in which case his selling cost will be high in proportion to his total sales. He might cover exactly the same ground without any loss of prestige or efficiency by advertising in six journals only. The resultant saving would considerably reduce his costs, and would doubtless bring them into correct relation with his total sales. *Over-saturation of a particular market is perfectly possible*, and should be avoided. But it is only possible to reach conclusions of this sort by keeping a strict account of sales results and sales expenditure, in which each item is analysed and its importance estimated. Exactly how this is to be done will be described later. Here it is necessary only to emphasise the importance of this methodical examination of selling costs.

The prosecution of a successful marketing plan demands many qualities; energy, optimism, care, thoroughness, common-sense, ingenuity, are all needed consistently. Too early discouragement is an almost certain cause of failure. Having made up his mind to organise his selling activities scientifically, having put his hand to the plough, the technical product manufacturer must not look back until the last furrow is turned. There is only one secret in selling: perseverance. Luck enters into it very little. Given a good and well-made

product ; given a well-organised sales department employing scientific methods ; and success is practically certain.

§ 2. *Preliminary Organisation.*—A small book could be written on the early stages of marketing alone. These stages cover analysing the market, fitting the product to the market, and collating the data acquired as a result of close investigation. In this general survey they can be discussed but briefly, and with as little technical detail as possible.

As was pointed out in the first section of this chapter, the most important operation by far is the analysis of the market for the technical product, whether this product be a well-tried article or a new invention. Unless the analysing be carried out as well as the sources of information will allow, any sales—or advertising—campaign that follows it will be conducted in, at the best, a careless and haphazard fashion. It may succeed or it may not, but the probabilities are that it will not.

The great essentials in analysing a market are to know just what to look for, and how to look for it. The first problem resolves itself into a number of simple questions, for which the manufacturer must seek answers.

1. What industries use or are likely to use the particular product ?
2. Do these industries all use the product or apply it in the same way ? If not, can they be grouped according to the use they make of it ?
3. How are these industries located ; what is their relative importance in terms of capital and labour employed ; how do they compare with each other in regard to the amount or numbers of the product they can absorb ?
4. On what principles does each industry buy ?
5. What is the best means of selling to each industry or group ?
6. Will the product suit each industry without modification ?

These six questions, if answered fully, will give a very satisfactory basis on which to begin the building up of an efficient marketing-plan.

But it must not be imagined that this brief list of questions constitutes the whole of the inquiries that the market-investigator has to make. Each question is but the precursor of a dozen others more particular and intricate. The scientific analysis of markets takes much time, needs considerable perseverance and patience, and cannot be carried out without certain necessary expenditure.

The clearest, most intelligible way of indicating the variety and scope of the inquiries to be made before the marketing campaign for a technical product can safely be begun is to take a particular technical product—such as high-speed steel, with the selling of which the writer has had a great deal to do—and outline step by step an imaginary investigation into the potential market for it.

In this case the answer to Question 1 would give, roughly, the following list of industries: shipbuilding, general engineering, automobile engineering, railways, coal-mining, chemical engineering, etc.

Question 2: All these industries use the product for the same purpose—*i.e.*, cutting metals, etc.—but use it on different classes of work and in different tool-forms. They can only be classified roughly and imperfectly according to application or use—*e.g.*, railways use high-speed steel largely for turning worn steel loco-tyres.

Question 3: As a body, these industries do not show any important phenomena of geographical distribution. Taken separately, they tend to group themselves in certain well-defined centres—*e.g.*, shipbuilding on the Clyde and Tees, automobile manufacture in Coventry, etc. On the other hand, many industries, such as general engineering, defy geographical classification. (Answers to the two subordinate clauses of Question 3 are statistical, and need not be given here.)

Question 4: Shipbuilding and collieries buy largely on price, but this does not affect high-speed steel, which is seldom sold at competitive prices. Performance in use, simplicity of heat-treatment, and reputation of manufacturer,

are the principles that chiefly influence buyers in all these industries.

Question 5 : Direct, by means of salesmen and advertising.

Question 6 : Yes.

The actual report of the investigator will, of course, go into much greater detail than this ; but here it is only necessary to indicate briefly the kind of answer that has to be made to these six leading questions. One must now turn to the subordinate, or, rather, more particular questions, a list of which is appended. To save space, those only are enumerated that have a serious bearing upon the ultimate success of the campaign.

1. Is the product a novelty, a specialty, or a standard article ? (In other words, is it on the market for the first time ; is it peculiar to one firm alone ; or is it a product widely known and used, and manufactured by many competing firms ? In the case of high-speed steel the answer is : a standard product.)

2. Is it a standard article in every industry in which it is used ? (Yes.)

3. Are its applications standard applications in every industry ? (Yes.)

4. What special features make it suitable for the various industries enumerated ? (Ability to cut at a high speed, ability to cut extremely hard materials, long life of cutting-edges in tools made from it, make it a desirable product in all the industries mentioned.)

5. Of what intensity is the competition ? (Extremely keen.)

6. What industry affords the greatest likelihood of rapid sales ? (General engineering.) And why ? (Less conservatism, more scope and variety of application.) What obstacles do the other industries present ? (Various details given.)

7. Past, present, and probable future state of trade in each industrial market ? Relation of this to volume of product absorbed ?

8. How do prices compare with those of home competitors ?

(Identical, except for one or two minor firms outside the Association.) What is the relation of these prices to the savings, if any, that can be effected by the consumer using the product?

9. Any foreign competition? (Yes.) Any competition from products of a different character or composition, but fulfilling the same purpose? (Yes.) How do prices compare in both instances?

10. What does it cost to pack and deliver the product (*a*) to station; (*b*) to customers' works within various (stated) radii; (*c*) f.o.b. various (stated) ports; (*d*) c.i.f. certain (stated) ports? What is the custom in regard to payment of these charges? (Extra charge for packing. Manufacturer pays carriage.)

11. Is the product bought for direct use as an accessory to some other product; or as an integral part of some other product, into which it is built? (Generally for direct use, but sometimes made into tools and sold in the manufactured form.)

12. Is it bought for resale? (Yes, by certain merchants.)

13. Is it necessary to carry stocks? (Yes.) If so, standard sizes?

14. Is the product to be branded or labelled? (Both.)

15. Does the product have to pass physical tests? (Not as a rule, but sometimes it is tried out against other steels or actual work in an engineering shop; and sometimes its composition has to conform to a certain standard specification.) If so, what and by whom designed and carried out? Cost of these?

16. Who does the buying in each industry, and on whose recommendation are orders distributed—*e.g.*, purchasing agent, chief engineer, works foreman, production manager etc.? Who buys when the product is for resale?

17. Can repeat orders be obtained, or does each successful sale mean a customer "dead"—*i.e.*, unlikely to need further supplies, as in the case of a complete cement plant? (Repeat orders can be obtained.)

18. Can orders be obtained for spare parts, accessories, or repairs? (No.)

19. Is engineering service necessary when once the product has been sold to ensure that it continues in running order and satisfies the purchaser? (No, but if the steel fails in use, it may be necessary to send an expert over to investigate.) If so, what is this likely to cost in relation to the selling price?

20. What is the smallest order on which a worth-while profit can be obtained? Will it pay to refuse orders smaller than this? What industry gives the largest average orders, and what is the size of these?

21. Is the sale constant, irregular, or seasonal? (Constant, when industry flourishing.) What factors govern the fluctuations of demand? Can demand be stimulated or influenced?

22. Percentage of sales costs in relation to (*a*) selling price; (*b*) profits; (*c*) total turnover?

23. Is it necessary or possible to sell through retailers? (Not necessary, but possible for small amounts only.)

24. Amount of competitive advertising? Its character? Media selected?

This may seem a long string of questions, and, as will be imagined, satisfactory answers to each one entail a good deal of thorough investigation. It need scarcely be repeated that whereas brief replies only are given above, full and comprehensive figures and data will have to be supplied in actual practice. It is possible to have too few facts on which to build up one's selling plans, but the writer has never yet heard of a case where too many have been collected. Of course, where the product concerned is well-established and has been on the market for some length of time, many of the questions will answer themselves; but this should not tempt the manufacturer into shirking those that remain. Not only will the correct and careful answering of the questions indicated prove invaluable in estimating the prospects of success, but it will also provide endless stores of material to

be drawn upon for the conducting of sales and advertising campaigns. The importance of this will be amply demonstrated later. A close and comprehensive review of his position, such as is furnished by this sales-catechism, puts the manufacturer in touch with every aspect of the marketing problem, and enables him to plan scientifically the course of his campaign.

But it is necessary now to indicate how these queries are to be answered. Whence is one to obtain the requisite facts and figures? Space does not permit of a full examination of

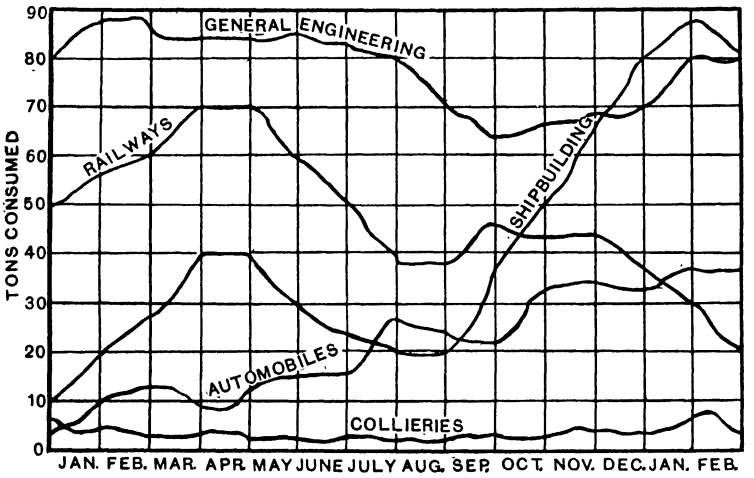


FIG. 1.

every method adopted, but a few practical suggestions may be of value. It is, of course, allowable to reduce the cost of these preliminary investigations to the lowest figure consistent with efficiency, and therefore the writer does not favour the plan of sending out special investigators to study each market or group of industries. This is a process not only slow but costly, and unless the investigators have been thoroughly and systematically trained it is not certain to bring the desired results. A better and simpler method is to combine

judiciously the statistical information furnished by various Government reports and blue-books with the information obtained on the spot by experienced salesmen. It must be remembered that perfect accuracy is at present an ideal that cannot be realised, though it should be striven for. Only when one comes to search for trustworthy figures in regard to various industries does one perceive the amazing paucity of information. Nevertheless, much valuable material can be obtained from trade journals, from the records and compilations of trade associations, from the census returns, directories, and so forth. But most of this is of a generalised character, unlikely to provide the accurate details demanded. It is here that the salesman, and in a less degree the trained and experienced engineer, come in. The salesman is in daily touch with the various markets; he can provide authentic information concerning the sales resistance to be expected in each market, the buying habits of each group of industries, the strength or weakness of competition, the suitability of the product to the industry or industries, the character and methods of buyers, etc., etc. The engineer can suggest new markets for the product, give details of its performance and composition, supply figures and facts in regard to production and delivery.

A method successful in certain cases, where the character of the product allows it, is to localise a section of the market and conduct a preliminary campaign against that section only —not so much to make extensive sales as to secure trustworthy indications of the probable reaction of the market as a whole. This is presumably indicated by the reaction of an average section of it. For example, a high-speed-steel manufacturer might attack general engineering establishments in the Birmingham district only, in order to test the efficiency of his marketing plans before going to the expense of a big general campaign spread over the whole country.

As a rule this method, the object of which is chiefly to obtain data, should only be employed for standard products,

TABLE I.—HIGH-SPEED STEEL.

Industry.	Consumption in Tons per Month.	Sizes and Shapes Used Most.	Used for	Grade of Steel Used.	Remarks.
Chemical Engineering	33½	Rounds ¼in. to 3in. Squares ¼in. to 3in. Flats 1in. × ¾in. to 3in. 2in. × ½in. to 3in. 3in. × ¼in. to 2½in. Bevels Nil. Ovals Nil. Hexagon Nil. Octagon Nil.	Turning cast iron and steel in Herbert and other lathes.	Use both 14% and 18% tungsten grades, but mostly 14%.	Price important. Competition keen. Hardening usually done by experienced workers. Pyrometers used in 75% of the heat-treatment shops. Buyers conservative. Recommendation or complaint from toolroom foreman usual cause of change in source of supply. Quick delivery required.
Coal Mines	29	Rounds $\frac{3}{16}$in. to 2in. Squares $\frac{3}{16}$in. to 2in. Flats 1in. × ½in. 2in. × 1in. Bevels Nil. Ovals ⅞in. Hexagon Nil. Octagon Nil.	Repair work in small lathes, etc. Some for twist drills and reamers.	Mostly 14% tung., but some 18% in the smaller sizes.	Price important. Competition keen. Heat-treatment arrangements not very efficient. Few pyrometers used. Buyers not always keen to pay the price. Buying not done on scientific principles of economy, except in one or two instances. Delivery important.

such as are widely and regularly used. It is usually carried out by intensive circularising, the object of which is to draw replies from the prospective customer, stating the general character of his requirements, on a questionnaire form provided for the purpose. Thus, a supplier of oil for steel-hardening might try to coax out of manufacturers the extent of their oil needs, the qualities of steel they are in the habit of hardening, and other statistical details of a similar kind. If sufficient replies were received, the information thus obtained would be extremely valuable. These circular letters must, however, be carefully worded, and the questionnaire be drawn up as briefly as possible, though without omitting any essential detail.

Assuming that as much information as possible has been got together by the various means outlined, and that every question has been answered more or less satisfactorily, it now becomes necessary to collate the various particulars and reduce them into concise form, so that they may be digested, thus enabling the decisive estimate to be prepared.

In this respect charts and tables will be found invaluable. Consumption figures for each industry can, for example, be clearly indicated by means of graphs. Fig. 1 shows how this may be done in the case of high-speed steel, though the figures given are purely imaginary. Table I. gives a convenient tabulation of certain other important figures and facts in connection with the sale of the same product. These two illustrations will serve as a broad general indication of the way in which acquired data should be presented. In themselves, their details being purely fictitious, they have no value.

§ 3. *Internal Organisation.*—The market having been analysed on the lines indicated in the preceding section, the next step is to organise the internal sales activities, in order that when once the product is launched on the market, or when the plan of campaign for stimulating existing sales is put into operation, it shall not fail for want of system and method at the manufacturer's works. The object of a sales

department is to create and increase sales, and to improve relations with customers of long-standing. It achieves these objects by carrying out analyses of the various markets, by inventing and putting into practice sales and publicity schemes of all kinds, and by keeping in the closest possible touch with the production and research departments.

The pivot on which the whole department revolves is, of course, the sales manager. He is the brain of the organisation. In many firms he is also a director of the company, but this is not essential so long as he keeps himself acquainted, or is kept acquainted, with the general directorial policy. His work is, broadly, to recommend changes of selling policy to the board of directors, or to whoever is responsible for the carrying on of the business, whenever such changes are necessary, or to confirm the policy already in force. He decides one way or the other according to the extent and trustworthiness of the market information in his possession. He then becomes responsible for the efficient execution of whatever policy is decided upon, and for this reason it is essential that he should have the co-operation of, and maintain a close connection with, his own staff, the foreign and colonial agencies and branches, the salesmen or technical demonstrators, the research department, and the works.

Perhaps the best way in which to indicate the ideal organisation plan for a technical sales department is by a diagram Fig. 2. Here is shown the co-ordination to be striven for.

To control efficiently these multifarious activities, the sales manager must have a strong belief in the personal touch. In the United States regular monthly conventions or meetings are arranged in which the salesmen and sales department staff gather together and discuss sales problems and policy. These conventions are necessary in America because of the much greater distances separating the salesmen from the head office, and the infrequency of their visits. In the British Isles, where the practice is for the majority of the salesmen to report at headquarters once a week, usually on Saturday mornings,

these monthly meetings are less necessary, though by no means useless if they can be arranged. In any case the sales manager should seize every opportunity to discuss individual selling problems with each representative. In addition, his delivery manager and publicity manager should have free access to him at any time for consultation or discussion.

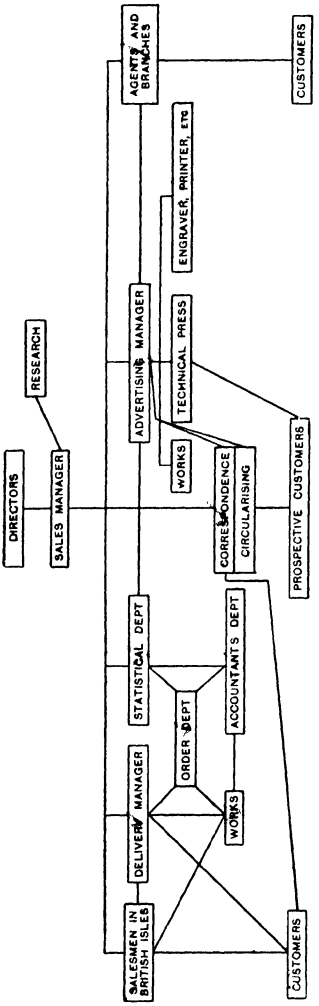


FIG. 2.

Every sales department should include a delivery manager, whose work is to speed up deliveries of specially urgent orders, to investigate delays and complaints, and in short to be a thorn in the side of the works departments. It must be clearly understood that he does not supersede the production staff, nor does he form a part of it. He belongs essentially to the sales department, and he represents customers' interests. He takes the customer's side, and in order that he may do this effectively it is necessary that he should be external to the production staff. He has to plead the cause of his customers with foremen, shop managers, and so forth, and his chief requirement is consequently tact, both verbal and literary. He should be able to write a good conciliatory letter, and to secure what he wants from the production staff without offending their susceptibilities. Patience, dignity, and restraint will be demanded of him continuously.

The publicity manager is another integral part of the sales organisation. His functions, summarised, are to supervise, in collaboration with the sales manager, the technical execution of the selling campaign. He will design and prepare the text of advertisements, etc.; design and write catalogues, booklets,

SALESMAN'S REPORT.

Firm visited.....JOHN SMITH & Co. LTD.,.....
† Address.....Albion Works,.....
.....Mitchamville, ...
.....Lincs....
Saw Mr.....Harrison..... †Status.....Buyer.....
Date of visit.....23/2/'23.....
Object of visit (*a*) Following up { enquiry / quotation } dated.....

State here which letter applies. ....(*e*)....

(*b*) Following up catalogue.....sent .....
(*c*) Ordinary call. (*d*) Special call, reference your letter.....
(*e*) New people: call to request orders.
(*f*) .....

† Requirements:....High-speed steel, squares and flats, small sizes.
† Present suppliers: .....Edgar Allen & Co. Ltd., Sheffield.....
Prices paid (if known).....Usual prices.....
Report of visit: ..Not requiring large quantities. Satisfied with present ..suppliers, but if contemplating a change will bear us in ..mind .....
.....
.....
.....
(If more space required, write on back of sheet ruled for the purpose.)
Financial position: .....Good.....
Signed.....HARRY JONES.....

† If this information has been supplied before on a similar sheet, repetition is unnecessary. Report all important changes in personnel as soon as known.

FIG. 3.—A SUGGESTED FORM OF OFFICIAL REPORT FOR SALESMEN.

and circulars; arrange stalls at industrial exhibitions; edit and contribute articles to the technical house-organ, should one be published by his firm; and order printing, engravings, drawings, advertisements, etc. He will have to compile charts

and tables showing the progress of the various publicity and advertising schemes for which he is responsible ; to keep an eye open for sales ideas ; and, in short, to serve as the general idea-hunter and fact-assimilator for the department. He must have freedom to rove at will in the various workshops, and be given every possible facility for acquiring technical knowledge to help him in his work. Personally, he must have the gift of self-expression. He must be quick-witted, mentally alert, intensely idea-ed. He should be systematic and careful, with a good memory ; and, above all, he should be conscientious, because only a conscientious man will write convincing advertisements.

The statistical department figures in every well-organised sales plan. In addition to details of output, its function is to provide the sales manager with figures that will justify his advertising and selling expenditure at the end of the financial year. It may be useful to tabulate briefly some of the facts and figures this department should supply :

1. Total sales in all departments of the works for the year.
2. Total publicity and advertising expenditure for the year.
3. Total sales of each individual department for the year.
4. The proportion of publicity and advertising expenditure absorbed by each department.
5. Total expenditure for the year on catalogues and other printed matter.
6. Total expenditure for the year on circularising.
7. Comparative figures for the previous year in each case.
8. Total number of new accounts opened during the year.
9. Total value of these new accounts.
10. Percentage of these new accounts directly traceable to advertising.
11. Percentage directly traceable to salesmen's activities.
12. Percentage directly traceable to catalogues, etc.
13. Percentage directly traceable to circularising.

In the preparation of these figures the statistical department will find it essential to maintain close contact with the order department, the accounting department, and the works staff.

The sales manager should have his own correspondence department kept quite separate from the correspondence staffs of other offices. From the clerks or typists who compose it, initiative and intelligence rather than mere mechanical accuracy are demanded, and should be rewarded by higher

rates of pay and increasingly responsible work. Every attempt should be made to interest the staff in the schemes they are carrying out. They should be made to feel that they have a part in the great work of attracting customers and keeping them satisfied.

The actual work and qualifications of technical salesmen call for more extensive treatment than the present section allows, and in a later chapter this subject will be dealt with in detail. Reference has been made to the necessity for frequent communication between the sales manager and the salesmen he employs. While monthly meetings are not absolutely necessary in this country, it should be a rule, except where distance is an obstacle, as in the case of travellers living in Ireland or Scotland, for salesmen to report at least once a week at headquarters. This not only enables them to discuss current sales-problems informally with the sales manager and his staff, but also enables them to make the acquaintance of the production and office staffs. Nothing is worse for the success of any sales department than misunderstanding between salesmen and home departments. Hostility, or a belief that their interests and those of the production staff are divergent or conflicting, prevents many salesmen from putting enthusiasm into their work. Much of this trouble can be eliminated by regular interchanges of views, and occasional friendly conversation, such as a visit to headquarters allows.

Another point to be borne in mind is that it will often be a great help to the salesman, and incidentally to the sales manager himself, if the latter from time to time joins him in his travels and accompanies him in visits to important firms. More especially is this the case when the sales manager is also a director. There are few buyers who will turn away a director from their doors. After all, many firms buy each other's products, and the director soliciting orders one day may be influencing the placing of his own firm's orders the next. The added prestige of a directorial visit is useful to the salesman, often enabling him to get into touch with buyers

whom he has never before been able to see. To the sales manager the visits are useful because they enable him to judge of the ability of his salesmen, and their standing in their respective districts; of the attitude of buyers and users towards the product; and of the factors to be considered when planning a new campaign. To go out "on the road" occasionally also prevents the sales manager from narrowing his views and adopting too stubbornly a standpoint limited by the four walls of his office.

While on journeys some sort of daily report of work done and progress made should be sent in by each salesman. English practice is usually to give a detailed account of each call made, the whole forming a long letter. In most cases separate letters are written to each department, so that none shall be compelled to wait until another has dealt with its own particular portion. This system of daily letters has, however, certain disadvantages, and many attempts have been made to introduce some more satisfactory form of report sheet. Usually these have failed for the reason that they demanded too much clerical work from the salesman. But there seems no reason to suppose that a report sheet could not be devised that, while giving the salesman no more work than his present daily letter, would remove the serious disadvantage of inaccessibility that attaches to the latter. A suggestion for such a sheet is given in Fig. 3. These forms could be made up in triplicate sets and bound in manifold books. One copy of each would, of course, be retained by the salesman. The remaining two, one coloured and the other white, would be sent to the head office for each firm visited. Of these, the white forms would be circulated to the appropriate departments and dealt with as is the ordinary letter at present; the coloured forms would go to the sales manager and be filed under the customer's name in a separate cabinet.

In this way the sales manager would be able at any moment to turn up the complete record of a salesman's calls on any

particular firm. Under the existing system of daily letters he has to wade through an accumulation of miscellaneous information of varying extent and value in order to find the particular report he wants. The form shown in Fig. 3 is, of course, generalised, but could be adapted to suit any particular technical product.

The motto of the sales department should be "Service." It has been conclusively proved by more than one technical manufacturer that *the surest way of keeping customers is to help them in all possible ways to get the best out of the machines or materials with which they have been supplied.* One of the best and most appreciated forms of technical service is that rendered by the manufacturer's research department or laboratory. Besides carrying out experiments for the purpose of improving the quality of the manufactures, the research laboratory or department should be at the customer's disposal for the solution of any problem connected with the particular product he is using. For instance, one large firm places a complete experimental crushing and grinding plant at the service of prospective customers. Here samples of ores or stones are crushed or ground in their own presence, so that they may judge for themselves of the ability of the various machines to cope with their work. The same firm gives disinterested technical help in the solution of problems connected with the use of steel, and employs its large and efficient laboratory for this purpose without making any charge for the service rendered. It must be borne in mind that policies of this kind would not be pursued if experience had not shown them to be well warranted by the results achieved.

Turning now to the agencies and branch offices, contact with these must necessarily be less easy to establish than with the other sections of the sales department and works. Nevertheless, much can be done by means of a free exchange of information on all selling problems, whether local or general, and by keeping branch offices and agencies well supplied with

stocks of publicity matter, catalogues, etc. From time to time, whenever this can be arranged, the heads of the various overseas offices should visit headquarters, and on every such occasion the sales manager should be given or should create an opportunity to discuss sales policy and special sales campaigns with them. It cannot be denied that foreign and colonial markets often present very different selling problems from those at home, and therefore, unless he has a specialised knowledge of some particular market abroad, the sales manager should be prepared to modify his sales policy for any country or dominion in accordance with the suggestions made by his overseas representatives. The latter, being on the spot, are bound to have a wider and sounder knowledge of the needs of their own markets. Before any radical alteration in selling policy is made, each agent or branch office should be notified, and expressions of opinion should be invited. In more than one instance the disapproval of a foreign agent has led to a wise abandonment of too-hastily-altered production plans. For example, a certain firm decided to increase the thickness and weight of its files, charging a slightly higher price, the theory being that files of this thickness would stand an extra amount of recutting, which would more than compensate for the increased cost. The representative of a certain country dissuaded them from this scheme, however, by pointing out that not only were his customers thoroughly averse from having their files recut, preferring to use light files and discard them when worn out, but there were no facilities in the country for recutting, and no user would bother to ship his old files back to England for the purpose. This question of overseas marketing is dealt with at greater length in another chapter.

The importance of having all these various sections of the sales department properly organised before any serious change is made in the selling plans of the firm, or even before the selling policy be arranged, if the product is new, cannot be too strongly emphasised. Before an army can become effective

in the field, much good staff-work has to be put in. The staff is as necessary to the sales army as to the more militant body. It must precede, not follow, the detailed operations that lead to big business.

CHAPTER II.

§ 1. *The Sales Policy.*—The first task confronting the sales manager and his staff is not immediately to sell the product, but to formulate a definite sales policy. Among English manufacturers of technical products there is far too much haphazard selling. Huge sums are spent on advertising and circularising without any systematic attempt being made to apply the tremendous force of these weapons in a scientific and effective way. Travellers and demonstrators dissipate their energies and enthusiasms in attacking the wrong markets. In those cases where more than one product is manufactured, imperfect balance is maintained in the amount of sales effort devoted to the products of different departments of the works, so that while one department is working at top speed, another is slack. If the product is good and needed enough, the firm manufacturing it may contrive to muddle through and go on paying yearly dividends. But whether this is the ideal to be aimed at in these days of strenuous competition may be doubted.

The sales policy should be decided before any selling activities begin. It corresponds to the plan of campaign of an army in the field. It gives every section of the sales department, from salesmen to advertising manager, a definitive and recognisable objective. It co-ordinates all their efforts, and enables the necessary adjustments to be made to suit changing conditions. It cuts out the wastes and inefficiencies due to poorly planned selling. In short, it is the idea behind the business.

The sales policy must take into account all the factors that govern distribution. Nothing is unimportant here. More than one business has failed through omitting to consider some minor and incidental feature. Bessemer's great invention was a commercial failure until Robert Mushet discovered that the addition of spiegeleisen to steel would solve all difficulties. Thousands of pounds' worth of steel was wasted in the old days through occluded gases in ingots, until some genius discovered that the admixture of a minute quantity of aluminium would " kill " the trouble. The parallel extends to the selling side of a business. Just as production often depends for its perfection upon some apparently trivial discovery, so marketing often depends for its success upon some apparently trivial point. As an example may be mentioned an American firm of saw manufacturers who suddenly changed their marketing policy and were immediately rewarded by enormous sales. Instead of concentrating, as previously, upon hardware dealers and ironmongers, they decided to advertise directly to, and circularise, the householder, amateur mechanic, private-garage proprietor, and all other potential private saw-users. The actual distribution was effected through dealers as before, but the attack was upon the householder instead of upon the dealers themselves. In a very short time those men of all classes who needed a handsaw began to specify that particular brand because they had seen it advertised, compelling the dealers, willy-nilly, to stock them. While competitors still continued to concentrate their selling activities on the dealer, these makers reaped the reward of a carefully thought-out change in policy.

It is obvious that the possession of a properly prepared sales policy will react enormously upon the various selling activities. For instance, the salesmen will know exactly what talking-points of the product to bring most prominently before the notice of the consumer. The publicity manager will be influenced in the selection of advertising media ; in the choice of copy-angles or lines of attack ; in his circularising

plans ; and in the preparation of catalogues and handbooks intended for use by the consumer.

Before a sales policy can be formulated, the market analysis figures and facts described in the second section of Chapter I. must be thoroughly digested. This done, the sales manager, upon whom the work of devising a sales policy largely devolves, should next turn his attention to the product or products that he intends to market. A number of important questions have first to be answered—

1. What is the position of the product in the market? (Is it entirely new? Is it an improved product supplanting obsolescent types? Or is it but little different from competing products already on the market?)
2. On whom must the selling activities concentrate? (On the ultimate consumer? On the dealer? On the manufacturer of an appliance into which the product fits? Or on the buyer, as distinct from the actual user?)
3. What methods must be used to conquer the market most efficiently and in the shortest possible time? (Advertising? If so, in technical, trade, or general press? Salesmen? If so, technically trained or ordinary? Circularising? Etc., etc.)
4. What product or products yield the most profit?
5. What product or products can be the most rapidly produced?

Some of these questions will have been answered already by the market analysis results, but the duty of the sales manager is to take these answers and mould them into a clear and connected policy.

To illustrate this a little more forcibly, it is useful to give concrete examples and carry them through step by step to show how a sales policy is formulated. In reference to the first question, an example of an entirely new product would be a machine or steel tool capable of drilling manganese steel.

An improved product aiming to supplant obsolescent or existing types would be a circular saw with inserted high-speed-steel teeth. A purely competitive product would be a cast steel file.

Taking any or all of these three kinds of product, the sales manager would then have to answer Question 2. Dealing with the new product first, the drilling machine, it would be useless to concentrate selling activities on general dealers, or on manufacturers of appliances, since this sort of machine is not sold by retail means, nor does it form an integral part of or an accessory to another product. The buying power would, therefore, be found to lie between the ultimate consumer—*i.e.*, the shop-engineer—and the official buyer. On either or both of these the seller of the manganese-steel drilling machine would have to concentrate his efforts.

When one turns to the improved product, in the instance chosen, an inserted-tooth saw, the problem becomes slightly complicated. Although this kind of saw is but infrequently if ever sold through general dealers, there are certain manufacturers of sawing machines who buy circular saws to fit into them. The sales manager would have to take these into account when formulating his sales policy. And probably, since the ultimate user himself would have to report on or recommend the purchase of this kind of tool, the sales manager would decide to attack him rather than the official buyer without practical experience.

The more competitive the product, the greater the importance of the official buyer in the marketing plan. This is a fairly safe generalisation to which there are exceptions, of course, none of which is important enough to disprove it. It certainly holds good in the case of cast steel files. There are easily fifty or more reputable firms in this country all making these tools, and it would be difficult for even the most experienced file-user to state dogmatically that the one maker supplies a better article than the other. It is at once apparent that reference, before buying, to the actual consumer of the

files will, therefore, be less frequent than if the product were some specialised instrument, needing skill and knowledge in its application, and possessing modifications and improvements that would enable wide differences between its performance and that of its rivals to be detected. The buyer will act largely on his own initiative, and will only change his source of supply if frequent and justified complaints are received from the file-users in the works. The selling activities will, therefore, take the form of an attack upon the buyer rather than upon the file-user.

At the same time, there is a large general trade in files through the hardware and ironmongery shops, and it may pay the sales manager to include this potential market in any plans he may devise. On the other hand, a file being a tool used solely for hand-work, there is no need to consider the possibility of selling it as a built-in part of or accessory to another manufacturer's product.

The question of selling-methods will, of course, be governed by the answers to Question 2. If the dealer is the focal point of the marketing plan, then advertising will have to be done through the medium of the appropriate retail trade journals. If the general user or man-in-the-street is the principal person to be considered, then the general press will have to be used. To reach the ultimate factory consumer, whether works engineer, shop manager, foreman or hand, the technical press will be selected, as it will be for the manufacturer of any appliance in which the product is used. Official buyers can usually be reached through the technical press, but men of this class often read journals giving information concerning raw materials, business-organisation methods, and so forth. It will therefore pay the sales manager to study the journals read by the buyer for his own firm. The functions of circularising and the qualifications of technical-product salesmen will be treated fully in separate chapters.

The answering of Questions 4 and 5 will indicate clearly to the sales manager the relative importance in his sales

schemes of each product manufactured. For instance, if he makes all three products mentioned in this article, it is probable that the machine for drilling manganese steel, being a novelty and having no competition to face, will yield a higher profit than the other two. It will, therefore, pay him, other things being equal, to spend more money and energy on selling this particular product than on selling the others. At the same time, his plant has a certain maximum output of these machines, and his aim will be to secure enough orders to keep it working at full speed continuously. When this has been achieved, a little of the sales pressure may be diverted from the marketing of the machine to assist the sale of the more rapidly produced files and special saws. This does not mean that files and saws will be neglected in favour of the drilling-machines until sufficient orders for the machines are received, but only that when apportioning to each product the money set aside for selling-costs, a larger proportionate sum will be devoted to pushing the sale of the machines than to selling the tools ; and that adjustments in expenditure will take place from time to time as one or other department of production needs a respite from or an increased flow of orders. The more accurately and quickly these adjustments are made, the greater will be the benefit to the factory.

If all the questions enumerated have been satisfactorily answered, it will be found that the broad outlines of a sound selling policy emerge. Thus, if the product be drilling-machines of the kind indicated, the policy will doubtless be to sell to those manufacturers who handle manganese steel in the unwrought form ; such as tramway and railway point and crossing makers ; and to any other potential users of manganese steel. It might even be found advisable to help create a market for manganese steel itself, so as to increase eventually the demand for the machines. Some form of co-operative advertising scheme, in which the manufacturers of manganese-steel goods and the makers of the machines for drilling the metal would combine for their common benefit, might be

planned and embarked upon. Furthermore, since the high cost of certain manganese-steel products is due as much as anything to the practical impossibility of boring holes through them other than by hot punching or by the oxy-acetylene flame, or by using cores and casting in the foundry, the saving in time and money effected by the introduction of a drilling-machine, were such invented, would appeal immediately to the production engineers of those works that constituted the market, and it might be decided to concentrate upon these men solely. It would perhaps be found worth while to offer free-trial installations of the machine for a certain period. Trained demonstrators might be necessary. In brief, a whole crowd of similar considerations and possibilities would press upon the sales manager, and eventually the complete sales policy, the idea underlying all the actual campaigns and activities, would be drawn up and settled.

The advantage of a comprehensive policy has already been described. To ensure that it shall be thoroughly understood by all concerned, the sales manager should set it down clearly on paper and distribute copies to those most concerned, such as the salesmen, the publicity manager, the Board of Directors, and so forth. No harm will be done by taking the heads of production departments into his confidence and explaining the scheme to them. Many of them may have had technical experience in just those very markets that are to be attacked ; their observations will do no harm, and may prove of inestimable value.

It will often be found advantageous to confer also with the service department of some technical journal of high standing or influence. Many journals can contribute, and are only too glad to contribute, helpful advice on and criticism of marketing schemes, and their wide knowledge of the market enables them to point out many factors that might otherwise be overlooked. In addition they can provide invaluable information regarding trade conditions, the psychology of buyers, and the needs and characteristics of the particular market. Some journals carry

the service they offer so far as to supply, at need, complete advertising schemes; to design advertisements; to write the text; to make suggestions; and, in short, to supervise completely the technical execution of the sales policy. For firms possessing small capital and no advertising experience to speak of, these service departments are extremely useful. But the manufacturer who can afford it will find it pays him to organise and equip his own sales staff, and to prepare his own sales policy and plans.

§ 2. *The General Sales Campaign.*—The sales campaign is the general putting into practice of the sales policy. It comprises the employment of every effective means to secure success. It is the detailed plan of operations. In parenthesis it may be remarked that it is as essential for the smaller manufacturer of technical products to unify his selling activities by means of a properly organised campaign as for the larger. From one point of view, in fact, it is even more important that he should do so than that the large manufacturer should. The selling mistakes made by the latter can be rectified in course of time. His organisation is powerful enough to withstand a heavy loss. It may stagger, but it does not necessarily fall. The mistakes of the small manufacturer may, however, mean complete disaster. Therefore he must avoid inefficient selling methods, and plan and organise as carefully and economically as possible.

The object of a sales campaign is to secure the desired results, as indicated by the sales policy, with the minimum of delay and expense. There are two kinds of sales campaign, the general and the special. With the special campaign it is not proposed to deal at this moment; but the difference between the two kinds may quite relevantly be defined. The general sales campaign covers the continuous, every-day selling plans—such as advertising, circularising, demonstrating by means of expert engineers, and so forth. The special campaign, on the other hand, is, as its name implies, something over and above the normal sales activities, to be planned

and considered quite independently of them. Its objects and justifications will be enumerated in a section specially devoted to it. Here it is only necessary to indicate that it presents its own problems of organisation and execution.

In the planning of a general sales campaign the first and perhaps the most important point concerns the total amount of money that can safely be spent either on stimulating or on making sales. It will be best for the manufacturer to set aside a definite amount, covering a period of, say, twelve months, for selling costs. To decide exactly what this amount shall be is not easy, and will be found to depend largely upon the previous history of the product. If it is a well-established article, a smaller sum will probably be found necessary than will be the case if it has not hitherto been put on the market. But too much importance should not be attached to the relation the sum set aside bears to previous expenditure on selling, to profits, turnover, or production costs. Some manufacturers allow 10% of their total profits for selling expenses; others base their allotment or appropriation on a certain definite percentage of their total turnover; others add a percentage to the total production charges. These methods are all more or less arbitrary, and in the majority of cases insufficient day-to-day records of expenditure are kept to allow of certainty that the appropriation has not been exceeded, nor is the campaign planned scientifically enough to enable the manufacturer to judge whether the sum allotted is too large or too small.

The only sound plan is to allow the sales manager to estimate, as carefully and accurately as possible, the sum necessary to ensure the successful carrying out of the sales policy. He knows the salaries that he will have to pay to his staff and salesmen. He can obtain from his advertising or publicity manager an estimate of the expenditure on the activities for which the latter is responsible. And eventually, by virtue of his experience and knowledge, he should be able to present a fairly clear idea of the minimum appropriation that will

meet his needs. The Board of Directors can then compare this figure with whatever other figures they like, and the question of whether or not the sales manager's requirements shall be fully met will then largely answer itself. It is directorial business to find the money, and if they cannot, they will say so. In considering the matter they will inevitably make all sorts of arbitrary financial comparisons, from which they will draw equally arbitrary conclusions according to their dislike of or belief in methodical selling and advertising. In this they will be doing no more than many sales managers habitually do, with perhaps less justification. The whole point is that no one knows exactly what relation selling-costs should bear to any of the gross figures, turnover, profits, production-costs, or whatever it may be. 10% may be a right proportion for one product and a wrong proportion for another. It is as well that this should be realised, because there are advertising quacks who pretend to have an authentic answer to this vexed question. Until selling is a much more exact science than it is to-day, any such claim must of necessity be unsubstantiated. One point is important. If the appropriation suggested by the sales manager is considered too large for safety and is cut down, the scope of the sales campaign as originally planned must be reduced correspondingly. *It is useless to attempt an ambitious campaign with an insufficient appropriation.*

Having fixed the total amount of money to be expended on sales, the next problem is to distribute it among the various branches of marketing. The advertising manager will need a considerable amount for advertising, circularising, and other publicity work. Travellers and demonstrators will take up a certain sum. There may be exhibition space to pay for. All these requirements will have to be carefully estimated. It is here that the importance of the efficient market analysis and the carefully worked-out sales policy become evident. Given trustworthy data, these various estimates should not present great difficulty. In every case a certain margin should be

allowed for emergencies. For instance, a special number of a technical journal may offer an unforeseen opportunity to the publicity manager to reach a particular class of consumers. He should be able, if he deems it advisable, to take extra advertising space without feeling that in so doing he is weakening his advertising campaign in another direction. Just as there is always a reserve army in warfare, so there should be a reserve of money in marketing, to be applied as circumstances may dictate.

The appropriation distributed, the next task is to begin operations. Roughly speaking, a sales campaign is divisible into seven classes of activity. These are—

1. Outdoor selling.
2. Advertising.
3. Circularising.
4. Selling by print.
5. Expert demonstrating.
6. Trade or technical exhibiting.
7. Overseas agency work.

The part played by each of these classes should be clearly understood before operations are begun, and for this reason the writer will indicate briefly why each class is important.

Outdoor selling means selling by means of regular salesmen —men who go about the country soliciting orders. The necessity for outdoor selling remains the same, whether the advertising of the product be extensive or otherwise. Advertising does not, as has been mistakenly supposed, supersede the commercial traveller. On the contrary, it helps and simplifies his work in many ways. The outdoor salesman is the only member of the sales force, or of the whole works for that matter, who regularly comes into contact with the actual consumers of the product. His experience and insight are therefore of the utmost value to the manufacturer. He serves as a connecting link between producer and consumer, and establishes friendly relations with buyers and users. His activities are not restricted to selling only. He acts as an intermediary in smoothing over difficulties, obtains in the course of conversation facts and figures that might never be

committed to paper, puts the customer's case fairly before his own employers, and, in short, acts as a trusted negotiator in all cases where tact and discretion are required. It will thus be seen that the qualifications of a technical-product salesman must be exceedingly high, and that the work he has to do could not very well be replaced by any of the other sales activities.

Advertising is probably the most important of the technical manufacturer's sales activities, though it does not supplant or minimise the value of the others. It is the most important for this reason—that by its means the manufacturer broadcasts certain authoritative statements concerning himself and his products, and more or less stakes his reputation on the truth of what he says. The errors of a salesman can be rectified before great harm is done. They are localised and individual errors; even the most irritated buyer, offended by some indiscretion on the part of a salesman, does not wholly convict the salesman's employers of guilt. But the personality behind an advertisement is a corporate personality. Any mistake or misstatement in a published advertisement is looked upon as a mistake on the part of the manufacturer himself. The failure of a salesman is known to those few only with whom he has come into contact. The failure of an advertising campaign cannot be concealed in this way. Whatever wrong things have been said have been said publicly and in many places. No instance is known where the failure of one salesman has caused the failure of the firm employing him. But, on the other hand, dozens of instances could be quoted showing conclusively that wrong tactics in advertising have caused nothing less than this.

This being the case, it is obvious that advertising has to be taken with the greatest seriousness. It is one of the most powerful of selling factors when used properly, but only of late years have English technical manufacturers begun to appreciate its significance. The results achieved by those who have paid special attention to it are sufficient proof in themselves of its enormous value.

The function of advertising is to spread information concerning the products of the manufacturer; to give adequate reasons why those products should be bought and used; and to build up goodwill for the firm manufacturing them. Advertising covers much more ground than a salesman could, and in much less time. Good technical journals go into the hands of several thousands of readers, all keenly interested in technical products and their performance; some go once a week, others at longer intervals. To bring the product before the notice of all these readers in the same length of time by means of salesmen would need an army.

Circularising is likewise an important selling factor. Its advantage is that it presents the case for the product cheaply and economically, and delivers the manufacturer's message to particularised prospective buyers or classes of buyers. It does not cover exactly the same ground as advertising, though it is a useful adjunct to it. The virtue and strength of advertising lie in its continuity. No manufacturer can afford to stop advertising for a few months and then resume. Advertising, to be efficient, must be continuous. But circularising can be carried on intermittently, or as occasion warrants. For example, a statement was made recently to the effect that slate-waste could be used for cement, experiments having proved this possible. An extended demand for slate-waste would mean an increasing need on the part of the slate-quarries for crushing and grinding machinery. The sales manager of any firm making this class of machinery would probably find it expedient to draft and send out a circular letter to the managers of slate-quarries pointing out this possible new outlet for slate-waste, and suggesting the use of his own machines in its production. At the same time he might also begin advertising his machines continuously in those technical or trade journals that appeal specially to the slate industry. The two forms of selling would thus supplement each other in the most effective manner.

Under the heading of circularising comes also what is known

as " mail-order " selling, or, in other words, direct selling by and through the post. While this is not generally feasible in the case of complicated machines, or technical products of a highly specialised kind, it has been employed successfully in the marketing of small tools and similar articles. Files, lathe-tools, hack-saw blades, and so forth, are all capable of being sold in this way.

As all these seven classes of selling activity will be dealt with at length in later chapters, undue space will not be given at this moment to a consideration of their most economical use. What is aimed at here is to give the broad outline of a general sales campaign, showing its main constituents and indicating how these are inter-related.

Selling by print covers all publicity-matter distribution. It includes the preparation of adequate catalogues, instruction-booklets, leaflets, handbooks, and so forth, but excludes folders or brochures written specially to accompany circular letters. The catalogue, especially if designed to meet the requirements of the ordinary buyer of technical products, plays a big part in influencing the placing of orders. Its value lies in its convenience and permanence. An advertisement is seldom, if ever, cut out of its setting and kept. A circular letter is generally destroyed when read and dealt with. A salesman calls and goes away again. But a catalogue can be filed for reference, and in most efficient purchasing departments is so treated. It is what printers love to call it—a " silent representative " of the firm that issues it. It tells at greater length, and in a more intimate way than either the advertisement or the circular dare attempt, all about the manufacturer and his products. It can be referred to again and again.

In the same way, the handbook of technical instructions intended for the actual user of the product or products creates goodwill and preserves the memory of the manufacturer. The importance of these handbooks is of the highest order, and a later chapter will give practical hints on how to design them successfully.

In all well-organised sales campaigns, expert demonstrators must be taken into account where the product allows of their employment. An expert demonstrator is not required, for instance, to push the sales of files or cotton-waste or pig iron. But such things as grinding-wheels, high-speed steel, twist-drills and complex machines, may all at some time or other need the services of an expert to clinch an order. The ordinary salesman cannot be expected to have the same technical knowledge as the man who has received engineering training. Some technical-product manufacturers have wisely taken the precaution of giving their salesmen workshop experience, or have made salesmen out of expert workers. But even so, the number of expert workers likely to make good salesmen is small, and *vice versa*, so that the existence of a small subsidiary body of expert demonstrators is a great asset to any manufacturer, however good his regular sales force.

The work of the expert demonstrator is to run tests at the works of the prospective purchaser, to investigate breakdowns or alleged failures in use, to educate actual users by showing them how to get the best work out of the product, and, when required, to attend at trade exhibitions for demonstration purposes.

Trade exhibitions make but infrequent demands upon the sales appropriation of the technical manufacturer, unless his product is connected with some industry that supports an annual "show." Nevertheless, their importance should not be under-estimated. They have two advantages. One is that they attract large numbers of overseas buyers. The other is that they catch prospective purchasers in a proper buying mood. Practically every visitor to a large trade or technical exhibition has some direct interest in or desire to buy the latest and best equipment for his own branch of industry. A well-planned exhibit may strike his eye at the right psychological moment and lead to the placing of large orders, or at least to a further investigation of the product that has attracted him.

Finally, the work of overseas agencies and branch offices concludes the list of selling factors in a general sales campaign. Their task is to extend the reputation and sales of the product in distant countries, and to suggest or devise whatever modifications may be necessary to suit the needs of their particular markets.

§ 3. *The Special Sales Campaign.*—From time to time, in the marketing of almost every technical product, there arise occasions for the introduction of what is known as the special selling campaign. This campaign must be clearly defined. It is neither a mere financial extension of the ordinary selling campaign, nor something that supersedes or replaces it. The general campaign goes on from day to day, irrespective of fluctuations in the market. The special campaign has a definite beginning, and usually an equally definite end. Whereas the general campaign has for its aim a continual and progressive stimulation of sales, the special campaign has some direct and immediate objective. Once this objective is attained, the campaign terminates. It will be as well to indicate briefly the five chief considerations that make the special campaign necessary. They are as follows:

1. General fresh impetus to sales.
2. Bringing out a new product.
3. Clearing out stock.
4. Stimulating falling sales of a particular product.
5. Extending uses of a product, or opening new markets.

To make the scope of these special sales efforts plain, each of the five objectives must be examined in turn, and an intimation given of how it can be reached by the methods outlined.

1. The desire to increase the sales turnover has been set down first because it is the most frequent motive for the inauguration of a special campaign. It may be that for some months, or even years, the turnover has been slowly declining, or has merely remained steady. This is in most cases due to a lack of sales energy, and is certain to result in disaster if allowed to go on. A simple increase in expenditure on normal selling activities may be unsuccessful in restoring sales to their

proper level, or in increasing them to the figure desired. In fact, this is generally the case. The special campaign, on the other hand, has often the effect of a tonic. It is more definite in plan and objective than the ordinary campaign, and can therefore concentrate more effectively on its particular aims. It is, or should be, different in conception and execution from the usual marketing methods, and therefore arouses more interest and attention. And finally, it does not draw attention from the general selling campaign; it helps and supports it, just as the presence of a striking leader in a journal causes its other contents to be read with greater attention.

2. To bring out a new product in the quickest and most effective way, the special campaign is essential. Its difference from the general selling plans attracts attention, which is just what a new product requires. Usually a new product, as distinct from the slight modification of an old one, has meant the establishment of a new producing department. This new department, according to strict marketing rules, is entitled to its proper share of the sales expenditure. The point to be decided is whether this share shall be devoted to a mere extension of general sales activities—a little larger advertisement space, a few more circulars, and so on—or whether it shall be devoted to a campaign apart from those and concentrating solely on the new product. To the writer's way of thinking, and he does not speak without experience, the second is the only sound method.

3. Unless a special campaign is used to clear out stocks, assuming these to be large enough to warrant the expense, the employment of the general sales campaign for this purpose is compulsory. Yet any such employment is, from the point of view of scientific marketing, uneconomical. It means that the balance of expenditure is disturbed. If the general sales campaign has been correctly planned, the cost should be borne by each department in the right proportions, as regulated by their relative importance. But any sudden diversion of the general campaign to the selling of a particular department's

stocks means that other departments get less than their proper share of attention, while that one gets more. Even if the immediate result is satisfactory, in that the stocks are disposed of, there is a strong probability that compensating losses will have been suffered by the other departments owing to temporary neglect.

4. For precisely similar reasons, the special campaign alone is economical and effective in stimulating the declining sales of a particular product. Theoretically, this argument could be met by maintaining the sales expenditure on other departments at its normal level, and devoting extra money to the furtherance of sales in any particular department through the general sales campaign. But, as has already been stated, this does not work well in practice. The exigencies of the situation demand something more novel and arresting than the general campaign can give. (This only means that the money is spent in a different way.)

5. For the same reason a special campaign is more effective than the general campaign in opening up new markets for the product, or in teaching the market new uses for it. It has greater flexibility, is usually more opportune, and has all the power that concentration on one end gives.

It does not follow that because the special campaign is different from, though complementary to, the general sales activities, it needs less careful planning. To secure the best results, the sales manager should regard it and organise it as if there were no such thing as a general campaign. It should be studied as a whole, complete in itself; and the first necessary thing is to define its scope. Is it to stimulate general sales, or is it to reach a quite new market? Is it to be a national campaign, or one devoted to a particular section of the public? If to a particular section, is this section geographical, occupational, industrial, or does it admit of some other special classification?

It cannot be too strongly insisted upon that these points need proper attention. Vagueness, diffusion of effort through

lack of a fixed objective, mean failure. It is not sufficient to say : " Let us organise a special selling campaign ! " The precise aims and bounds of the project must be fixed from the start.

As an example, two instances may be given. A was the manufacturer of a special steel, considerably used in general engineering shops. He discovered that the same material could also be used in the manufacture of safes. B invented a new tool for use in the motor industry. Both decided to employ special campaigns over and above their general and continuous selling activities : A, because he wished to extend the uses of his product (Point 5) ; B, to bring out a new article (Point 2). In A's case a national campaign was unnecessary. His steel was already nationally advertised and sold. The new application specially concerned a particular industry on which he decided to concentrate. Thus, before he had worked out the details of his campaign, he knew exactly its limits and objectives.

B's case was not so quickly settled. He had, it is true, a market to hand in the motor industry ; but he had to bear in mind that his product when placed on the market would speedily be imitated. There were potential users for it among garage owners, amateur mechanics, and so forth. If, therefore, he concentrated solely on the motor industry he would probably be ousted from the other markets by his imitators, who would speedily perceive the adaptability of the tool to other uses. He embarked finally upon a big national campaign with a view to capturing all the available markets and creating a reputation for his product before his imitators could get to work. Here again, as will be seen, the scope of the campaign was clearly thought out before any move was made.

Having arranged the broad details of the special effort, the next points to consider are ways and means. There are seven important questions that call for answers at this stage—

1. Is the product to be specially advertised ?
2. How long shall the campaign last ?
3. Will any special literature be required ?
4. Shall postal circularising be tried ?
5. Who are to be approached, and how ?
6. Is the sales force to be increased ?
7. Shall special terms or prices be offered during the period of the campaign ?

These do not exhaust the list of questions that may have to be dealt with, but they are the most applicable to technical products as a class. Other questions will probably arise out of the special character of particular products and their markets.

1. In the majority of cases, special advertising is the life's-blood of a special sales campaign such as is being described. It is this that gives a note of difference, of distinction even, to the whole. There are, however, exceptions to this rule. Where the product is easily imitable the effective period of the campaign is the length of time between the product's appearance in the market and the appearance of the first imitation. The more publicly the product is advertised, the speedier will appear the imitation. In such a case it may be advisable either not to advertise it at all, or to advertise it in less conspicuous ways. For example, a certain steelmaker making lathe-tools conceived the idea of supplying a set of these tools in a neat box, together with a booklet of treatment instructions, to small users. The idea was to sell complete sets, and thereby stimulate the sales of the steel from which the tools were made. (The small user, such as the amateur mechanic, or the owner of a little workshop, etc., has not been greatly studied by steel manufacturers, and usually obtains his supplies from ironmongers and merchants at fancy prices.) It was seen that a big market could be tapped in this way. But to advertise these sets extensively would have been to open the eyes of every steelmaker in the kingdom, and of makers abroad as well, to this new market. In a few months every manufacturer would have been advertising similar sets and reaping the reward of the original designer's imagination.

To prevent this, the manufacturer in question avoided a national campaign, and relied on " small " advertisements in

various technical journals, such as are read by small users of steels. In addition he described his sets fully in his own house-organ, and distributed this among likely buyers. The aim was to get the sets known to consumers without clamouring so loudly as to draw the attention of other manufacturers to the new market.

These cases are, nevertheless, exceptions to the general rule. There must usually be a fair proportion of the special campaign expenditure devoted to advertising. And this advertising should not be of a general or "publicity" character. It must go straight to the point, and confine itself to the particular product or products it is intended to sell. Each advertisement must be a link in a complete chain; each must bring the campaign a step nearer its goal.

2. The length of time the campaign is to last depends largely upon the time taken to reach the main objectives. Thus, if it is employed to clear out stocks, the logical termination is when the stocks have been sold. But the objective is not always so clearly marked out. It is not quite easy to say, for instance, when sales have been sufficiently stimulated; when the new product has been sufficiently made known; or when the new markets have been thoroughly worked. It may so happen, also, that the amount of money set aside for the campaign is used up before all the objectives have been reached. The sales manager will then have to decide, taking all the factors into consideration, whether it is safe to spend more for the sake of performing what was originally planned, or whether what has been won is, if not all that was hoped for, sufficient to justify the termination of the campaign. It is quite possible to lose by too desperately pursuing an aim. For instance, if the special campaign resulted in selling all the old stocks with the exception of a few tons of whatever it might be, it would be absurd to spend two or three hundred pounds more in getting rid of what little remained. There is a point at which further prosecution of the special campaign becomes uneconomical. If the plans and arrangements

have been carefully made, after a thorough analysis of the market, the sales manager will know pretty accurately when that point has been reached.

But there are other considerations affecting the period of a campaign. The demand for a particular product may be largely seasonal, as in the case of certain spare parts used in sugar-making machinery. The end of the season would therefore mark the natural conclusion of the special selling efforts. The timeliness of the scheme may cease with the consummation of a particular event. For example, a special campaign may be run because it is rumoured that the railways are going to place large contracts. The placing of these contracts would then be the signal for termination.

3. Whether special literature will be required depends again upon the character of the market and the product. In general it may be stated that the special sales campaign will almost certainly be helped, and can hardly be hindered, by the designing of special literature. This literature can be used to follow up inquiries aroused by advertising, circularising, or good salesmanship; to accompany sales letters; to be distributed to dealers, for their own information; or to be distributed through dealers to the general public. Where economy is essential, it is not improper to make use of literature already existing; but since the special campaign concentrates on one special objective, it is always better, where it can be afforded, to design new literature—which need not be bulky or exceptionally ambitious—that falls into its place in the scheme, and is written to emphasise and support its main features.

4. Postal circularising, which usually means sending out sales letters, either by themselves or with relevant literature, to picked prospects, is a useful adjunct to the special campaign, and could be employed by technical manufacturers much more often than it is.

The remaining three questions will be best answered by a close study of the pre-existing market analysis. Space does

not permit an extensive examination of the various pros and cons here. Much will depend, so far as question No. 6 is concerned, on the objective of the campaign. If the product is a new one it may be worth while to engage a salesman specially to devote his whole time to it. The other salesman will already be fully occupied in dealing with the existing range of manufactures, and the close attention paid by one man to the new product will probably have a beneficial effect, not only upon its sales, but upon the sales manager's examination and understanding of the market.

CHAPTER III.

§ 1. *Technical Salesmen.*—One of the most important factors in the efficient marketing of technical products is the quality of the salesmen employed. In the case of most general products it holds good that sales-making ability in itself will sufficiently enable a man to dispose to customers of the goods he is trying to sell. Once the general-product-salesman has familiarised himself with the particular product's talking-points and uses, and with the main characteristics of the market—a matter of a few weeks—he can set to work with confidence. For this reason salesmen of general products need ordinary selling-experience rather than works training. For example, a householder who contemplates buying a piano is often led to choose a particular make because his imagination is stirred by clever salesmanship. He is told how attractive it will look in his drawing-room ; how great a source of pleasure and amusement it will be to his friends, his wife, his children, and himself ; how delightful music is ; and so forth. He will not be cajoled by statements that its frame is of cast steel, its wires of bright-drawn steel, and so forth, unless these details have an imaginative significance. It is advisable, though not absolutely necessary, that the salesman should know these facts, but he will not often be called upon to make use of them. Given a few months in which to learn the ins-and-outs of the piano-trade, a good all-round experienced salesman should soon sell pianos successfully, even though he has previously sold only soap or tallow candles. (One assumes an ability to play the piano—the sole technical qualification he would really need.) This is seldom or never the case with the salesmen of technical products.

From first to last the technical salesman has to work by logic and reason. One cannot stir the imagination of a buyer by eloquent descriptions of the æsthetic or social advantages of buying piston-rings or steam-dryers. The one thing that a salesman of technical products must eliminate from his armoury is rhetoric. To be able to convince the men he meets that his product is desirable, the salesman must have considerable technical knowledge in addition to sales-ability above the average. While a salesman of technical products would not find great difficulty in taking up the selling of general products, the probabilities are that the salesman of general products would find it extremely difficult to sell technical products successfully, unless he had had some previous experience in this direction.

The case of grinding-wheels aptly illustrates this point. Grinding-wheels can be used for many different purposes, from sharpening the teeth of circular or band saws to grinding manganese steel tramway points and crossings. The salesman of grinding-wheels must, therefore, be prepared to answer accurately questions of considerable technical importance. Are his wheels safe when run at so many revolutions a minute? What is the reason for the failure of another make of grinding-wheel when used for grinding manganese-steel castings? What wheel would he recommend for the work? How long will his wheels last? And so on. The best of technical salesmen will sometimes, perhaps frequently, meet questions he cannot answer off-hand; but he must be able to convince the buyer that, although he is not an out-and-out expert, he nevertheless knows what he is talking about, and has not merely learnt off by heart a few technical facts and figures for talking purposes. He must be able at a pinch to run a test, or to supervise the running of a test. Even when the firm employs a technical demonstrator or sales engineer, it does not follow that the salesman will be relieved of the necessity for supervising tests. The technical demonstrator may be engaged on a more urgent test somewhere else, or may be ill

or absent on leave. Therefore the salesman must be prepared to take his place occasionally. And he must also have so thorough a knowledge of industrial methods and requirements that he will be able to put himself in the buyer's place and point out ways in which money can be saved by use of the appropriate wheels, advise him on questions of storage, and so forth.

It follows that to engage a band of salesmen indiscriminately, and set them to work selling, without preliminary training, a technical product with which they have only a passing acquaintance, is fatal to efficient sales-work. The ideal salesman of technical products is a man who has had several years of good works experience, and possesses also those general qualities of vigour, confidence, imagination, and tact that make for salesmanship. But the ideal is not easily found. Men with a mechanical bent, or men with technical skill and knowledge, are seldom fluent and versatile enough to make good salesmen. Good salesmen, on the other hand, have seldom technical manufacturing experience. But the two things are not wholly incompatible. The trouble is that technical manufacturers have not paid sufficient attention to this need for trained and efficient salesmen of their goods. In consequence they have taken no steps to secure or guarantee a supply. The young men in the drawing-offices have migrated to various posts in the works, without ever being made to realise that opportunities may lie elsewhere. Yet hundreds of young men training to become engineers, none of whom will ever rise to more than an under-manager's position, would, with a little training and encouragement, make splendid technical-product-salesmen. The technical salesman does not need to be an engineering genius. He needs only some works knowledge and experience—the groundwork that many of these young men acquire as a matter of course —plus those qualities previously detailed. It is much easier for a young man with works training to learn salesmanship than it is for a salesman to acquire works training.

One large firm instils into its young men, from the time they enter the drawing-office as tracers or run-about lads till the time when their inclinations and abilities are clearly perceptible, the idea that it wants a certain proportion of them to train for salesmanship. The result is that those young men who have but ordinary engineering ability, yet considerable confidence and energy—those, in short, who prefer the prospects of representing the firm at home or abroad to those of becoming a works manager—set themselves to acquire the salesman's outlook, often with success. The firm has always, therefore, a reserve of eager young men, possessing the requisite engineering experience and with minds plastic and open enough to fit them for salesmanship, ready and willing to represent it in any quarter of the globe.

A system such as this makes for efficiency. It must be remembered that in practice, if not in theory, the work of the salesman of technical products includes much more than merely getting a buyer to send in orders. One important part of his work is to deal with or investigate complaints. A firm of large size, however excellent its manufacturing methods may be, is bound to receive a certain number of complaints in regard to the performance of its goods. The trouble may be due not to faulty material but to careless handling, inefficiency of the user, accident, and so forth. To send the works manager or the sales engineer—who is not to be confounded with the salesman—to investigate every complaint is not only costly but impracticable. Complaints may come from Glasgow and Southampton, London and Bristol, all on the same day. No one man could be in all those places with the quickness necessary to create a good impression. Obviously, the salesman has to take the place of the actual expert. Yet to send an entirely unpractical man to investigate minor complaints would be as foolish as to send the firm's best expert. The salesman must, therefore, be technically equipped so that he can tell whether the trouble is due to bad material or to clumsy use, and, if possible, prove his point by setting

matters right. There will, certainly, be times when the trouble is so obscure in its causes as to necessitate examination by the expert ; but cases of that kind can be dealt with as they arise. For the general run of complaints the salesman must, and should, rely on his own knowledge.

For exactly the same reason the technical salesman has sometimes even to take the place of his firm's buyer. The buyer cannot be everywhere at once, and it may be necessary in an emergency for the salesman to visit a works to examine the quality of a particular product offered or ordered. Of course, these extraneous demands upon his time should be reduced to a minimum, but he has to be prepared for the eventuality, and unless he has the knowledge and experience for the purpose, he will prove an unsatisfactory substitute.

Primarily, however, the duty of the technical salesman is to sell, and having briefly discussed his qualifications for this task, one may turn to a consideration of how he can most effectively carry out his main object. As already pointed out, the buyer has to be convinced by facts and figures. A book could be written—books have been written, in fact—on the art of making sales. It may as well be stated, once and for all, that there is no royal road to success in this. But a little guidance may be of value, without its being necessary to go into elaborate detail or to repeat axioms of salesmanship.

§ 2. *Meeting the Buyer's Arguments.*—The salesman of technical products will find four distinct lines of argument taken by buyers who do not feel immediately inclined to buy his goods. These four are at once the most common and the most difficult to combat of any he will meet. A few hints on how to overcome them will not, perhaps, be out of place.

The first argument is this : " I'm perfectly satisfied with John Brown's goods. Why should I take my orders away from him ? His material is good, and so is his delivery. In what respect are yours any better ? "

The wrong way to handle this objection is to run down the goods of one's competitor. Such a course is fatal. The point that there is no reason to change must be conceded generously (unless, of course, it is incorrect) ; but the salesman should go on to say that when a firm grows accustomed to receiving regularly the orders of a certain customer it sometimes becomes careless about them and makes mistakes in execution, or gets behindhand with delivery. He should try to pave the way for trial orders, if at any time the existing supplier should prove unsatisfactory.

But before the concession is made, the salesman must make thoroughly certain, using tact and discretion, that the buyer's statement is sound. It may be true, as he says, that the quality of John Brown's goods is equal to that of the salesman's own, but what about delivery ? Does Brown deliver as quickly ? Are Brown's goods equal in performance ? Will Brown's do a certain class of work as well ? Are Brown's as easy to handle ? Very few competing technical products are so closely allied that one has no advantages at all over the other. The salesman's task is to elicit these advantages and stress their importance. Tact is, of course, essential here. The buyer must not be led to think that doubt is thrown on his word, nor must any attempt be made to get information behind his back from subordinates.

The second argument is : " I send my inquiries to a few firms, all as good as one another. You are included. Since quality is equal in every case, I place my orders on price, the lowest quotation securing them." The answer to this is that there is no such thing as three or four firms of equal merit. One firm has had longer technical experience ; another has a more modern or larger plant ; a third uses finer raw materials ; a fourth has a better-trained production staff ; and so on. The salesman should point this out to the buyer, and should also remark that while some firms may be supreme, for instance, in the manufacture of lathes, their milling-machines may not be nearly so good as those of their rivals.

Then he should go on to emphasise the reasons for the superiority, uniformity, or general excellence of his brand of the particular product under discussion.

The third argument is : " My workmen are used to John Brown's goods. They've learnt by long experience just how to handle them, and just how to treat them. To change suppliers would cause bother and confusion and loss of time. I prefer to go on smoothly, as at present."

The counter to this is that a change can only cause trouble if the new supplier omits to give clear and simple instructions for use and treatment that the humblest workman could not fail to understand. Provision of these instructions—wherever it is made, a point that later articles will discuss—precludes annoyance or delay. It is possible, the salesman should point out, that although things may be going smoothly, the best work may not have been extracted from the product. The provision by his firm of efficient literature giving complete working instructions ensures getting the maximum efficiency from the goods. A man trained by good instruction-literature to use a product correctly is a better workman than one who has learned by experiment only how to handle it. If the original supplier's product ever varies in composition, even though the variation be intentional in order to increase efficiency, the previously satisfactory experimental treatment will fail to give good results, and as much trouble will be caused as if a change in supplier had been made. But if an improvement in quality is made in the product that the salesman is selling, the user will at once receive literature acquainting him of the change, and advising him of the differences in treatment thereby rendered advisable.

The fourth and bluntest argument is this : " Don't bother to keep calling on me. If I want your goods, I'll write to your firm."

A reception of this sort usually means that the salesman has been making too many mere inquiry-calls, calls simply to find out if any business can be done. The way to overcome

it is to make no call without an exceedingly good reason, and that reason should be the doing of service to the buyer. The publication of important new catalogues or booklets, the inauguration of a house-organ, the introduction of a new machine or product, the discovery of a way in which money can be saved for him, are all good excuses for calling. The salesman should make the buyer feel that in calling on him he performs a very necessary and useful service. Most buyers will give salesmen a hearing once they are convinced that their calls have interest and value. This is the ideal the salesman should strive for.

§ 3. *Helping the Salesman.*—Having thus dealt briefly with the four main arguments the technical salesman is likely to meet, another important subject comes up for discussion—a subject vitally connected with the efficiency of the sales campaign generally. This is co-ordination between the sales and advertising departments and the salesman. It is axiomatic that the sales manager should notify the salesman immediately any change in policy is decided upon, and that there should be regular occasions on which they may meet and discuss in friendly fashion the business problems of the day. In the same way, the advertising manager should explain to the salesman his campaign, its scope and objects, and should invite criticism and comment. But there are, in addition, numerous ways in which the work of the technical-product-salesman can be facilitated by a little thought and effort on the part of the sales and advertising departments. One of the most useful plans, adopted by a large firm of steel-manufacturers, is to go through the "contracts received" pages of every trade journal that covers a market for their product, and notify their travellers of contracts received by firms in their respective districts. In this way salesmen are able to follow the path of business, and do not waste calls on firms whose plant is standing idle for lack of work. In consequence, they plan out their journeys more scientifically, and are always on the spot when orders are given out in connection

with some big contract. The advertising department of the same firm supplies all its travellers with pulls of each new advertisement it publishes, thereby enabling them to keep in constant touch with what is being said publicly about the product. In addition this practice furnishes them with fresh talking-points and sales-arguments. They also receive copies of competitors' advertisements. With these in their possession they are able to prepare in advance answers to the claims made, and to see wherein lie the points of difference between their own product and its rivals.

Authentic testimonials, or, as they are preferably called, users' reports, are an asset that any salesman is glad to have. If an enthusiastic customer writes giving details of the excellent performance of a particular product, duplicates of this letter should be sent to every salesman for use by him as a means of convincing buyers.

Some travellers are compelled by the exigencies of the industry they serve to carry samples. Steel-salesmen, for instance, often carry little fractures set out neatly under glass in leather boxes. The sales manager should pay great attention to the design of these sample cases, whether they carry specimens of lubricating-oil or samples of leather-belting. The points to be watched are ease and comfort in carrying; facility of opening; accessibility; neatness of appearance; strength; lightness; and security. An elegant or ingenious sample case is bound to make a good impression on a buyer. A battered, shabby portfolio or bag in which things are jumbled up untidily is equally certain to do the reverse.

These are but a few of the ways in which the sales department can help the salesman. Equally important is co-ordination between works departments and salesmen. The works should supply the salesman with new facts about its products, and notify him of changes in mechanism, composition, or application. It should back him up by giving good and prompt deliveries whenever he indicates the necessity for it, and by paying special attention to the trial

orders he sends in from time to time. The salesman, on the other hand, must be equally prepared to support and co-operate in the activities of the sales and advertising departments, and those of the works as well. He must supply the former with any information necessary and obtainable for the planning of a successful sales campaign. He must supply them with the names of buyers and important works officials; with the status and financial position of firms; the attitude of buyers towards the firm's advertising or literature; and any testimonials he can obtain. He must notify them of any changes in personnel or address in his district; criticise or comment on their policy and plans; follow up promptly the inquiries they have secured through efficient advertising; and report progress with promptitude and accuracy.

He must notify the works of any complaints received, and indicate whether the fault lies in material or workmanship. He must appreciate their difficulties, and refrain from urging for impossible deliveries or promising whatever cannot be performed. When sending orders, he must give as many details as possible of the uses to which the product will be put. In short, whether in co-ordination with sales department or works, he must be prepared to give his help freely and generously so that he may receive in return the benefits that reciprocation will infallibly bring.

CHAPTER IV.

§ 1. *Arguments Against Advertising.*—Many manufacturers disbelieve profoundly in the advertising of technical products, for reasons not without a certain superficial justification. Their objections can be tabulated briefly :—

1. Advertising is all right for things, such as Pears' Soap, that appeal to the general public ; but no-one would buy a technical product because he had seen it advertised.
2. Engineers and buyers are too busy to read advertisements.
3. Advertising costs too much, and only brings in trifling orders from men in a small way.
4. Advertising prejudices people against a product, because it makes them think it costs more. Advertised goods do cost more, in fact, and if we advertise we shall be forced to increase our prices, and so lose trade.

There are other objections, but the four mentioned above are the most important and the most significant.

It must be remarked at the outset that none of the recommendations contained in this chapter will be effective if the manufacturer who reads it retains a prejudice against advertising founded on one or other, or all, of these four objections. A preliminary paragraph or so must, therefore, be devoted to combating and, let us hope, removing them.

1. To say that a force which has proved its worth by placing goods in the homes of the people is worthless when applied to placing goods in the workshops of the people is like saying that a railway-engine will draw carriages of excursionists but will not draw trucks of goods. Buyers of technical products are neither Robots nor automata. They are human beings, and as such are susceptible to whatever can interest, attract, and convince them. Advertising, ably done, tells the buyer of the existence of certain articles he

needs. Its range is wide. An entry in a directory is advertising; a printed showcard is advertising; circular letters, embellished letterheads, and invoice-forms; signboards and catalogues and exhibitions; all are forms of advertising. When, therefore, a manufacturer says that he does not believe in advertising he is, in the vulgar phrase, "talking out of his hat." He cannot help advertising. He is advertising in one way or another all the time. Unless he did so scarcely anyone would know he had a works, and he would, in consequence, get few orders.

What he really means is that he does not believe in press advertising—*i.e.*, advertising in journals of various kinds. But why does he not believe in it? Simply because he is accustomed to dogmatise without contradiction, and is seldom or never put to the trouble of proving his case. He has never definitely tested the power of advertising for himself. An opinion based on sheer ignorance has no value for the man who bases his views on facts alone, and the plain truth of the matter is that the facts are all against the sceptic. Dogmatism must here be met with dogmatism. Advertising in technical journals *does* sell technical products effectively, and buyers both will and do order goods that they have first encountered in the advertising pages of a trade magazine. It is not claimed that one can sell as many vertical boilers by advertising as one can sell tablets of soap; but all the same, advertising can sell them in a degree that varies proportionately to the efficiency with which it is carried out.

If any proof is needed, it lies in the simple fact that the very day this page was written an order was received by a certain firm with which the writer is acquainted for a stone-breaker that the purchaser had seen advertised in a particular journal.

2. The answer to this is that the firm alluded to in the preceding sentence received in twelve months, as a direct result of advertisements, no fewer than 2,500 requests for literature from engineering firms or persons of importance

employed by them ! Yet the amount spent by this same firm to obtain these requests was small as advertising expenditure goes.

3. The proper cost of advertising is fully discussed in an earlier chapter. To say that " advertising costs too much " is like saying that water costs too much. The true measure of a particular cost is the results obtained with it. If water is essential to life, it can scarcely cost " too much." If advertising keeps up and increases the turnover and profits of a firm, it can scarcely be said to cost " too much." A manufacturer who makes the statement criticised without having tried advertising merely dogmatises. If it doubled his profits he would not consider it too costly. Yet, until he has tried it, and tried it in an efficient form, he has no standard whatsoever by which to judge its cost.

Advertising will certainly bring more small orders, sometimes unwanted, than it will bring large ones. Surely this is no extraordinary phenomenon ! A man who casts a net into the sea brings up thousands of small fish, but only hundreds of large. Yet he would get few large fish if he cast no net at all. The moral is obvious.

4. This is a much more subtle and plausible objection. To advertise one must spend money that would otherwise not be spent, and therefore it seems as if goods that are advertised must cost more than goods that are not advertised. In one sense this is true. Advertised goods usually cost more to produce than unadvertised goods, because *the manufacturer has to keep up a certain standard of quality, which means more careful supervision of production methods, more care in selecting raw materials, and so forth.*

In advertisements a firm claims certain things for its products. It gives the public a name, an address, and a trade-mark, by which to recognise them. If the goods do not fulfil the claims made for them in the advertisements, the customer knows whom to avoid in future, and the firm by advertising falsely has seriously damaged its reputation.

Therefore, the first thing advertising does is to ensure that a manufacturer keeps faith with his customer. If a man goes to a merchant and orders a bar of high-speed steel, without specifying any particular brand, he may get a good bar or he may not. It is quite possible that he will get an unbranded bar that gives poor results; but not knowing the maker's name he has no remedy if the merchant refuses responsibility. If, on the other hand, he buys a bar of steel from a firm that advertises, he knows that that firm must for its reputation's sake make good its claims, and can largely be trusted. If no steel were branded or advertised, the consumer would have no security whatever against getting bad stuff. If, therefore, he pays a little extra for advertised steel, as of course he does theoretically in the long run, it is worth while. He pays for security.

But it must not be forgotten that the cumulative effect of advertising is to increase the demand for a product. People do not begin to use a thing until they have been told about it many times. The effect of this increased demand is to make the production of an individual article less costly, the overhead charges being spread over a greater number of articles. This means that the article can be produced a little more cheaply than before, and this cheapening due to increased demand will be found at the worst to compensate roughly for the amount spent on advertising, assuming that gross extravagance has not been practised. In sum, therefore, advertised goods will be found to cost in the open market no more, and probably less, than unadvertised goods *of equal quality*. The manufacturer increases his gross profits through the greater number of articles he makes and sells by means of advertising, not through the greater profit he makes on each individual article. This is the point that opponents of advertising so often overlook. Advertising, therefore, pays the manufacturer by increasing his reputation, his output, and his gross profits. It pays the consumer by giving him security against the inferior product, and often—a matter

too frequently forgotten—by enabling him to buy more cheaply, because some of the increased profit due to increased demand is devoted to reducing prices. In theory only does he pay more for advertised goods; the profit caused by increased demand is not *all* devoted to price-reduction, the cost of advertising being defrayed first, and this, it may be argued, means that the consumer bears the cost of advertisement. But in practice he usually pays less, because if the goods were not advertised at all there would be less demand, increased production cost, and consequently smaller gross profits and higher prices.

And now, having cleared the ground of a few dead trees of contention, one may turn to the more practical and insistent question of advertising efficiently.

§ 2. *Basic Principles of Engineering Advertising.*—Advertising—by which is meant, here, taking space in either general or special journals for the purpose of making known one's product—is without doubt the most powerful weapon at the technical product manufacturer's disposal. It is precisely for this reason that its scope and limitations should be clearly understood. There is altogether too much nonsense talked about advertising technical products, and much of this is, it has to be confessed, talked by advertising-men themselves. Many so-called advertising agents, with little or no experience of advertising this class of goods, promise quick and brilliant results if only the manufacturer will spend his money. In proof, they indicate the number of general-product manufacturers who have made fortunes by means of effective advertising. But the plain fact has to be faced that, as already pointed out, it is not nearly so easy to sell technical products by means of advertising as it is to sell soap or beverages. The manufacturer too hastily convinced of the value of advertising to his business often makes expensive contracts with the first trade or technical papers that happen to canvass him, writes out reckless and ineffective copy, and expects to pull immediate results. When these do not come, he turns

round and curses advertising as the greatest swindle known. In reality he himself is alone to blame. It is idle to pretend that the advertising of technical products, however good, can build up in a few months an enormous demand for them. It cannot. The technical product advertiser has to wait a long time before his expenditure is repaid in the material sense. He has to persevere. And, above all, he has to study the best methods for achieving his ultimate aim, which is quicker and better sales.

The reason why technical product advertising must necessarily be slower in its effects than general advertising is that the appeal is usually to a less ingenuous class of person. If you go on saying " Pears' Soap " long enough to the man in the street, he will eventually come to think of " Pears' " whenever he wants soap, and will ask for it for no other reason than that it is familiar to him. Soap washes : that is all one need know about it ; and so long as no one else is shouting " soap," it is only necessary to say " Pears' Soap," with the accent on the proper noun, to secure orders. But as soon as " Sunlight " and " Palmolive " and countless others come upon the scene, advertisers of soap have to say something more than their mere names if they wish to win the custom of the man or woman in the street. They have to advance reasons why their particular brand of soap should be purchased. They have to argue, whereas formerly it was only necessary to assert or suggest.

This may seem irrelevant to the subject of technical product advertising, but in reality it is not so. The " reason-why " stage that soap advertisers are only now coming to is really the first necessary stage in engineering advertising. You could shout " Smith's hydraulic presses " into an engineer's ear for a century, but that would not enable you to give a definite guarantee that when he wanted a press he would buy Smith's. He would certainly send Smith an inquiry when he was in the market, but the final purchase would be made only after a careful consideration of the press's strong and

weak points as compared with the strong and weak points of other machines. In short, the essence of good technical-product advertising is, nine times out of ten, argument. The man in the street wants to know about soap only that it will wash. He would buy it anyhow, whether advertised or not. To attach a particular name to soap is practically to sell it to him, because the very name makes him think he is buying a product better than one unnamed. And in effect this is so, for reasons already discussed in the preceding section. But the engineering buyer wants to know more about a press than that it is Smith's. Iteration of a name may sell a particular soap. It will not sell a particular hydraulic press.

The trouble with English engineering-advertising is that it still persists in treating technical products as if they were soap or candles. It still continues to declare in a variety of pompous and uninteresting ways, all equally bad, that Smith's presses are " the best in the world," or are " superior to all others." Often it merely says " Smith's Presses." The success of the simple verbal repetition " Pears' soap " has undoubtedly hypnotised manufacturers into believing that similar methods will suit their products. They forget that, when all is said and done, presses are *not* soap. A far higher standard of advertising is found in American trade and technical journals than in English publications of corresponding scope and circulation, and this higher standard is reflected in the fact that American technical products are coming into favour more and more in foreign markets that were once the preserve of the British manufacturer. In Italian and French hardware shops it is more often American than British saws, files, and small tools that one sees in the windows. (Even in Liverpool they swear by and display in their shop-windows American goods.) Here is an instance where sauce for the goose must surely be sauce for the gander. If it pays America to advertise efficiently, it will pay Great Britain.

Unfortunately, there is a wide difference between the attitude of technical product manufacturers on this side of the

Atlantic and that of the Americans towards advertising. Largely for reasons indicated, British technical product manufacturers disbelieve in the value of advertising. They have insufficient faith in it to attempt to do it well. Many take space solely because their competitors do so. When their greatest rival's name is absent from a particular publication they do not hasten to insert their own. From experience of this scepticism, the writer can understand the trials of those unfortunate persons who have to canvass for advertisement space orders.

Obviously, a selling-factor in which the manufacturer has no faith is never likely to be used to the best advantage. Yet there is every ground for stating that although engineering-advertising can never take effect with the immediacy characteristic of good general-product advertising, it can in the long run be as profitable with technical-products as with soap, beverages, or household articles.

But this result can be obtained only by abandoning what is known as " business-card " advertising. When considerable sums of money have been expended in purchasing space in the advertising-pages of a reputable trade or technical journal, it is wasteful and inefficient to fill up this space solely with one's name and address and a list of the products one manufactures. (Quite rightly, the proprietors of a technical journal do not interfere with the use made of the space they have sold. It would be to their own advantage to have good and interesting advertisements, because this would increase the value of their journal to the reader. The *Daily Mail* is read for its advertisements by men and women to whom its political views are anathema. Yet it is not their duty to criticise or amend the efforts of their advertisers.)

The main defect of " business-card " advertising is that it is uninteresting and ineffectual. When a board of directors has sanctioned the purchase of a large boiler, it does not greatly interest the buyer who has to make the purchase to know that Timothy Brown and Co. make boilers. The mere

statement leaves him cold. It gives him no help in his task of choosing the best type of boiler for his purpose. What he is immediately anxious to know is the relative merits of upright or horizontal boilers, Lancashire or Cornish boilers, and so on. Advertising, it must be borne in mind, is salesmanship in print. Yet many technical manufacturers tolerate methods of advertising-salesmanship that would ensure the immediate dismissal of a living salesman if he put them into practice. How many orders would a man secure, for example, if he merely went into an office and announced in a loud voice that his firm, Timothy Brown and Co., made boilers, and left it at that?

The duty of an engineering-advertisement is to indicate why a particular product is desirable; why it is more desirable than a similar product on the market; and how it may be obtained. This duty is not fulfilled by the simple statement that it *is* desirable. Proof must be given. Otherwise, when the buyer meets some extravagant suggestion that "Brown's boilers are the best in the world," he says to himself sceptically: "Indeed? In what way are they better than Robinson's?" And there is no answer.

It sounds trite but it is nevertheless true that the psychology of the buyer of technical products must be studied by every engineering-advertiser. In many works the buyer is a technical or technically-minded man, with a considerable and extensive knowledge of technical products. The responsibilities of his position are great, and preclude him from too lightly accepting claims unsupported by adequate proof. He goes through the advertising-pages of a good technical journal either to find out the best makers of a particular product that he needs, or to discover whether there is any appliance on the market that will solve a special problem confronting him at the moment. Advertisers of technical goods would find it distinctly advantageous to realise that their advertisements are studied carefully and with discrimination. Such a realisation would ensure greater attention being given to composition and design.

The first principle of engineering-advertising is to explain, in the most complete and practical way, without flowery embellishments or superlatives that do not convince, the various respects in which one's product differs from and is better than its competitors. And the surest and most effective way of doing this is to ignore one's competitors altogether. As soon as one declares that one's boilers are the best that can be obtained, one admits the existence of others, and thereby suggests invidious comparisons. The art of technical-product advertising is to word one's announcements in such a way that reference to competitive articles is excluded. If one is advertising efficiently, the space at disposal will be quite fully occupied in describing the good qualities of one's own product.

The second basic principle of engineering-advertising is to concentrate on facts. Without facts any advertisement, but more particularly a technical-product advertisement, is a dead and dreary thing. Facts animate and invigorate. In proof of this, two unlabelled extracts from recent engineering advertisements may be contrasted. A second's thought will indicate why one is so much more convincing than the other.

1. " Blank's Extra Refined and Warranted Best Cast Steels are the most Uniform and Reliable for tools and dies," etc.

2. " The number of crescent-shape Ford Timer contacts per die was increased to 135,000 through use of this Blank Die. This was 215% greater than obtained with a high-speed steel die previously used. The stock is $\frac{5}{16}$in. steel."

An analysis of these two extracts will reveal some of the best and some of the worst characteristics of engineering-advertising. The first declares with suitable solemnity that certain steels are the most reliable and uniform for a particular purpose. This would not matter if the advertisement then went on to state why ; but it does not. It merely gives the name of the steels. It is a statement of what the manufacturer himself thinks about his goods. Not a shred of evidence is brought to support the claim.

In journalism, hackneyed phrases and expressions are known as " clichés." Many technical-product advertisements are full of these. " Uniform and reliable " occurs over and over again. It is easy to say, and it means very little. Similar meaningless expressions, actually used in recent engineering-advertisements, and leaving no mark on the reader's mind, are : " Buy Brown's boilers because they are the best " ; " Save money by using . . . . " ; " The reliability, accuracy, and economy of Blank equipment have been demonstrated " ; " the very latest up-to-date type of machine " (is not the " very latest " type of machine necessarily " up to date " ?) ; " the most accurate and quickly applied machine ever developed " ; " machine tools of quality " ; " products of undeniable quality and economy " ; " reduce costs with the Blank lathe " ; and so on. " Economy " and " quality " are favourite words, it will be noted. One could catalogue hundreds more, but little purpose would be served by so doing.

On the other hand, the second extract contains none of these stale and outworn expressions. It gives actual, indisputable facts. Any honest and conscientious buyer who happened to read that advertisement could not but ask himself the question : " Might I not get equally good results if I gave that material a trial ? " There is a definite impression left in his mind. The facts and figures presented to him are challenging, and, what is more, they destroy scepticism. Details so clear and accurate would not be given unless they were authentic and demonstrably true. It is the inefficient advertisement, with its cloudy phraseology, its clumsy superlatives, that awakens suspicion.

The third principle of engineering-advertising is that the manufacturer's opinion of his own product carries no weight with a buyer possessing common-sense. This may sound harsh, but it is correct. Obviously, the manufacturer is an interested party. Even when he is scrupulously honest in his convictions, there must always be a strong predisposition for him to believe better things of his own product than are always justifiable.

The buyer knows this, and it explains his reluctance to believe any advertisement which says that such-and-such a machine is " the finest in the world." It is a biassed statement. What he wants is a simple and reasoned account, supported wherever possible by facts and figures, of the product's special merits. If it is a boiler, then the advertiser should be able to give actual details of money it will save in operation, length of service, and similar particulars. If it is a machine, the output figures should be given, new or valuable principles of construction be outlined succinctly, and so forth.

The fourth principle of technical-product advertising is to study the market the advertisement is intended to reach. It is in this detail that American manufacturers are conspicuously superior. It is no rarity to find one advertisement doing duty unchanged for an English manufacturer in journals all over the world, wholly irrespective of differing conditions. In such cases there can be no just cause for complaint that advertising is useless if orders fail to arrive.

Some actual examples of the influence that local market conditions have upon advertising may be cited. In India, one requirement of steels for automobile-engines is that they shall be able to work at temperatures of ninety degrees in the shade and over. Some steels ordinarily used in this country for certain specific automobile parts are obviously not intended to stand this extra strain. The advertising of automobile steels in India must, therefore, be governed by this fact. If steels can be supplied that will stand up to the work, the advertisement should say so. It then establishes a point of contact between the Indian buyer and the English steel-manufacturer. To advertise automobile steels in India without reference to the peculiar requirements of the Indian consumer is to prove that one has not studied the market with sufficient care. Analysis of markets almost invariably discloses important factors of the kind indicated. The efficient advertiser adapts his advertisement - copy to these.

Similarly, in China the mark or " chop " is most important to the Chinese merchant, because it enables the native to recognise the goods and describe them readily when ordering supplies. Consequently, advertisements in Chinese journals should invariably make a principal feature of the trade-mark or brand on their products.

The point of all this is that the advertisement that sells goods to a man in South America will not necessarily sell them to a man in New Zealand. Each market has its special needs and requirements, and efficiency in engineering-advertising cannot be fully obtained unless these are studied and the lessons learnt incorporated in the advertising-campaign for the particular markets attacked.

Thus far the broad general principles of engineering-advertising have been discussed. Some such brief indication of the needs and potentialities of this branch of marketing is necessary in order to clear the ground for a more detailed and systematic account of the subject. Later sections give hints on how to approach advertising from the economic standpoint, and describe in detail the methods by which an efficient and fruitful advertising-campaign may be inaugurated. The importance of this branch of marketing necessitates close attention.

§ 3. *Where to Advertise, and Why.*—Having paid some attention in the previous section to the broad principles of engineering-advertising, one may now deal with the subject in its practical aspect, showing how the principles outlined should be applied. The first consideration that arises is the efficient distribution of the expenditure sanctioned for advertising. Below are questions that the sales manager, and after him the advertising manager, will have to answer before proceeding to the technical work of preparing lay-outs and copy, placing contracts for space, engaging the services of artists, and so forth.

1. What percentage of the general sales allotment shall be devoted to advertising ?

2. Having decided this, shall the money be spent in—
   (*a*) Advertising in the daily press?
   (*b*) Advertising in general periodicals?
   (*c*) Advertising in the trade or technical press?
   (*d*) Advertising in directories, diaries, year books, etc.?
   (*e*) Poster or similar publicity advertising?
3. What spaces shall be taken?
4. How often shall the advertisements occur?
5. What form shall the campaign take?
6. How can results be checked?

It will be seen from this list of preliminary questions that the advertiser must proceed in no haphazard manner. Each step should be carefully thought out before the next is taken. Since each of these six queries has great practical importance to any and every advertiser of technical products, some attempt to indicate the answers to them is essential at this point.

1. The best means of answering this question is to give a hypothetical example. Assuming, then, that a manufacturer, A, making steel chains, has decided to spend £4,000 per annum on promoting sales, he will have to apportion this sum among (*a*) salesmen, (*b*) advertising, (*c*) circularising, (*d*) publicity literature, (*e*) extra expenditure. For obvious reasons no definite percentage figure can be laid down here for salesmen's salaries and travelling-costs, but this expense can be quite accurately estimated beforehand, and deducted from the sales-allotment. Of what is left—which, for example's sake, we will assume to be £2,500—advertising should receive at least one-half, or £1,250. It will be seen, therefore, that very nearly as much should be spent on advertising as on salesmen. Of the remaining £1,250, circularising should receive £200 and publicity literature £800, leaving a margin of £250 for contingencies, such as exhibitions, special issues, and so on.

At the same time, *the provisional character of these proportions must be stressed.* There is no such thing as a hard-and-fast rule. Much depends on the product, which may lend

itself more to outdoor selling than to printed selling, or *vice versâ*. Again, the state of the market will react on the percentage of the sales-allotment claimed by each branch of selling. There may be a popular prejudice against the product that only advertising can effectively combat, and that must be removed before sales can be expected to increase. This will involve a much heavier expenditure on general advertising than is represented by the figure quoted. Most advertisers prefer to fix their own percentages after taking all these governing factors into account, and in many instances their proportions would vary considerably from those given above. There is no such thing as a generally accepted *best* proportion, but that outlined will serve as a rough guide for any advertiser or manufacturer who has not previously studied selling from the scientific standpoint, and who is consequently uncertain of the relative importance to be attached to each branch of sales-activity.

2. It is most essential that each manufacturer of technical products should face this question and answer it thoroughly. One of the greatest wastes in technical-product selling is imperfect selection of advertising-media by engineering firms. The attitude of many manufacturers seems to be this: "So long as my advertisements appear, it doesn't much matter where. Advertising isn't of any use, and I only advertise because my competitors do so." Even allowing for the scepticism of the British manufacturer in regard to the power of advertisement and his consequent carelessness in its employment, one cannot but marvel at the illogicality with which certain technical-product manufacturers place their contracts. No sane man would, for example, advertise battleships in the pages of *Comic Cuts*, yet mistakes as absurd as this are being made every day. The writer knows of many quite worthless publications—devoid of circulation, of prestige, of everything that makes a journal worth while to the advertiser—that are kept alive solely by the money of inefficient advertisers. The character, quality, and

relation to the market of every journal that approaches him for a contract should be as closely studied by the technical-product manufacturer as the market itself. Only thus can he be certain that he is getting what he pays for—circulation and reputation. The name of the publisher, the age of the journal, the amount of advertising carried, the character of the advertising, the size and quality of the firms advertising, are all factors that will help him to select with discretion. Particularly is the character of the advertising a good guide. If a firm with an efficient publicity department advertises in a particular journal, it is probably because that journal has been thoroughly examined and found satisfactory as a medium. One firm's manager was even heard to say : " If I see so-and-so's advertisements in a paper, I know it must be a good paper, so I advertise in it myself."

For the technical-product manufacturer, advertising in the daily press will, unless his product be specially adapted for use by the ordinary man or his wife, prove a costly luxury. The big circulation of some of the best-known dailies offers a tempting bait to the inexperienced advertiser, but it must always be remembered that much of this circulation is sheer waste so far as the engineering-product is concerned. Of the million readers of the *Daily Mail*, for instance, how many are likely to buy hydraulic presses at any time in their lives, or to be in a position to influence the placing of an order for such a machine ? Probably not more than a hundred. And even these hundred will not, at the time of their reading the *Daily Mail*, be in a mood conducive to the careful consideration of an engineering product's claims. In all probability they will not be thinking about engineering products at all, and will resent being made to think about them, just as we all dislike the man who talks pure business in our leisure time. It may be argued that, at all events, these hundred will see the advertisement, so that the advertiser's aim has been achieved. But even assuming what is improbable, that all these hundred do see and read the announcement, the point is :

could they not have been reached in a cheaper and equally effective way? The price paid for space in the *Daily Mail* is based on a circulation of a million, not a hundred. You may have reached your prospects, but you have reached them far more expensively than was necessary. You have fired a million bullets in order to kill a hundred rabbits: an effort wholly disproportionate to the result.

For most technical-product manufacturers the daily press is, therefore, uneconomical. There are, however, one or two exceptions to this rule that call for comment. For a novelty of sufficient interest to attract the attention of the ordinary man or woman, the daily press is an ideal, even though costly, medium. The word "novelty" is used here in its popular sense, and not in the sense in which a new drilling-attachment is a novelty in a machine-tool. To give an instance, a file-manufacturer recently put on the market a set of ten specially-selected files, handled, furnished with a wire brush for cleaning purposes, and set in a stout wooden rack. This set was intended to meet the needs of the amateur mechanic, the private-garage owner, the man with a little workshop, the model-engineer, the boy with a mechanical bent, and so forth. Now all these classes of consumer would be readers of the daily press, and the set could be advertised to them through its pages. There would be less circulation wasted than there would have been had the same firm advertised tool-steel in the particular journals referred to. Nevertheless, there would still be sufficient waste to make the buying of large spaces uneconomical for this class of product. Small spaces alone could be safely and efficiently used. But even in this instance it is by no means certain that it would not be better to advertise in weekly journals dealing with mechanical hobbies and so forth.

Another class of technical-product that may at times be effectively advertised in the daily press is that which finds its way to the consumer by way of the retail-shop counter. These are usually standard products, such as shovels, files,

hammers, etc., and the aim of the advertising is not so much to emphasise differences between the advertiser's product and its rivals as to familiarise the public with a particular name or brand, so that when next buying they may ask for it in the shop. Advertising of this kind is usually done to help the retailer, and it is only likely to succeed if done cleverly and with frequency. It is an expensive form of selling for the engineering firm, and should not be embarked upon unless there is sufficient likelihood of success to warrant the cost. In general it is as inappropriate to advertise technical-products in the daily papers as it would be to advertise toffee or breakfast-foods in the *Mechanical World.*

Advertising in general periodicals, such as *Tit-Bits* or the *Strand Magazine,* can be criticised, so far as the technical-product manufacturer is concerned, on exactly the same grounds as daily-paper advertising. There is a great deal of waste circulation, and consequently an exceptionally heavy c.p.r. (cost-per-reply) figure. Novelties and standard products can, however, be advertised in these publications when suitable.

The true field for the engineering-product advertiser is the technical press—whether made up of weekly, monthly, or quarterly journals is immaterial. To prove this, let us take the case of a buyer interested in steam-boiler fittings, or powdered-fuel plant, or any of the million-and-one technical articles of British manufacture. He wishes to discover the firms most likely to provide him with goods of the quality he needs. Where does he go for this information? Does he consult his daily paper or his last month's fiction magazine? The negative answer is almost unnecessary. He turns to the *Mechanical World,* let us say, for steam-boiler-fitting advertisements; to the *Iron and Coal Trades Review* for powdered-fuel-plant announcements, and so on. The reason for this is twofold: first, the editorial columns of these journals have for years been keeping him in touch with the latest developments in the various branches of engineering in which he is

interested, so that he at once associates them with the information he needs; secondly, these are the most likely places in which to find the names he wants.

The writer has seen too many orders for engineering-products placed as a result of advertisements in technical journals to have any doubts left as to the value of this class of periodical to the engineering advertiser. But quite apart from the direct practical results to be obtained, the technical press has other advantages worthy of enumeration. The circulation of an engineering journal is practically a picked circulation, which is exactly what the technical-product manufacturer requires. Nobody but a man interested in engineering would read an engineering journal, and almost every man of this sort is, or may be at some future date, a likely buyer of technical-products. Furthermore, the circulation, being comparatively small—few British technical journals reach more than 8,000 subscribers per issue—has an effect upon the space-rates charged, which are considerably lower than those of the general or daily press. It is at once obvious that the technical press constitutes the cheapest and most effective medium for engineering-advertising. The bulk of the money appropriated to advertising should, therefore, be expended on space in the journals most suitable for the particular product or products.

Certain trade papers are also economical advertising media for the engineering-product. Taking casehardening steel, for example, it might be worth while to advertise this in a trade journal like *Motor Commerce*, read by garage proprietors, as well as in the *Automobile Engineer*, which is read by firms and individuals interested in the technicalities of motor-car manufacture. The garage man might be tempted to stock this particular class of steel for repair work. In the same way, he might be induced to stock other products for resale to his customers. To quote another instance, hack-saws are often advertised in journals serving the retail hardware trade, as well as in journals that reach the actual consumer.

The advantage of display (or large space) advertising in directories is, in the writer's opinion, problematical for the technical-product manufacturer. Most large consumers of a particular product know with fair accuracy who are the best people to approach for quotations, and act on that knowledge without reference to a directory or buyers' guide, or if they do not know it they turn to the advertising columns of the appropriate journal; sometimes, even, they ask the journal itself by letter. The only consumers likely to be secured as a result of directory advertising are the infrequent user, the merchant with a small order to place, and the "little mester" with half a dozen hands and a small workshop, and even these can be reached by means of the ordinary line-entry, under the proper headings, in the body of the directory itself. In the majority of large works buying is done scientifically, and there has been sufficient experience of various suppliers to make it extremely unlikely that recourse to a directory will be necessary. Products sold by trade-name; novelties; special machines and machinery; and goods sold in oddments: are more suited to this form of advertising than those sold in large quantities or in bulk lots. There are a few directories in which one's name must figure, if a charge is made for the ordinary entry, on the principle that "one never knows who may come along"; but no manufacturer need use display-advertising as well. The ordinary entry is quite sufficient, even in these.

Year books and diaries offer a somewhat better inducement, because they have in themselves matter of interest to the person who buys or receives them. This means that they will often be read, or that reference will be made to them from time to time. Their circulation and relation to the market should, however, be very carefully analysed before space is taken.

A word of necessary warning must be said here. There are certain men who call on manufacturers, professing to represent directories. They produce a printed order form bearing an

entry of the particular firm's name, probably cut out of some other directory, and ask for a " renewal " order. Probably the manufacturer fails to remember the name of the directory, does not like to question the statement that he authorised this entry on a previous occasion, and signs the " renewal " order-form, agreeing to pay for entries in a fictitious or worthless directory. The thing is just a shady trick. The man relies on the manufacturer's not taking the trouble to go into the matter and test his statements. In this way orders are obtained from year to year by firms publishing directories with an entirely mythical circulation. The advertiser receiving a visit of this kind should make sure, before committing himself, that he actually *did* give an order for that alleged previous insertion which he is required to renew, and should also go very closely into this directory's origin and circulation. Of course, when the trick is exposed, the directory-man merely regrets the mistake made by his firm.

Finally comes the question of poster advertising. This, again, suffers from the same defect as daily-press and general-magazine advertising—it reaches too generalised a public. In addition must be taken into account the utter impossibility of checking results. No one can tell, for example, how many gas-engines have been sold as a result of the enamelled signs, advertising a particular make, to be seen in so many of our railway stations. It seems to the writer extremely unlikely that a buyer of any standing would act on the injunction of a metal plate, or consult a coloured poster, when contemplating the purchase of a highly technical product. For all practical purposes the poster can be eliminated from the engineering advertising manager's budget. There may be a few technical products that could be advertised in this fashion with effect, but they are so few as to affect the above statement but little. The essence of poster advertising is to impress upon the popular mind in the shortest possible time *a particular name.* The essence of technical-product advertising is, as has been

pointed out, *argument based on facts*. For the man in the street it is sufficient to say " Rowntree's chocolate," because the man in the street is not interested in the technicalities of chocolate. For the buyer of engineering products it is *not* sufficient to say " Edgar Allen's steel," because he *is* interested in the technical performance of steel, and wants to know *why* Edgar Allen's steel more than any other. The poster cannot argue ; it can only proclaim. That is what makes it of inferior value to the manufacturer of engineering products.

3. The space to be taken will be governed largely by the amount of money to be spent. As a general rule it will be found better to have full-page spaces in few magazines than quarter-page spaces in many. In the same way it is better to have a good space in one magazine in a particular market than to have small spaces in all the journals that cater for that market. It must be borne in mind that *the value of a full page is much more than four times that of a quarter-page.* Another point that needs remembering is that half a page in the best journal is better in the long run than a whole page in the second best. These assertions may seem dogmatic, but they are based on careful observation and much experience.

Some products, of course, if they are to be advertised at all, must be advertised in large spaces. Battleships, for instance, would be advertised ludicrously in quarter-page or eighth-page spaces, and any attempt to advertise them thus would appear suspiciously like parsimony. The size and standing of the advertiser is also an important factor in deciding the amount of space to be contracted for in the various journals. A firm with a world-wide reputation, or one whose name is a household word, would find its prestige very seriously affected by a too-frequent use of small spaces. There is always a readiness in buying-circles to take economies like this as evidences of financial distress. It would be far better for such a firm not to advertise at all than to advertise meanly.

The size of a competitor's advertisement should only affect the size of one's own announcement when all other

conditions are known to be equal. If one's rival chooses to take whole-page spaces in a second-rate journal rather than half-pages in a first-rate one, that is no reason why one should imitate him. So long as one has laid out one's money to the best advantage, there is no need to worry. Neither, if one's rival's purse is twice as long as one's own, is it of any use, unless bankruptcy be courted, trying to compete with him in this way. But if both are equal in size, and the rival takes a full page in the best journal, that is a strong argument for taking an equivalent space oneself in the same medium.

4. The frequency with which advertisements shall occur is again a question of money. The essence of good advertising is continuity, and therefore, if one can afford to appear in every issue of the journals one has selected, so much the better. If not, one should appear as frequently as one can. It is better to appear once a week in one journal than fortnightly in two. The very week your announcement is missing may be the very week the buyer looks through the advertisements for names. Likewise it is better to appear regularly in one journal in a particular market than to appear irregularly or at infrequent intervals in all the journals that cater for that market. *Fifty-two weekly insertions are more than twice as valuable as twenty-six fortnightly insertions.* Similarly, fortnightly insertions in the best journal are better than weekly insertions in the second best.

Considerations of prestige also play a great part in deciding this point. In all these matters the general policy of the advertising-campaign will afford good guidance.

Questions 5 and 6, concerning the form of the campaign and the checking of results, are of exceptional importance, and the next section deals with them fully and practically.

§ 4. *The Twelve Best Forms of Advertising Campaign.*—The questions left undecided in the previous section of this chapter were : What form shall the advertising-campaign take, and how can results be checked ? As will readily be admitted,

they are two most important questions, the answers to which need to be both full and explicit.

Answer to the first question can be made most readily by describing briefly the various forms that the campaign can take, giving each its appropriate name, explaining its uses, and giving a typical example of it in the form of an illustration. It must be understood, however, that the examples given are "typical," not "ideal." They are as follows: (1) educational; (2) institutional; (3) argumentative; (4) allegorical; (5) pictorial; (6) negative; (7) trade-mark; (8) quality; (9) service; (10) testimonial; (11) historical; (12) humorous or whimsical. There are other forms, but the twelve listed above are the most frequent and useful. It now remains to consider their uses and character.

1. Educational campaigns are of especial value when it becomes necessary to change the buying-habits or prejudices of the market. That buyers do have habits and prejudices is known to every engineering-salesman. Are they not human beings? For example, in motor-car manufacture, designers often specify bright-drawn steel for certain parts when ordinary black-bar would do quite well. This is because it has become a habit with designers to specify bright-drawn bar. The maker of black-bar steel wishing to change the habits of the designer would need to conduct an educational advertising-campaign, in which the consumer would be told again and again in different ways why it was not essential to specify bright-drawn steel in every case, and that very often the cheaper steel would prove equally effective.

Educational campaigns are also of service when it is necessary to introduce a new product. Manganese steel for complicated railway and tramway track is an excellent example. When this steel, with its marvellous wear-resisting properties, first came on to the market, railway and tramway engineers were extremely sceptical in regard to its value, as is their custom with new inventions. Long and consistent advertising explaining exactly WHY manganese steel could

outlast ordinary steel in certain sections of track was necessary before they became convinced that there was something in it. In short, engineers had to be taught, exactly as if they were school-children, all about the new product. That is what the educational campaign is for. It can also be used to teach consumers new uses for the product.

2. The institutional form of campaign is, in the writer's opinion, much more common than it ought to be. At its crudest it consists of printing a big half-tone reproduction of the advertiser's works, with his name at the foot in exaggerated lettering. At its best it can be an excellent asset in building up goodwill. Institutional advertising pays more attention to the factory in which the product is made, and to the men who make the product, than to the product itself. For example, the advertisements of Billings and Spencer, the American engineering firm, show a picture of an old craftsman working away as he has worked away for years with the same firm, putting his heart and soul into the production of a perfect article. One cannot look at that announcement without feeling that that firm takes a pride in its work. To heighten this effect, the man is illustrated not by the half-tone engraving process, but by wood-cut.

Institutional campaigns should only be employed by firms of the very highest standing, old-established in their industry, or else of enormous size. To be effective it must be dignified, not blatant, free from the slightest suspicion of bad taste. Too much institutional advertising in this country is marred by blemishes of the worst kind, and practised by firms whose name, age, or size carries little or no weight. It is an expensive thing to advertise the works rather than the product, because it is *indirect* advertising. The only firms who can afford, therefore, to advertise indirectly are the best-known and biggest firms. The smaller manufacturers should shun institutional campaigns unless they really have something, in the commonplace phrase, to shout about.

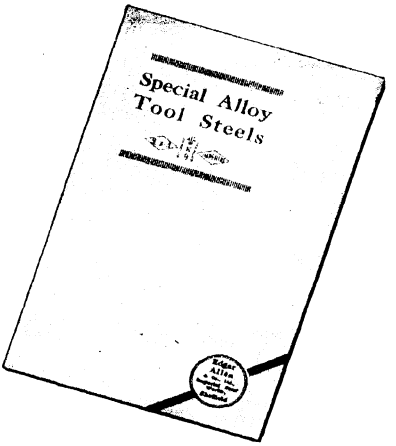
3. Argumentative campaigns are, all things considered,

The Steels between—

Many users of steel think, when selecting a suitable and, to the best of their belief, economical quality for their work, that the choice lies between the high speed and the carbon tool steels, the one class varying chiefly in tungsten content and the other in carbon content. In reality neither high speed nor carbon tool steels may be economical in their particular case, and only a special alloy tool steel would really be so. Unaware, however, of the existence of this intermediate class of steels, these users make a wrong selection, and sometimes order consistently a steel that is not economical.

Special alloy tool steels come midway between the high speed steels and the carbon tool steels in cost and application. They present a wide range of qualities from which selection can be made. According to the kind of work to be done, one or other quality may in practice prove more economical than either a high speed or a carbon steel.

The object of the new Edgar Allen booklet "Special Alloy Tool Steels" is to draw attention to these steels, and to indicate their suitability for various classes of work.



What this booklet tells:

The scope of Edgar Allen intermediate steels.
When to use "Imperial" tool steel for turning and finishing.
Heat treatment of "Imperial" tool steel.
When to use "Red Label" tool steel for dies, etc.
Heat treatment of "Red Label" tool steel.
When to use "K.9" oil-hardening tool steel for taps, dies, etc.
Heat treatment of "K.9" steel.
When to use special chrome-vanadium steel.
Heat treatment of special chrome-vanadium steel.
Special chrome steel, uses and treatment.
"Minerva" self-hardening steel.
When to use No. 4 hot die steel.
Heat treatment of No. 4 hot die steel.
Heat colour temperatures.

Post the request form to obtain your copy.

Edgar Allen
Imperial Steel Works
Sheffield

Edgar Allen & Co. Limited,
Imperial Steel Works, SHEFFIELD.

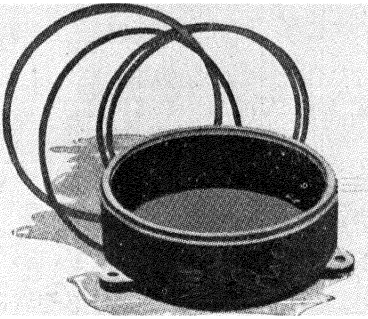
Please post "Special Alloy Tool Steels" to

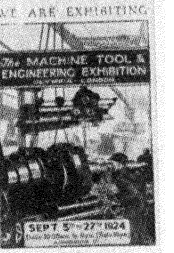
Name .....
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The "Educational" Advertisement.



The "Institutional" Advertisement.





RAPID PRODUCTION of LOCO PISTON RINGS

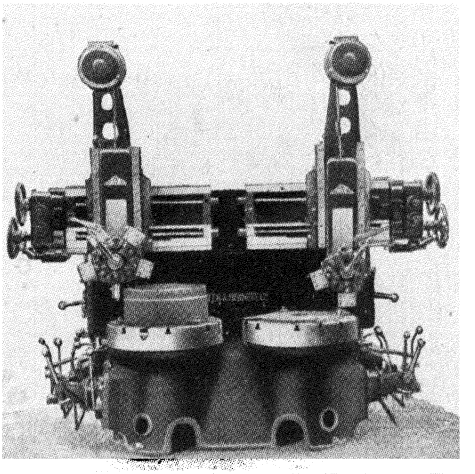
ON THE W. & B. DUPLEX MILL

ON the left-hand table the "pot" casting is bored and turned (roughing and finishing cuts), and the rings parted off four at a time. They are then transferred to the right-hand table and surfaced in a special fixture. Note the dimensions: dia. of rings—21⅛ ins. outside, 20¼ ins. inside; each ring is ⅛ in. thick and the machining allowance is ⅜ in. on outside and ⅞ in. on inside dias.

W. & B. time on this job—despite the large machining allowance—is only seven minutes per ring.

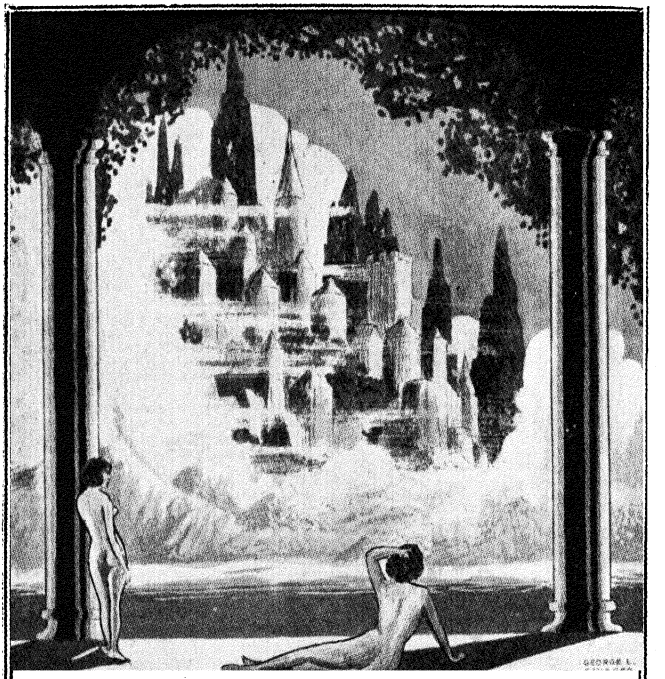
The productive capacity of all our Duplex Mills is in proportion to the above example. We build a range of sizes from 18 ins. to 60 ins. swing, and would like to prepare guaranteed output figures from your blue-prints. Will you send them?

W&B



WEBSTER & BENNETT, LTD., NORTHEY RD. WORKS, FOLESHILL, **COVENTRY.**
LONDON OFFICE: 32, VICTORIA STREET, S.W.1.

The "Argumentative" or "Hard Facts" Advertisement.



SPRINGTIME in AMERICA

Where Dreams Come True

Actual achievements today exceed dreams of yesterday. This is especially true in electrical science. **CAMPBELL FIBRE** plays a very important part as an insulation. The BONE QUALITY is used with the most satisfactory results.

CAMPBELL FIBRE COMPANY

STANTON, DEL., U. S. A.

The "Allegorical" Advertisement.



The "Pictorial" Advertisement.



Shelter your wire with a ZINC roof that won't leak

GALVANIZING is like building a roof of ZINC over your wire. The ZINC keeps out the weather and prevents rust. But ZINC that is impure is like a roof that leaks. Wire necessarily is bent and twisted and thrown about when it is handled. It is spliced and twisted, seized with rough pliers, and otherwise abused. A ZINC coating that lacks ductility cannot stand this treatment. It cracks, breaks and gives way, and offers no more protection than a leaky roof offers to the building it covers. Horse Head ZINC is supremely suitable for galvanizing work. Its freedom from impurities makes it extremely ductile. Wire properly galvanized with Horse Head ZINC can be twisted tightly about its own diameter without the slightest danger of the ZINC cracking.

New Jersey zinc

The New Jersey Zinc Company

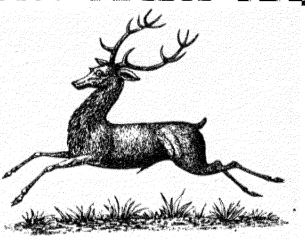
Established 1848

160 Front Street, New York City

CHICAGO PITTSBURGH SAN FRANCISCO CLEVELAND

Mineral Point Zinc Company · The New Jersey Zinc Sales Co.

The "Negative" Advertisement.



Stag Specialties in High Speed Steel

USERS of "Stag" high speed steel are not always aware that such things as lathe tools in standard shapes and sizes can be obtained ready for use in the same range of steels. On the other hand, firms who have for many years been buying "Stag" high speed steel twist drills do not always know that they can obtain milling cutters and reamers of the same steel. For the convenience of buyers a list of "Stag" Specialties in high speed steel is given below. Literature dealing with any or all of these specialties will gladly be sent on receipt of the inset form to buyers or works officials.

Stag Extra Special high speed steel,
for extra heavy work

Stag Special high speed steel,
for heavy work

Stag Air-hardening high speed steel,
for the general run of work

Stag Cutters and Reamers

Stag Twist Drills

Stag Lathe Tools

Stag Toolholder Bits

Stag Bevels and Ready-hardened lengths

Post the coloured inset to obtain appropriate literature.

Edgar Allen & Co.
Imperial Steel Works
Sheffield

The "Trade Mark" Advertisement.

CROCKER-WHEELER

PIONEER MOTOR MANUFACTURERS Founded 1888

"He is one of the world's two greatest electrical engineers"

Playing with his crudely constructed telegraph and telephone lines, little did the boy—Francis Bacon Crocker—imagine that, some day, to him would be paid this deserved tribute.

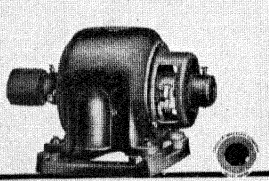
But the years pass. It is 1906. The city—London. He is one of the two American delegates on the International Electrotechnical Commission. Lord Kelvin, the great scientist, is speaking.

To the vision, ability, and practical enterprise of Dr. Francis Bacon Crocker, science and industry owe many of their attainments. To the Crocker-Wheeler Company, its illustrious founder will ever be an inspiration and guide.

CROCKER-WHEELER COMPANY
AMPERE NEW JERSEY

BALTIMORE CHICAGO NEW YORK
BIRMINGHAM CLEVELAND PHILADELPHIA
BOSTON DETROIT PITTSBURGH
BUFFALO NEW HAVEN SAN FRANCISCO

Foreign Distributor: International Western Electric Co.



MOTORS & GENERATORS

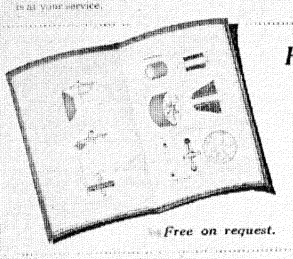
FRICTION TRANSMISSION.

EVERY engineer requiring reliable data on this important subject should get into touch with us.

We have placed on the market a new and wonderful material for friction transmission, and we are prepared to give engineers all assistance within our power, in applying this material to their needs.

In cases where direct-coupled positive drives are applied with difficulty, friction drives faced with this new Ferodo Lining will provide an economical and easy solution to the problem.

Look into this new and valuable idea, which has given splendid results on difficult tests. Write us, giving full details, and our vast experience is at your service.



Free on request.

Have this Book.

It is profusely illustrated, besides containing many hitherto unpublished facts & figures.

A copy will be sent to all engineers and draughtsmen on receipt.

VISIT OUR STAND AT WEMBLEY, No. 200
AVENUE 1, BAY 28, PALACE OF ENGINEERING.

FERODO LTD., - CHAPEL-EN-LE-FRITH.

DEPOTS and AGENCIES:—London, Birmingham, Leeds, Manchester, Bristol, Belfast, Nuneaton, Cardiff, Buxton, Glasgow, Carlisle, Brighton, Swansea, and Liverpool.

Good Metal —*through and through*

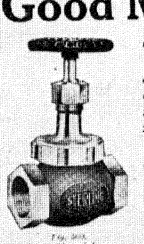


Fig. 3618. Screwed or Flanged for use on superheated steam. Brass, heavy bronze throughout, with nut and outlet cone of Monel Metal. Suitable for a working steam pressure of 400 pounds.

THE wonderful durability of Jenkins Valves is due to the use of the best metals, and to sixty years of manufacturing experience. They are made right, for severe as well as for average service.

Every Jenkins Valve must pass an examination before it is certified as fit for Jenkins service. It has to survive the rigid tests of the Jenkins factory experts; and it must be first-class in every detail, then it goes forth to render that remarkable valve service which has made the name of Jenkins famous. For prices and sizes see our

72-page Catalogue FREE.

TRADE JENKINS MARK

Jenkins Valves

SINCE 1864

JENKINS BROS. LTD.
(Regd. 1911)
6, *Great Queen Street, Kingsway, LONDON, W.C.2.*
Works—MONTREAL, CANADA.

ALFRED HERBERT LTD. COVENTRY

A COMPLETE GEAR CUTTING SERVICE

THIRTY years' experience in the production of gears and gearing of all types enables us to place at the disposal of those requiring high-class gears a really efficient gear cutting service. This service includes:

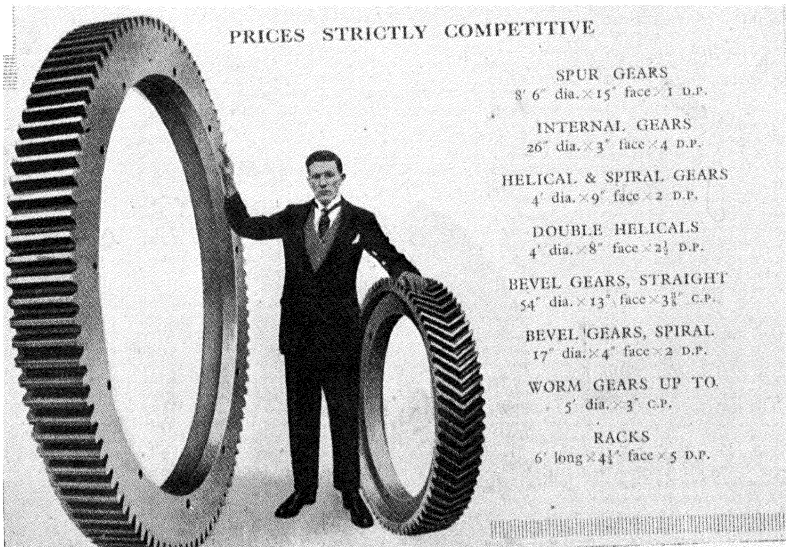
Laboratory tests for the most suitable material.

A staff of gearing specialists for designing gears for any specific purpose.

An efficient Gear Cutting Department containing modern machines.

Supply of gears complete or cut from customers own blanks.

Nothing too large—nothing too small.



The "Service" Advertisement.



THERMOLITH

The All-Temperature Fire Cement

THERMOLITH comes as a dry powder, packed in metal drums of 100 lbs. each

ONCE again the bonding and heat-resisting qualities of THERMOLITH have withstood an extraordinary test. The accompanying letter from The Lippincott Glass Company, prominent manufacturers of glassware, tells how THERMOLITH effectively bridged a seven-foot furnace break and saved a serious situation.

Today, in hundreds of industries where fire brick are used, THERMOLITH is proving the one fire cement capable of withstanding the destructive forces commonly encountered in furnace practice. It will serve you also—try it!

"Makes the Weakest Point the Strongest"

HARBISON-WALKER REFRACTORIES CO.

World's Largest Producers of Refractories

Pittsburgh, Pa., U.S.A.

The "Testimonial" Advertisement.


Remember the miner who
LOVED his Climax Drill?
IT WAS A JOBURG III under test. They had to steal it from him at night before they could try it out in another part of the mine.
Well, that miner got his beloved Joburg III back—and more with it, and this is the sort of work they're doing :—
Stoping with three drills, that miner broke 252 fathoms during January—3'11 fathoms each drill shift. In a single end drive, handling three drills, he drove 15'6 feet in 26 shifts.
That's the sort of going that makes Climax Drills beloved by miners all the world over!
Climax Sam
It's all in the Build of the Drill!
Save your Bills Climax Drills
British from Handle to Steel-Point
The Climax Rock Drill and Engineering Works, Ltd
4 Broad St. Place, London, E.C.2 and Carn Brea, Cornwall
CLIMAX DRILLS

WHO SECURED THE CONTRACT ?



+GF+

Malleable Tube Fittings

Gas, Steam, and Water, ¼ in. to 6 in.



PRACTICAL MEN REALISE THAT IT PAYS TO USE ONLY THE BEST MATERIAL.



+GF+ FITTINGS!
+GF+ FITTINGS HAVE A LARGER SALE THAN ANY OTHER.

+GF+ MALLEABLE FITTINGS ENSURE COMPLETE SATISFACTION AND A SAVING IN LABOUR OF 50%

I DIDN'T-I WISH I HAD USED +GF+ FITTINGS.

ONE GRADE ONLY FOR GAS, STEAM, OR WATER. 7500 VARIETIES.

LARGE STOCKS HELD OF WELDED AND SEAMLESS TUBES: ¼ in. to 12 in.

EDWARD LE BAS & CO. :: LONDON, GLASGOW, MANCHESTER, BELFAST.

STOCKS IN ALL PRINCIPAL TOWNS.

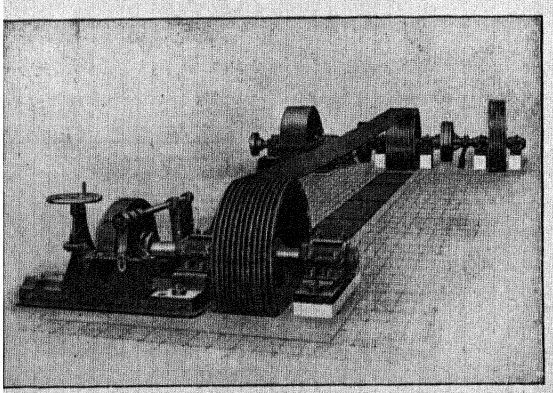
The "Humorous" Advertisement.

Heywood & Bridge's

FRICTION CLUTCHES AND MODERN MILLGEARING

IMPROVED PATENTS

Write for Catalogues (C 30 "Friction Clutches" and "Modern Millgearing." Post Free.



The Last Word in DURABILITY

WHEN a clutch can be applied 40,000 times a year over a long period of years without showing signs of wear, surely nothing further need be said as to its Durability.

This is the experience of a user who writes as follows:

"Each Clutch applied 125 times a day, or 40,000 times a year, and unable to trace any signs of wear or tear."

There are scores of Heywood & Bridge Clutches in use to-day with an equal record, and it is no unusual thing for us to hear that Clutches installed so long as 30 years ago are doing their work as satisfactorily as on the day they were first started up.

Be sure to specify "Heywood & Bridge Clutches" made by Bridges"—then you get the original and genuine Clutch, with our guarantee behind it.

DAVID BRIDGE & Co Ltd

Castleton Manchester

London Office—

The "Durability" Advertisement.

the safest and best for the maker of engineering products. Argumentative advertising consists of closely-reasoned statements why the particular goods referred to are better in value than those the customer is actually using. (This does not mean that the latter's goods need be directly mentioned. As has already been pointed out, this is not good policy. It invites comparisons, and the last thing one wishes is to put one's rival's product into the buyer's mind. He must be led of his own accord to think that, since this product is so good, the one he is using cannot be its equal.) Other forms of campaign may achieve greater brilliance, may attract more attention at the moment, may be more appropriate to a particular marketing problem, but none is so consistently and generally applicable to the technical product as this. If you carry it out well, you can never fail with an argumentative advertisement, because it does above all things fulfil the great essential of engineering-advertising, which is to tell the prospective purchaser *something he does not know* about the product. There is no product on the market for which argumentative advertising is improper. It does not merely say the product is better; it shows clearly and vigorously why it is better. And that, when all is said and done, is what the engineering-buyer most wants to know.

4. Allegorical copy is only to be recommended as a means of advertising a technical product in a novel and striking way. It is useful, for example, in the case of those goods that are standardised, and scarcely dissimilar from competing goods. Files, for instance, would be a good subject for allegorical copy, because there is so little difference between one good file and another that arguments soon become exhausted. The allegorical campaign expresses the product in terms of something widely different, but by means of metaphor, simile, analogy, etc., it establishes an arresting and unexpected connection between them that serves to impress a particular fact on the reader's mind. For instance, a firm manufacturing a superheating device for locomotives pictured a number of

horses leaping hurdles at terrific speed. " Thus," it said, " does the steam race over the obstacles in its way in the locomotives fitted with our super-heater." To be effective, this form of campaign must be carefully carried out, and the imagination of the reader must not be wrenched too hard in the attempt to establish a link between the product and the analogy.

5. The pictorial campaign is an attempt to bring the principles of poster-advertising into the domain of the technical advertisement. It flourished for a time, and in certain advertising-service agencies it flourishes still, but its vogue is not so great as it was, because it has been found an expensive form of advertising that does not wholly justify its cost by results. Briefly, it consists of a picture, with a bare line or so of copy (usually a catch-phrase, or, more familiarly, a " slogan "). It is a poster in miniature. The theory is that the buyer looks at the picture and remembers the slogan ; and because he remembers the slogan, he buys your goods next time he orders. The logic is delightfully sound ; but, like many other logical arguments, it proves unsound in practice. No buyer of engineering products worth his salary buys a technical product because he remembers a catchy slogan connected with it. One of the most successful engineering-product slogans of recent years is Edgar Allen and Co.'s " The right steel for every tool," but Edgar Allen's know better than to leave it at that. Their advertisements teem with arguments that show *why* Edgar Allen steels *are* the right steels. A slogan is a handy and valuable thing as an adjunct to the close reasoning of the ordinary advertisement, but in itself it carries no conviction. It is merely a phrase, and it takes more than a phrase, however clever, to sell tool-steel or a hydraulic press to a buyer.

6. Negative " copy " is, like allegorical " copy," useful as a deviation from the ordinary form of campaign, serving to present the product in a different light. It does not consist of telling what the product will do, but of telling what it will not

do ; of saying not why you should use it, but what will happen if you don't use it. For example, instead of saying : " Blank's wood-saws will deal with any kind of timber," you declare that " Blank's wood-saws won't cut nails," the idea being that good as a Blank saw is, it isn't proof against foolish treatment by the workman. Apparently concentrating on the stupidity of the workman in not examining the wood beforehand to see if nails have been left in it, one contrives to leave an impression of good quality in the reader's mind. He feels how great a shame it is to spoil a rattling good saw by carelessness, and all the time his subconscious mind is thinking, or being led to think, that Blank's wood-saws are rattling good saws ; which is just what the advertiser wants.

Or, again, instead of saying : " By using Blank saws you make sure of keeping up production-rate," you declare : " An important order was delayed for a week through using inferior saws."

On the whole, the technical-product manufacturer will do well to avoid negative copy. It needs expert handling to make it successful, and it has dangers. It is always bad policy, except in special circumstances, to put into a man's head the idea of a damaged product, because, by association of ideas, whenever he thinks about your product he will think of damage at the same time, and hesitate to buy. It is not that he necessarily believes your saws will damage easily, but that the risk of damage and loss caused by trying out a new kind makes him think twice before deciding to take it. By too strongly emphasising the dangers of inferior saws, you make him reluctant to buy saws with which he is unfamiliar. And that is always bad marketing.

7. Trade-mark advertising-campaigns are important in technical-product advertising because there are many standardised products for which fresh arguments are not easy to find. Files have been mentioned as an example. You cannot say very much that is new about a file, because one file made by a good manufacturer is as like another made by a

different but equally good manufacturer as two blades of grass are alike. But it may so happen that the one maker's trade-mark is much more widely-known than his rival's. He may be turning out a certain world-famous product, files being merely one of his sidelines. But because his chief product's excellence has made his trade-mark equal almost to the hall-mark on gold and silver, his files will, if stamped with the same mark, attract to themselves some of the same prestige. It will sometimes pay him, therefore, instead of trying to find new things to say about them, to announce as clearly and often as he can that they bear the same trade-mark as his other product, and are worthy to bear it. He will advertise the trade-mark rather than the goods. The man who has been using "Stag" high-speed steels and has found them admirable will be strongly inclined to buy and use "Stag" files when he sees them advertised, because he knows the "Stag" mark is trustworthy. At the same time, trade-mark advertising brings the mark into greater prominence and serves as a factor in building up reputation and good-will.

8. Quality campaigns devote themselves not so much to arguments this way and that in favour of the product, as to dignified declarations concerning its essentially good quality. This form, too, is chiefly used in connection with the standard product, the advertising of which is the most difficult problem the technical manufacturer has to face. There are several ways of striking the quality-note. You may refer to the fact that such-and-such a firm uses the product, and therefore its quality must be high. Or you may describe the care used in selecting its ingredients, or the diligence with which it is tested before leaving the works, or the length of time it takes to make it, or the exacting character of the work for which it is required. All these methods are good, but quality-campaigns should only be used when there is insufficient material left for a continuation of the argumentative form.

9. Service is an excellent thing to advertise when it is a

reality. If the advertising-campaign makes a feature of the service the firm renders to its customers, then every precaution must be taken to ensure that this service is actually rendered. A customer attracted by these offers who fails to receive the treatment he expects is twice as difficult to conciliate as one who comes in an ordinary business way. Service, properly and generously given, is one of the things a buyer most eagerly seeks and recompenses. The form of service will depend on the product and on circumstances. One engineering firm, for instance, publishes a fine range of technical handbooks, and advertises these, knowing that the man who writes for and reads them cannot but be influenced in favour of its own products, though the information the books give is of value whether its products are used or not. Another offers the free help of its research laboratory in solving any problems connected with the use of its product. Another offers an experimental crushing and grinding plant for use by mine managers, etc., who wish to test the fineness to which their materials can be crushed or ground. Service-advertising is undeniably the finest form of indirect advertising, and, if sincere, can be heartily recommended.

10. Testimonial advertising is as good in its way as argumentative advertising, though it has dangers. Its name describes it accurately. It brings before the notice of the buyer an authenticated performance of the product that practically speaks for itself. It can be used in connection with any product that lends itself to an authentic test, and if the name of the person or firm under whose auspices the performance occurred can be quoted, the effect is strengthened considerably. It must be remembered, however, that a performance too abnormal will merely excite disbelief and scorn. The man whose average of hard worn steel locomotive-tyres turned with one grind of tool is ten will simply refuse to credit the man who announces that his steel has turned sixty-nine tyres with only one grind of tool. Such a result is beyond the bounds of his credibility. The writer has

more than once refrained from publishing details of record performances for this reason alone. As a celebrated writer has said : " Facts that the public won't believe aren't facts." The performance advertised must be exceptionally good, but it must not be astounding.

Furthermore, there is always a tendency on the user's part to try to get similar record results out of the product he buys, whether the conditions are similar or not. For example, if the manufacturer advertises that his twist-drills have drilled a thousand holes in mild steel in such and such a time, the man using the same make of twist-drills on hard cast iron is not unlikely to try to drill a similar number of holes in the same space of time, with a smashed drill as the result. So that in advertising record performances, care must be taken to emphasise the conditions under which they were achieved. The rate of feed and speed must be stated in the case of twist-drills, and so forth. If any details are omitted, some careless or thoughtless user is certain to try to do the impossible, and will promptly accuse the manufacturer of misstatement in his advertisements when failure greets his efforts.

When running a campaign of this kind, it is better to describe the letters from users giving the details as " users' reports " rather than as " testimonials." The latter word has unpleasant associations with patent-medicine and other advertisements.

11. The historical form of campaign needs little comment. It is intended chiefly to arouse the interest of the reader with an inquiring turn of mind. A campaign of this kind traces the history of the product from early times to the present day, and usually winds up with a picture of the particular manufacturer's product as " the last word." It is useful as a change from other forms of campaign.

12. Humorous or whimsical campaigns—*i.e.*, series of advertisements in which the product is dealt with in a familiar or comical way—are campaigns of which the success is a thing of

doubt and dread right to the end. In the advertising of technical products one can never be sure how far a light and buoyant treatment of the subject will strike the buyer as irresistibly attractive and novel, or how far it will strike him as needlessly flippant and undignified. A maker of bituminous paint could not sell his product at all until he employed whimsical illustrations in the engineering journals that carried his advertisements. Another, whose machine-tools sold quite well when advertised in conventional ways, found his sales slump badly when he tried a series of humorous cartoons—quite well-done, too,—to stimulate the sale still more. It is a question of taking one's chance, and the manufacturer who finds his ordinary advertising effective will do well to steer clear of the humorous campaign until all other forms have failed.

Perhaps this summary of the various forms of campaign would be incomplete without reference to three others of growing importance. One is the trade-character, such as "Climax Sam," a typical user portrayed in various attitudes in each successive advertisement, and talking in familiar and natural fashion about the product as he sees it. This is a form of advertising that has the attraction of novelty, and it can be made to embody quite convincing argument; but it will readily be seen that a general adoption of these characters would soon make them ridiculous. If every advertisement showed a typical Sam or Bill or Joe or Dick, each talking slangily about a particular product, the effect would be nauseating.

The second form is that in which the manufacturer announces, on the principle of the doctor taking his own medicine, that he uses his own product in his own workshops, because he doesn't know of anything better. It is a sound line of argument, and it carries a good deal of weight. If not overdone, it would prove of great value to an enterprising advertiser. A series showing the use the manufacturer made of his own product in each department of his works would be novel and interesting.

The third and last form is that which takes a handbook or catalogue published by the manufacturer, describes its scope and contents, and tempts the buyer to write for it. There are certain advantages in this method. First of all, it is an effective way of inducing action. Secondly, the number of replies received is a good guide to the success or otherwise of the advertisement. Thirdly, it gives the advertiser the names of prospective customers. And, lastly, it enables him to follow up and keep in contact with the buyer who has written. It is useless, however, to employ this method if the booklets advertised are mere price-lists. The chapter on engineering catalogues should be carefully read in this connection.

The technical-product maker will be able, after considering these numerous forms of campaign, to decide which is the most applicable to his product. Having made his decision, he should adhere to it. It is poor policy to change the form of the campaign before it has reached its logical completion.

In the next section a scheme, quite novel, whereby the results of advertisements may be ascertained with considerable accuracy, the value of each medium be decided without effort, and the general effectiveness of the campaign be perceived, is described in detail.

§ 5. *A Scheme for Checking Advertising Results.*—The form of the campaign having been decided, the next question: "How can results be measured?" becomes important. Of all the branches of engineering-advertising this is, perhaps, the most necessary to understand. Unless side by side with the efficient advertising-campaign there goes a sound scheme for calculating its results, the publicity-manager will be in the dark as to the exact degree of success his efforts have achieved. He may, by waiting a little time and getting out details of total sales over a given period, be able to assume either that an obvious increase mean success, or that decreasing sales mean failure; but the assumption will be based on no proper evidence. For all he knows, a thousand differing factors, totally unconnected with the advertising-campaign, may

have caused the fluctuation one way or the other. Although, spread over a sufficiently long period, the sales figures do indicate to some extent the efficiency or otherwise of the selling activities, it does not follow that they indicate failure or the reverse in the advertising section of those activities. It may be that salesmen are slack or specially energetic, production-methods bad or exceptionally good. There is no trustworthy proof that the publicity campaign is at fault or praiseworthy.

Advertising badly done is one of the most expensive forms of selling. Advertising well done is perhaps the cheapest when the results obtained are considered. Here, less than anywhere, can waste or inefficiency be tolerated. Yet for the lack of a proper system of checking results thousands of pounds may be wasted annually on an advertising-campaign that such a system would immediately prove unsatisfactory. The writer, who has had much experience of advertising technical-products, was perplexed for some considerable time by this problem. Every year a campaign was launched after much thought and pains, and every year the succeeding months produced harassing uncertainty and doubt whether or not the campaign was really doing all that could be expected. Finally, to obviate this, he attempted to devise some quick and effective check on the success or failure of his campaigns. After repeated experiments he invented the scheme here described. This scheme has now been in operation long enough for its efficacy to be thoroughly tested, and it has stood the test excellently. It has an important additional advantage: it reveals with astonishing accuracy the relative value of each journal as an advertising medium.

Before giving details of this scheme, to the best of the writer's belief original, it is necessary to mention a few qualifying facts. No scheme, however ingenious, can scientifically measure the total result of advertising, or decide its exact value to the manufacturer. The influence of an advertisement on the reader is not a ponderable thing, that

can be scrutinised and measured and weighed. It is incalculable. It is impossible to trace every order that advertising may bring, impossible to declare with certainty exactly how many it has brought. There are some buyers whose reasons for ordering can never be tracked to their source.

For this reason the various suggestions put forward here are not advocated as measures of advertising's whole effect. They are merely trustworthy guides and pointers, showing with a good degree of accuracy the relative success of this campaign and that; the relative worth as a medium of this journal and the other. To crystallise this explanation, one may point out that if forty out of fifty inhabitants from an unknown country, selected at random, were short and red-haired, it would be pretty safe to assume that that country harboured a red-haired, shortish race. In the same way, if fifty replies to a given series of announcements in a particular journal are received, and forty of them are orders, it is pretty safe to assume that that particular campaign in that particular journal is successful in producing orders. So much the writer's scheme discloses. It does not claim to reveal more.

Two things are essential to any device for determining the results of a campaign. They are as follows:—

1. Some incentive for the reader to communicate with the manufacturer.
2. Some means of tracing such a communication to its source in a particular advertisement.

To deal first with the incentive, this may take various forms, of which the following are the most usual—

(*a*) A free sample may be offered for trial.
(*b*) A trial order on advantageous terms may be suggested.
(*c*) A catalogue, booklet, or other piece of literature may be offered free of charge.
(*d*) An offer to supply certain information or to advise on special problems may be made.
(*e*) A special bargain offer may be made, to hold good between certain dates only.

The object of all these offers is to put the consumer into touch with the manufacturer, thereby enabling sales-letters to be written, travellers to call, catalogues to be sent, and so forth, until an order is secured or the " prospect " is dismissed as " dead," or, in other words, of no value as a market. Only secondarily are they inserted to enable results to be checked ; but they do effectively serve this purpose if the replies they bring can be traced to their source. (The value of advertising for technical-product manufacturers would be raised by 50% if every announcement they published contained some inducement to create correspondence between reader and producer. A man who replies to an advertisement is obviously interested, and is thereby rendered so much the more likely a buyer of the goods advertised. But few men—and this is a psychological fact well known to the expert—will trouble to write unless the suggestion is made to them in one or other of the ways indicated.)

There are various ways of tracing a reply to an advertisement. Sometimes, though rarely, a correspondent will refer to the journal in which he saw the announcement. More often than not he fails to do so. For this reason experienced advertisers have invented keys of various kinds that enable them to detect infallibly the origin of an inquiry. A brief summary of some of these keying methods is of interest and importance here :—

1. The reader is instructed to address his letter to a particular department, such as E 1 or A 2. These numbers are the key-numbers of particular journals and advertisements. Thus, E 1 might mean the first advertisement of a particular series in the *Engineer*, A 2 might mean the second advertisement of a series in the *Mechanical World*. Each envelope addressed to Department A 1, etc., is picked out and sent to the Publicity Department, where its contents are examined, and the result noted to the particular advertisement and journal.

2. The manufacturer's address is slightly altered in each case. Thus, in one journal and advertisement it may be given as John Smith and Co. Limited ; in another as J. Smith and Co. Limited ; in a third, as J. Smith and Co. And so forth. Or if he has an address such as 23—26 South Street, one advertisement gives the address as 23, South Street ; another as 24, South Street, and so on. The envelopes with these different numbers are picked out and sent for recording in the way described above.
3. The offer, whatever it may be, is conditional on the reader's quoting the name of the journal in which he saw it.
4. A coupon or request form has to be filled in by the reader, each coupon bearing a key-letter that enables it to be traced.
5. The name of the product is slightly modified in each advertisement. Thus, in one it may be " Smith's ' Brush ' brand soluble oil " ; in another, " Smith's ' Brush ' brand oil " ; in a third, " Smith's dissolving oil, ' Brush ' brand."

All these methods have their value, but the simplest and best is, without doubt, No. 4. For some strange reason that has been a puzzle to advertisers for years, the presence of a coupon or request form in an advertisement has the effect of increasing the number of replies. This fact has been verified over and over again, until it has now passed into the region of accepted truth. Probably it is because it makes writing easy that its success is so great. The reader has but to scribble his name and address in the space provided for the purpose, make a snip or two with his scissors, slip the form into an envelope, address and post. No letter is necessary.

Be that as it may, the fact remains that a request form stimulates replies. (Technical-product advertisers should never use the word " Coupon " in their advertisements. It lacks the dignity that the longer but more advisable term

" Request Form " has.) Practically every advertisement, unless the form of the campaign utterly precludes it, should carry a coupon of this kind, with a key-letter and number inconspicuously placed somewhere on it. From the number of these returned, the advertiser will be able to ascertain the results of his efforts.

It must not be imagined that " coupons " are in any way derogatory to the dignity of an advertisement. This is one of the fond superstitions of the older generation of manufacturers. There was once a famous personage in manufacturing circles who to the day of his death considered riding in motor-cars undignified, and came to work daily in a horse-drawn cab. Here again the moral is obvious.

Perhaps the first thing to decide is the effect of the same series of advertisements in different journals. Very few English technical papers give details of circulation, and therefore it is difficult for the manufacturer to decide what is the best and most widely read medium in a particular field. Fig. 4 shows how weekly comparisons can be made, even when an advertisement does not appear in one paper during the same week that it appears in the other. The chart can be adapted, if necessary, to show daily or monthly comparisons.

The thick black line stands for Journal A, and the dotted line for Journal B, which may be taken as competing weekly technical journals. The figures in the left-hand column show the number of replies received as the result of any particular advertisement. At the top appear the months, each divided into four weeks. The small figures that break the continuity of the lines on the chart represent the key-numbers of various advertisements in the series. To illustrate this it will be necessary to examine Fig. 4. During the first week of January, Journal B carried advertisement No. 3, which drew 6 replies only. Journal A for the same week carried advertisement No. 7, which drew 12 replies. Journal A did not print advertisement No. 3 until the fourth week of March, when it brought 19 replies. On the other hand, when

advertisement No. 7 figured in Journal B, during the third week of February, it brought 4 replies only. Examination of the two lines on the chart shows that Journal B was consistently the inferior reply-drawing medium, a fact essential for the advertiser to know.

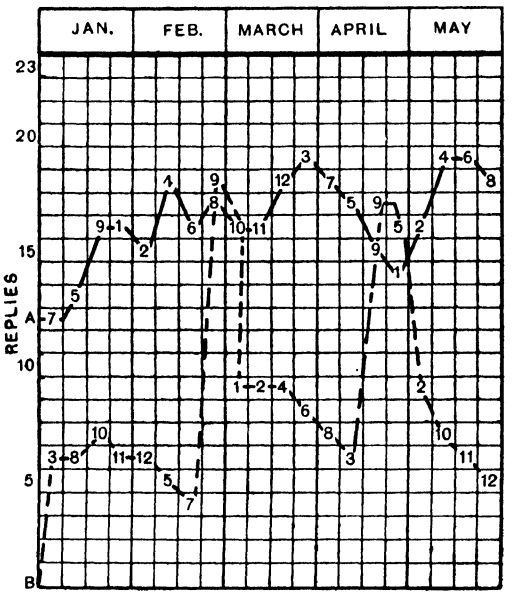


FIG. 4.

The use he makes of this knowledge will depend upon circumstances. It does not follow that because it consistently pulls inferior results Journal B is a worse medium than Journal A, which gives much better returns. It may be merely that the class of advertisement, the form of campaign, that suits the

readers of Journal A is not suited to those of Journal B. A change in the form of the campaign might bring better results immediately.

Again, examination of the chart shows that advertisement No. 9 on two occasions did better in Journal B than in Journal A. This is a surprising fact that demands close investigation. Perhaps the dates of its appearance in B were more suitable for some reason than those of its appearance in A. Perhaps this one advertisement is better adapted to B than to A. If so, it will give an indication of the methods to be practised in the case of B, and avoided in the case of A.

This system of weekly comparisons obviously affords data that would otherwise be unobtainable, and discloses weaknesses and defects that might have passed unnoticed.

But the analysing of results only begins here. The chart shown is merely a rough-and-ready method of making quick comparisons between one paper and another. It does not show the whole of the advertising-media in relation to each other, nor does it afford a true analysis of the results obtained.

In the first place, it is obvious that replies to advertisements vary in quality. For example, an advertisement offering a catalogue of steels may bring replies from the following classes of readers :—

1. Directors of large works.
2. Directors of small works.
3. Directors of works whose size and standing are unknown.
4. Works managers, of all three above classes.
5. Buyers, ditto.
6. Chief chemists, ditto.
7. Chief draughtsmen, ditto.
8. Foremen, ditto.
9. Ordinary hands, interested in steel.
10. Professors or lecturers in technical colleges.
11. Students.
12. Mere catalogue-hunters.
13. Men whose position on a particular firm is unknown.
14. Minor officials on firms of varying sizes.

On the other hand, it may bring orders, trial orders, or inquiries.

Under the system represented by Fig. 4, each of these replies is counted as one point, an undoubtedly unfair arrangement when a close analysis is required. An inquiry or a trial order is of more value to the manufacturer than a request from a student, or from a mere hand unlikely ever to be in a position to order. Similarly, a request from the works manager of a large firm is more valuable than one from a minor official. It follows that the essential of a satisfactory result-checking system is some method of assessing these replies at their proper relative value. Two journals may bring in an equal number of replies over a given period, but from the manufacturer's point of view they may be by no means equal in value as advertising-media. If Journal A brings 50 replies from directors, it is a better medium than Journal B that brings 50 replies from students. The system must therefore clearly indicate the value and character of the replies each journal produces.

For this reason the writer has invented what he calls the advertising-unit system. The first principle of this is to award points for each reply in accordance with its relative value. No absolutely correct relation can, of course, be measured, because no one knows exactly how many times a reply from a director of a small firm is likelier to lead to business than one from the chief draughtsman of a medium-sized firm. Nevertheless, a rough working scale of values can be drawn up, and if the difference between each class of correspondent is sufficiently emphasised, the result will give a fair basis for comparison. The table that the writer has found best for his purpose is given below; but it must first be stated that an inquiry counts 15 points, if it be detailed and of ordinary size. If it is just a general inquiry for prices, or of little importance, it counts 10 points only. An order counts 15 points plus one point for every shilling of invoice-value, so that an order for five pounds-worth of steel would reckon as 100 points plus 15, equals 115. Ordinary replies or requests are then given the following point-values :—

	Of Large Firm.	Of Medium Firm.	Of Small Firm, or Firm Unknown.
Director	6	5	4
Buyer	6	5	4
Works manager	6	5	4
Manager	6	5	4
Assistants to or deputies for the above	5	4	3
Chief chemist	4	2	1
Chief draughtsman	4	2	1
Head foreman	4	2	1
Minor official	2	1	½
Draughtsman	2	1	½
Clerk or hand	1	½	—
Unknown man	1	½	—
Firm alone	6	4	2
Professor or lecturer	2	—	—
Student	1	—	—
Catalogue-hunter	—	—	—

As each request-form comes in, the number of points it is worth is allotted to the particular journal or advertisement. Eventually, therefore, the journal that produces the largest number of orders, inquiries, or requests from important firms, will show the largest number of points.

But although the system as far as this point does show very accurately the reply-getting powers of each journal, there is another factor that must not be overlooked, and that any analysis of results must take into account. This is the factor of cost. Although Journal A may have drawn 50 replies, equalling 561 points after assessment of value according to the above table, it is not necessarily inferior to Journal B, which has drawn 51 replies equalling 600 points, if the cost of getting these replies is considerably higher in the case of B than in that of A.

For example, a year's advertising in Journal A may have cost £100. A year's advertising in Journal B may have cost £200. Yet there is only a difference of 39 points between them. Obviously, then, A is by no means a worse medium than B. Another £100 spent on advertising in A might have raised its total of points from 561 to 1000, which would have nearly doubled the number of points gained by B with equal expendi-

ture. To get at the true relation between B and A it is essential, therefore, to divide the number of points gained by each into the cost of getting them. The figure resulting, expressed in pounds, shillings, or pence, as the case may be, will give the exact difference between them. Thus,

561 into 2000 shillings (£100) equals roughly 3·54 (Journal A).
600 into 4000 shillings (£200) equals roughly 6·66 (Journal B).

In other words, it costs 3·5 shillings per point in the one case, and 6·6 shillings in the other. Therefore Journal B is the inferior medium when the three essential factors have all been taken into account, these three factors being—

1. Number of replies received.
2. Quality of replies received.
3. Cost of drawing each reply.

The figure of 3·54, which sums up the value of Journal A, is called the advertising-unit figure. The lower this figure, the higher the value of the journal.

Although, as has been pointed out, it is not claimed that this method gives absolute values, it does very clearly and accurately indicate the worth of each journal in which advertising space is taken. If, over a sufficiently long period, a number of journals consistently give a higher unit-figure, or, to put it in another way, occupy a lower place in the merit-table, than other journals covering the same ground, it can be safely assumed that they are not the right media for the manufacturer, and they may be removed from the list without compunction.

To make sure that as many orders as possible are traced to their source, the manufacturer should see that his Publicity Department is furnished with lists of orders received by each department of the works. In this way any new customers will be noted, and if investigation proves that literature has recently been sent to them in response to a request made as the result of an advertisement, the order may in all fairness be credited to the account of the journal that carried the advertisement. Inquiries from new firms should also be listed in a similar manner for the Publicity Department.

The effect of all these arrangements will be to give the sales manager and the publicity manager a clear idea of the success or otherwise of the advertising campaign, and will show with a good degree of certitude whether money is being wisely spent.

In the next section of this chapter are given some practical hints on the designing of technical-product advertisements.

§ 6. *Preparing the Advertisements.*—An advertisement can be divided into two main parts, the " copy " and the " lay-out." The " copy " is, of course, the wording or text. The " lay-out " comprises the way in which the text is set out, the illustrations that enliven it, and their position in the advertisement.

It will be as well to deal with the " copy " first, because this, when all is said and done, is the pith and marrow of the advertisement. Unless the text is sound and convincing, no amount of artificial attractiveness in the way it is displayed will sell goods, and selling goods is the main function of all advertising.

The general principles of engineering-product advertising have already been discussed at some length, and it is unnecessary to repeat them. Some attention must, however, be paid to the more detailed fundamentals of good " copy." The essentials of a good advertisement are as follows :—

1. It must attract attention.
2. It must arouse interest.
3. It must convince the reader.
4. It must arouse desire.
5. It must induce prompt action.

There are hundreds of advertisements that contain one or other, or two or three, of these essentials ; but no advertiser should be satisfied until all his announcements meet these requirements in every respect.

1. The first essential, the attraction of attention, is largely a matter of efficient lay-out or display, and consideration of

this point will therefore be deferred for a space. The second essential, the arousing of interest, directly concerns the copy-writer, and can therefore be dealt with at once.

2. One of the speediest and surest ways of arousing interest in an advertisement, once the eye has been caught, is to devise an arresting headline. A crisp, vigorous headline will compel the reader to dig into the text in order to find out more. Every superfluous word should be boiled out, and vague generalisations excluded. Such weak, unenterprising headlines as " Economy and Quality," " Blank's Castings," and so forth, have no interest-arousing merit whatsoever. Contrast with them the following sentences : " Eighteen railway lay-outs that were never made " ; " The steels that made this photograph possible " ; " How thick is a coat of paint ? " ; " Why should the belting-user pay the cost of stretch ? " ; " A lay-out worth an outlay." Each of these tempts the reader to peruse the wording below in order to find out the explanation. One wants to know, in spite of oneself, why those eighteen lay-outs were never made ; why certain steels made a photograph possible ; and what is the actual thickness of a coat of paint. At the same time the text must back up and explain the headline. If the headline promises an answer to its own query in the text, the text must contain that answer. In other words, the " copy " *must* say *why* the lay-outs were not made, and *how* the steels made the photograph possible. Otherwise the reader's interest will fizzle out, and the irritation of disappointment will take its place.

An alternative form of headline to those above is that in which practically the whole story is told in a single line, so that " he who runs may read." This form is specially useful where the text is closely reasoned and technical rather than literary or allegorical. Even if the reader never tackles a line of the copy, he gets the whole message by reading the headline. The following examples illustrate this point : " A ' Stag Special ' tool removes 1·75 cub. in. of steel a minute " ; " 233 holes drilled in an hour with a ' Dash ' drill."

The best plan is to write the text first, then go over it and pick out the headline that suits it best. Very often a splendid headline will be found buried away in the written sentences, needing only to be transposed.

Next in importance to the crisp headline is the opening sentence. This should never be a generalisation. One copy-writer makes an invariable rule of cutting out the first sentence of any advertisement he writes. He finds it always an advantage, because he usually begins, quite unintentionally, with a weak generalisation in order to get going. Similarly, if one finds oneself beginning with this sort of sentence : " The buyer of steel castings must take into account reliability of performance," one should go back, when the advertisement has been written, and ruthlessly remove the trite and tedious opening general remark. Always be specific, never general. It is a good rule.

3. Convincing the reader of the value to himself or his firm of the product advertised can only be done satisfactorily by facts. The speed with which conviction comes to him depends largely upon the character and worth of the facts presented. Yet many manufacturers, with all the will in the world to inject good, sound, practical talking-points into their announcements, are baulked by a seeming paucity of data. It is difficult for them, familiar with their product from the manufacturing point of view only, to see it from the buyer's point of view. Properties it possesses that to them seem commonplace and unworthy of mention may be the very properties that would clinch the buyer's decision to order, were he aware of them. The maker is too close to his own product to know all its talking-points. That is why trained advertising-men are often engaged to supply the outside view-point that the maker lacks.

But there is no real reason why sufficient facts should not be extracted and sales arguments collected by the manufacturer himself, whoever he engages to write his advertisements for him. What is needed is a close study of the product.

Made with a perfectly open mind and a determination to consider no fact unimportant until it has been proved so, analysis of the goods is bound to yield a fine harvest of selling-points if carried out systematically.

There are five sources whence valuable facts may be obtained—

(*a*) The product itself, and what it will do.
(*b*) What the product will not do.
(*c*) The consumer of the product.
(*d*) The performance of the product.
(*e*) The man who sells the product.

(*a*) A good beginning is to set down on a sheet of paper every attribute the product is known to possess, however insignificant it may appear. Then one may investigate the unknown attributes. A cursory examination is insufficient. The possibly big ideas that lie hidden within the actual article are seldom exhaustively sought for, and some apparently trivial quality may in the end prove to be that which will double sales. Tests, both reasonable and unreasonable, should be made. For example, a certain file-manufacturer, wishing to find some distinctive point that he could feature in his advertisements, weighed a standard file ; hammered it ; threw it on to a hard, concrete floor ; left it out in the open air ; used it on brass, on copper, on steel, and on granite. He tested it with acids ; analysed it in the laboratory ; fitted it with a handle. He reckoned up the number of teeth it possessed ; examined them with a magnifying-glass ; tested the file to destruction. He counted the number of effective strokes it would make before wearing out. He found out the number of times it could safely be recut. In short, he overlooked nothing that would unearth concealed qualities. At the end he found that the steel of which he made his files was so tough that you could not break the tang—*i.e.*, the sharp-pointed end that fits into the handle—unless you took a hammer and smashed it. The tang, as is well known to all file-users, is the weakest part of the file. Strength in the tang

was an excellent selling-argument, and full use was made of it.

This will serve as an instance of the detailed study that must be made of the product.

(*b*) Sometimes sales-arguments are to be found in what the product will not do, rather than in what it will do. A case in point is " Monkey Brand " soap, which sold because it would not wash clothes, not because it would scour pans. Even better as an illustration is " Lux," which " won't shrink woollens." In the same way, the great sales-argument for safety-razors is not that they will shave you better or quicker than an ordinary razor, but that they will not cut you. These negative arguments are sometimes even more powerful than positive arguments.

There are occasions, also, when what appears at first glimpse to be a grave drawback to the sale of a product becomes eventually a splendid selling-point. American file-makers seized upon an apparent disadvantage of this sort, and turned it into a sound sales-argument. American files are lighter than English, and cannot be recut so often. That looks like a drawback. " No," says the American manufacturer. " Why go to all the trouble and worry of sending old files to be recut, and waiting until they come back? Throw ours away when you've used them once, and get new ones. It's always better to use a new file than an old one done-up; and our files are cheap enough to make it worth while."

An English circular-saw maker embodies the same idea of turning a disadvantage into a selling-point in his advertisements. " You pay more for our saws than for ordinary saws," he says. But he goes on to say why it is *worth while* to pay more. He surrounds his product with an atmosphere of high quality and excellent achievement, and does good business as a result. The man who supplies a machine with a circular-saw as part of the equipment has to put in that maker's saws, because they enhance the reputation of his whole appliance. A machine with any other sort of saw would not sell nearly so well.

(*c*) The consumer is a prolific source of talking-points. What does he expect the product to do? What does he use it for? How does he use it? Does he use it properly? Does he use it as much as he might? Could he use it for more purposes than one? These are queries that may be put with a fair chance that the answers will provide new facts. A firm of steel-makers, to give one example, found that the user of tool-steels is often lacking in precise knowledge of how to heat-treat and harden them. He makes mistakes in heat-treatment, spoils the steel, and blames the manufacturer to the buyer if the latter complains of excessive wastage. Seeing the advantage of teaching users how to handle tool-steels correctly, this firm offered in advertisements carefully-written technical literature, the object of which was to instruct the foreman-hardener or the tool-smith in the proper use of steels, and so to prevent him from making mistakes. Many men had cause to be grateful to the literature with which they were periodically supplied, and recommended that firm's steels to their purchasing departments as a result.

(*d*) A fourth source of arguments for the advertisement is the actual performance of the product in use. The manufacturer should find out for himself what his goods do and go through after they have been despatched from the works. One engineering firm discovered, during an investigation of this kind, that the detailed working-instructions in connection with the machine they made were seldom or never received by the men in the consumer's works who had to look after it, but were filed away with correspondence up in the offices. Obviously, this was bound to affect the product's performance. So that even if some big talking-point is not elicited in this way, facts of value from another point of view may be brought to light.

Sometimes it will be found that the product is doing, and doing excellently, work for which no one had deemed it suitable. Here, at once, is a new sales-argument, and possibly a new market. Sometimes record results are being obtained

that in themselves cry out for publication. An investigation into the product's performance will dig up many enthusiastic users, many ungrudging testimonials, and sometimes a few justifiable complaints that may lead to improvements in design or composition.

(*e*) The final source is the man who actually sells the product, whether he be the salesman employed by the manufacturer, the general merchant who stocks the goods, or the mere shop-assistant who passes them over the counter. Any one of these may know things about the product that it would pay you to discover. He may know just why sales fall off at a certain time; just why Smith's product sells better than yours; just why he would sooner stock Smith's; just who buys your product and who does not, and why. Obviously it is worth while to wheedle out of him the information he can give, and on examination it may be found to contain the very facts that will make a series of brilliant advertisements.

4. Turning now to the question of arousing desire, it may as well be said at once that no recipe can be given for the writing of advertisement-copy that will contain this essential quality. Here, if anywhere, the individual skill of the copy-writer counts. It must be remembered that it is not nearly so easy to arouse desire for technical products as for breakfast-foods or pretty garments. One cannot play upon the senses with deliciously appealing words. One cannot flourish tempting pictures before the reader to stimulate his appetite. The appeal must inevitably be to the reason rather than to the senses. Yet word-craft is as necessary here as in the general-product advertisement. In reality it is more necessary because it has less scope. It must do more with less material. The ordinary manufacturer has usually neither the literary ability nor the time to write his advertisements as they should be written. The man who writes his own copy as one writes a letter is the very man who produces those unsightly examples of English ignorance of the advertising art that

disfigure the pages of many technical journals. Copy-writing is a skilled man's work, and it will invariably pay the manufacturer either to employ a trained advertising man who will look after the advertising side of his business or to entrust the actual designing and writing of his advertisements to some professional advertising agency of competent character. But *having bought a dog, he should not do the barking himself.* He may rightly correct any technical errors that the outside man inadvertently introduces into his text, or modify any statements that appear to conflict with the selling policy adopted; but he should never meddle with the literary form in which the various selling-points are expressed. It is the trained man's task to present those points in the most effective way possible. He has spent his life in learning how to do it. It is not likely that the ordinary manufacturer, with little or no literary or sales training, will be able to express himself more clearly and effectively than the man who earns his living at the work.

5. Every advertisement should induce action of some sort. It may invite the reader to write for a catalogue or pamphlet; it may offer free trial-samples; it may request the interested consumer to supply certain information concerning his requirements; it may solicit his orders bluntly; it may instruct him to name a particular product when next he goes into a shop; it may suggest his visiting an exhibition where the product is displayed. But whatever be the quality of action desired, no advertiser should be satisfied until he has made the reader feel the necessity for doing something more than merely read the advertisement. As has already been pointed out, one effective means of stimulating action is the insertion of a request-form or coupon, by filling in which the readers can obtain literature, samples, etc. Another is to run a line of italic type right across the foot of the advertisement, suggesting the kind of action required. Thus: "Write at once for a free copy of our latest catalogue." This sort of instruction appears in many advertisements. Sometimes

an injunction of this kind may conveniently be set in what is technically known as a " box "—*i.e.*, a little panel. It is an axiom in advertising that people will always read the contents of a " box." But all these are mere tricks to suggest to the reader that some action is necessary. It should be the task of the copy-writer to see that even without them the text would coerce the consumer into doing something definitive, into taking at least one active step towards purchasing the goods.

The five essentials of good " copy " having been thus examined in detail, the subject can now be left. The broad outlines of successful technical-product advertisement-writing have been sketched. To go into greater detail is not practicable, limitations of space preventing it. But in any case, enough has been written to show the necessity for care and thoroughness in this branch of marketing. It is unnecessary to discuss the more intricate technicalities of advertising here. A separate book could be written on this subject alone.

The lay-out deserves mention, however, because of its great importance. Except in one or two rare instances, an advertisement of technical products must, above all things, be restrained, dignified, and neat. Given these qualities, no other restriction need be placed upon the designer. He may use any device whatsoever to attract attention, with the proviso that such attention must be of the kind desired. If one drops a book with a bang during a Beethoven recital, one attracts attention, but not the sort of attention that will prove beneficial. Likewise, too loud and vulgar a clamouring for attention may attract it, but it will be grudging and inimical. That is not the sort of attention the manufacturer wants.

A few rapid hints on lay-out must be given. Half-tone illustrations should be of a screen-size suitable to the paper on which they are to be printed. The block-maker will recommend the proper screen when furnished with a specimen

of the printing-stock, should the advertiser not be acquainted with the various sizes. Too much retouching of machinery and machinery-parts gives the resulting illustrations an unreal appearance. To bring up edges sharply in the photographs, rub a little chalk along them. This will save many pounds in retouching.

Balance should be carefully studied. Do not make your advertisement look top-heavy or bottom-heavy. Never crowd too much into too small a space. It is better to have three lines of ten-point type than six lines of six-point. Avoid printing words and sentences in all capital letters. It is a well-known fact that capital letters are less legible than small letters. (If you want to emphasise a word or passage, don't underline it or print it in capitals. These methods invariably make it difficult to read. The best plan is to set it in italic type, or to put it in a " box.")

Every illustration should have a description of what it is, however short, underneath it, even though the text of the advertisement may give the same information. The reason is that people will often stop to look at pictures, whether they read the text or not, and by describing the picture you make certain that they will get at least a brief message.

If you have a good deal to say, break it up by inserting sub-headings. It looks more readable thus. Avoid too long a line-length. Any printer will supply you with a little table showing the maximum length of line according to the size of type, or one can be bought. Too long a line makes text difficult to read. If the " copy " cannot be set in larger type, break it up into parallel columns.

Study type-faces closely, and remember that some types are easier to read than others. Caslon, Cheltenham, Plantin, De Vinne, Roman, Baskerville, and many others almost as good, are stocked by most good printers. Caslon is especially good in technical-product advertisements, owing to its clarity and simplicity. There is a saying that " you cannot tell a lie in Caslon."

Avoid extravagances, such as setting type at an angle, setting an advertisement upside down, using white lettering on black, and so forth. These are merely clumsy and ineffectual substitutes for real cleverness of design. Black in large masses never prints well in technical journals, the conditions under which they are printed making it difficult to obtain a clean and even impression. As a result the solid black surfaces come out spotty, blotched, or mottled, and are in any case ugly. Not only this, but they are, as has been proved, far less legible than plain black type on white.

If you use a designed border for your advertisements, let this have some connection with your product—*e.g.*, one advertiser uses a border made up of the word "steel" repeated again and again, this being his specialty. The border should not be so striking in appearance as to lead attention away from the text. It should serve rather to throw the text up. Half-lining—*i.e.*, shading by a mechanical process—the solid black parts of the design will often turn a bad border into a good one. The block-maker will do this, if instructed. Remember that anything which distinguishes an advertisement from its neighbours helps the reader to remember it, so long as this difference is agreeable. Therefore, designed borders, name-plates, and so forth, are useful.

Fig. 5 shows how a lay-out should be prepared for the printer to enable him to set the advertisement correctly.

If these various instructions are carried out, the main elements of a successful advertisement will have been embodied.

It would not be fair to end this chapter without some reference to a particularly despicable kind of fraud practised on unsuspecting manufacturers. A communication is sent from some unknown journal with a high-sounding name (which changes every time the trick is tried), saying that the proprietors propose to describe the manufacturer's works in an early issue, and would like some notes from him to enable their journalists to write up a suitable article. He is assured

that this will cost him nothing, and that he will not be asked to advertise. He sends the notes. An article is prepared and

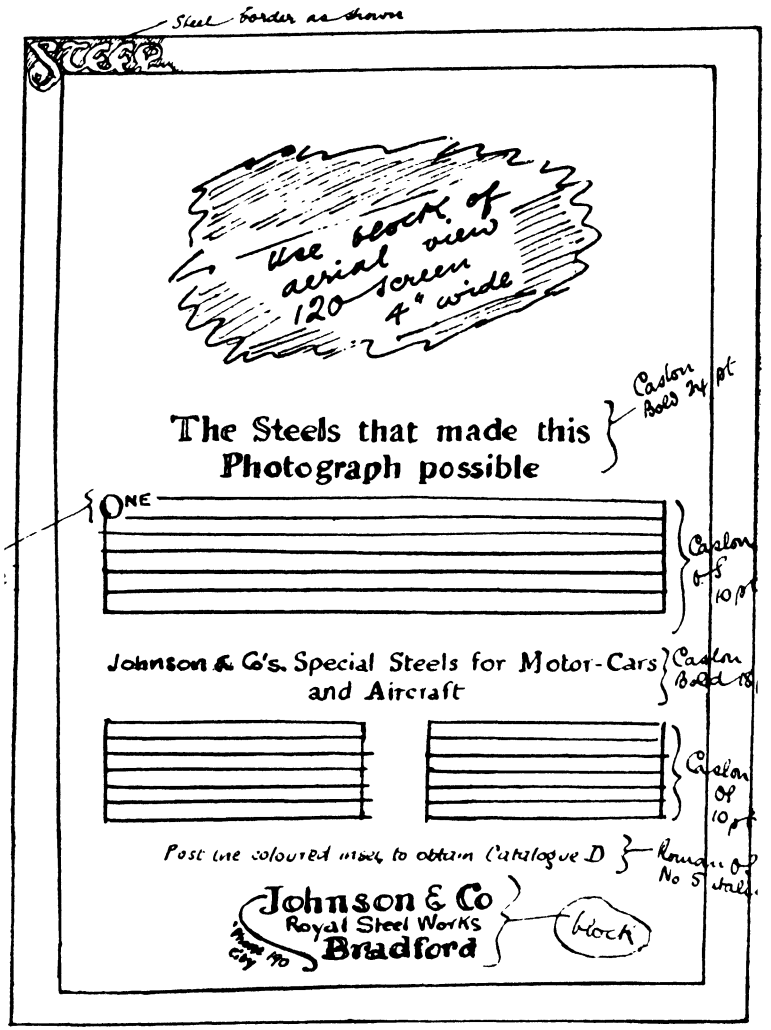


FIG. 5.

sent to him. He corrects and passes it. Back comes a request for photographs to illustrate the article. These the manufacturer willingly sends. A letter is then sent pointing out that he is getting so much free publicity; would he object, in return, to bearing the cost of the blocks that will be made from the photographs. The manufacturer knows that the blocks will only cost a few shillings—say, £5 at the most. He thinks the request quite fair, and sends a written authorisation to prepare the blocks at his expense. He receives eventually an enormous bill for blocks, sometimes as much as £100, and he has no option but to pay it, because he has bound himself to pay for the blocks without receiving any preliminary estimate of their cost.

The people who employ these methods will write as many as a dozen times to the same firm, and always they write under a different name. The manufacturer receiving a request of this sort from an unknown journal should, therefore, tear it up. It is a trap.

CHAPTER V

§ 1. *The Engineering Catalogue.*—Many modern manufacturers of technical products do not take their catalogues and other publicity-literature with sufficient seriousness. They have catalogues because, more or less, they have to have them, as they have to have offices and clerks and wastepaper baskets. In consequence, when the time comes, they often hand over a batch of diffuse matter to the cheapest printer, and entrust the printing, arrangement, format, and everything else, of the catalogue to his tender mercies. The result, unless by sheer good fortune they have hit on a painstaking and imaginative man, is a mass of ill-assorted types, bad setting, over-emphasis, and illiteracy. But even the best of printers cannot put into the creation of publicity-literature the selling-power and direction that it needs. In the first place, it is not his job to do so. True, there are many printing firms who combine copywriting and advertising service with their presswork ; but while these may serve the purpose of the small manufacturer quite well if he is unable to afford his own publicity department, they cannot wholly replace the trained man thoroughly familiar with his firm's problems of sales-development. Secondly, few printers are as well acquainted with the habits and characteristics of the technical-product market as the manufacturer himself, and their work is always apt to smell of the professional advertising-department. Engineering publicity-literature must never do this.

The first and most important factor in selling by printed matter is the catalogue. Before going on to discuss the best form for this, a point of importance must be stressed. The manufacturer should make up his mind from the outset what

he wants his catalogue to do, and into whose hands he means it to go. Of course, a catalogue's function is primarily to make buying in a certain direction easier. But, rightly treated, it can be made a veritable printed salesman and technical adviser. Take the case of a tool-manufacturer. He may have been selling tools for years by means of an old-fashioned catalogue of shapes and sizes, combined with a price-list. Suddenly it occurs to him that there are many varied uses for his tools, and that Mr. A., who uses them for such and such a purpose, would doubtless find it interesting and valuable to learn that Mr. B. uses them for something quite different. He therefore redesigns his catalogue, endeavouring to acquaint his customers with every possible use for his goods. Instead of dwelling on the superlative quality of the materials that go into the making of the tools, he invents, discovers, and publishes new uses for them. In consequence Mr. A. orders more tools so that he can use them for the same purpose as Mr. B., and Mr. B. probably orders more so that he can use them for the same purpose as Mr. A. The point to be observed is that the *policy* of the catalgoue has been changed. And the policy of any piece of printed matter is, perhaps, the most important thing about it. A bad catalogue with a good policy will sell more products than a good catalogue with a bad policy. The manufacturer must endeavour to discover the best policy for his goods, and give it the most efficient expression in the printed pages of his catalogue.

The question of who uses and needs the catalogue is important in its bearing upon policy and design. If the buying is done by a works-manager or foreman, a different style will have to be adopted from that suitable when the buying is done in a centralised buying department. The first of these two methods of purchasing is most often found in small works. The second is more and more coming into favour in large well-organised factories. For this reason modern practice in engineering sales-departments tends to draw a sharp distinction between sales-booklets and catalogues

proper. The catalogue is regarded as primarily for the large buying-department, and is therefore designed on different lines from the booklets, which are meant to reach works-managers and similar practical men whose requisitions influence the buyer when choosing his source of supply, or who in some cases buy direct.

Engineering catalogues should contain everything that will help the buyer in his task of ordering, everything that will increase the reference value of the book, everything that will predispose him to buy from its publisher. Tool-steel furnishes an excellent example of how this plan has been carried out. A large firm of tool-steel manufacturers issue a catalogue that, from first to last, is packed with facts and figures unobtainable elsewhere in so compact a form. Sections on when to use a tungsten steel; when to use a special alloy tool-steel; when to use a plain carbon tool-steel; when it pays to buy a low-priced steel; how to order steel; are but incidental features. Weights of steel bars are tabulated for ordering and calculating purposes; lists of extra charges are given; every different steel is fully described, and the particular purposes for which it is suitable are enumerated; it is practically a fool-proof catalogue. Any buyer who had occasion to purchase tool-steel would find it quite easy, even if he knew no more about tool-steel than that someone in the works wanted it, to send out an order or inquiry with reasonable certainty of getting the right material.

Obviously a book of this kind has definite value. It is lifted out of the common rut. It takes on a dignity and usefulness that an ordinary price-list or catalogue could not. There are so many things in it that the buyer needs that he has to keep it, if only for reference purposes. And as long as it is kept it acts as a salesman for the firm that issued it.

The trouble with many engineering-catalogues is that the manufacturer imagines everyone knows as much about his products as he does himself. The writer happened to be shown recently a sumptuous catalogue of machines. It was

printed on expensive art-paper, well-bound, profusely illustrated, and of little value as a means of selling the products it described. The reason was that beyond the usual superlatives and hackneyed phrases expressing the manufacturer's own opinion of his products, there were only pictures and specifications of parts. The skilled engineer, reading this specification and examining the illustration, might possibly have been able to judge of the machine's merits. But neither the non-technical nor the technical buyer would have found anything to grip his imagination. It is a mistake to suppose that because an engineer by mental effort can detect the virtues of a machine from a mere list of its components, he therefore desires and should be left to make this effort. In most cases of the kind an engineer looks for the bad points rather than the good. It is the work of the catalogue to make him so conscious of the good points that he forgets all about the bad ones, if there are any. This means that the mere list of parts must be scrapped. What must take its place is a clear and detailed explanation, such an explanation as even the non-technical buyer can understand, of the main features that make this particular machine better than others. The list can be worked in with this, if necessary, but by itself it has no selling-power at all. An engineer does not *want* to pore over a specification and build up in his mind by constructive thinking a conception of the machine it represents. If this work has been done for him in advance by someone who understands the machine and can explain it in simple, unaffected English, he is all the better pleased.

Another point, too, is that on the whole engineers are far less interested in what a machine is made of, and how it works, than in *what it will do and how quickly it will do it.* To say that a gyratory crusher can break up a thousand tons of stone a day is far more important and impressive than to say that its wearing surfaces are made of manganese steel. *In engineering-literature output-figures should take precedence over construction-details.*

Turning to the more intricate questions of catalogue-construction, a few words on typography will not be out of place. It is a mistake to believe that capital letters, except in very rare instances, increase the attractiveness or legibility of a printed page. Far too many firms use this artificial emphasis. Words are printed in bold capitals, underlined, printed in red, or italicised, often needlessly. Now and again a little more stress than the written language allows is necessary, and in such cases, which should be minimised, simple italics may be used. But a well-written sentence will largely accent itself, and should need no typographical devices of this kind.

The types used should be clear, open, legible, and pleasing to the eye. Certain " fancy " types, affected by printers who happen to have them in stock and consider them " artistic," are to be shunned. It is impossible here to catalogue them all, but a broad rule, which will enable some to be detected, is that any type that distorts the shape of the Roman letters is bad. For example, a letter " e " with the bar sloping upwards, or an " a " with a slanting back, are distortions to be found in some of these uglier types. They are invariably less easy to read, and this alone, quite apart from questions of taste, should be sufficient to debar their use. But it should never be forgotten that people are far more sensitive to pleasing and readable type than they or many others imagine. A bad kind of letter (the writer deliberately avoids the technical terms " family " and " face ") makes reading laborious, and very often a book or catalogue is put down as uninteresting, when really it is the eye that has become tired through struggling with poor type.

For most textual purposes a straightforward Roman type, of the size known as ten-point, with the slightly smaller eight-point size used to help it out when absolutely necessary, will be found satisfactory. (The expressions " eight-point " and " ten-point " are technical, and refer to the sizes of the types, which are measured by what is known as the " point "

system. The type used for this book is ten-point. That used for the Appendices is eight-point. Any printer will explain the point system if required. It is scarcely necessary to do so here.) This is the kind of lettering adopted for most books, and for that reason alone it is good policy to use it. Long experience has proved Roman to be a thoroughly readable type, and the fact that the reader's eye is familiar with it helps to make it look easy. There are many beautiful and varied types that can be used to splendid advantage in advertisements, where distinctiveness and originality are never out of place; but in catalogue-work, and especially engineering-catalogue work, their use is not always to be recommended.

For the display-lines, or, in non-technical language, the headings and sub-headings on each page, the best type—though this opinion may be considered controversial—is Old Style No. 5. This is a truly beautiful letter, clear and eminently legible. It stands out with the necessary prominence from the lighter Roman type used in the text, and harmonises with it perfectly. This point of harmony is worthy of attention. Nothing makes a catalogue more unsightly to the eye than a too-varied use of types. It is no uncommon thing to see as many as six or seven different kinds of type used on one page, in varying sizes and styles. The result is a jumble, ugly, and hard to decipher. Unless the designer is a typographical expert, it is far safer to trust to one kind, or at the most two kinds, of type, and let that suffice for the whole book.

Another common failing is the Teutonic habit of printing every noun with a capital letter. This again decreases the legibility of a page, and makes it spotty and less interesting in appearance. The grammatical rule should hold good in catalogues as in every other literary form: use capital initial letters for proper nouns only.

When designing a catalogue, the text should first be written out in full; then the illustrations should be prepared.

Whatever kind of type is ultimately chosen, it will be found advisable to use the ten-point size for most of the text. The number of words in the written matter should be carefully counted, and by reckoning up words to the line, and lines to the square inch, in the size of type chosen, it will be possible to calculate approximately how many lines the text will occupy. Any printer will supply tables for calculation purposes. There is, for every size of type, a maximum length of line that should never be exceeded if complete legibility is desired. Having decided on the page-size of the catalogue, the lines to each page can be estimated, and allowing for the space taken up by illustrations, the number of pages the book will contain can be found by simple division. A preliminary layout of each page should then be made, as shown in the illustration Fig. 6, and by inserting where necessary copies of the photographs and blocks, a good idea of the appearance of the catalogue will be obtained. This lay-out, when complete, can be sent with the written " copy " to the printer.

A plan that has been found valuable is to enclose with the catalogue a little booklet of request slips for other literature, and trial order forms for the various products with which the catalogue deals. This gives the customer a ready means of communicating with the manufacturer, and also serves to show whether the book is being read and used.

The size of the catalogue will depend largely on the size and appearance of the product. For example, a small tool such as a twist-drill scarcely needs a large quarto-sized book. A big turret-lathe, on the other hand, calls for space and amplitude. As regards the amount of money to be spent on the catalogue, this should as a general rule be regulated by the amount of profit the product yields, and by its size and selling-price. For example, a ten-ton crane costing hundreds of pounds demands something more impressive and elegant than a paper-covered book printed on cheap, rough-surfaced paper. On the other hand, a big quarto-sized book bound in half-calf would be absurd for files.

When designing the catalogue, overcrowding the pages should be avoided. If a rule of one illustration to each page

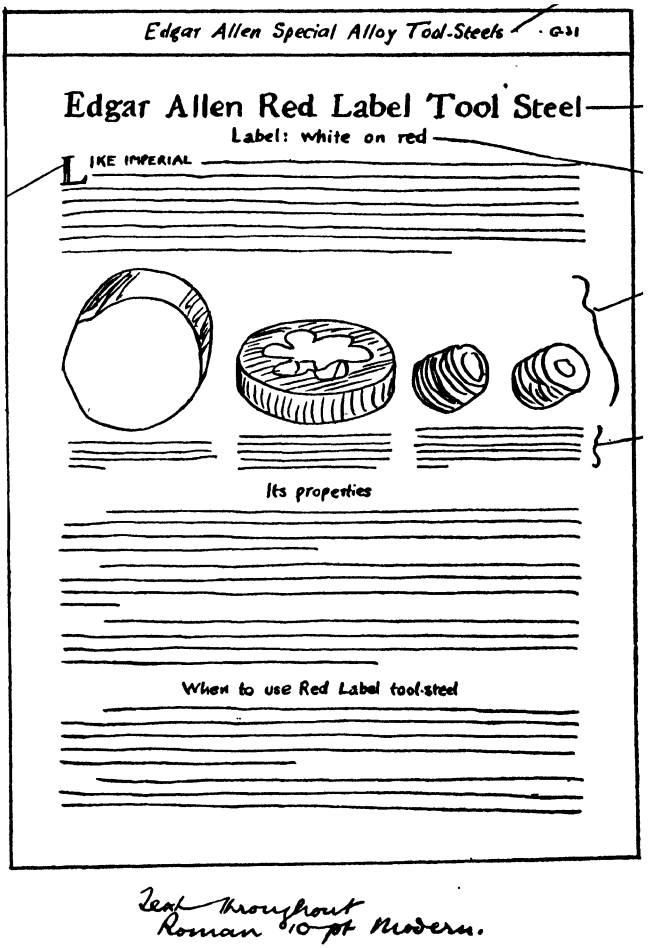


FIG. 6.—ROUGH LAY-OUT OF CATALOGUE PAGE.

can be made and kept, it will be an advantage. Two illustrations on the same page, unless they be fairly small and well-separated from each other by type, detract from each other's attention-drawing power and weaken each other's attractiveness. And the greater the number of illustrations that appear on the one page, the more they destroy each other's value, until the page looks ugly, dull, and dreary to the reader.

Separate subjects should be kept as far as possible to separate pages. This is especially important in the case of machinery catalogues. As often as not the man who writes for a machinery catalogue is interested in one particular kind of machine only. To send him a bulky and expensive catalogue of them all is wasteful. An illustrated pamphlet dealing with the particular appliance he requires will often serve his purpose equally well. By arranging the catalogue in the way indicated, it will always be possible to run off separate sheets or pamphlets for each machine, so that a casual inquirer's needs can be satisfied far more cheaply than would otherwise be the case. This is really more satisfactory than the sectional-catalogue proper. Sectional catalogues fail in this respect, that the onus of revision is placed on the customer. When new sheets containing revised details are prepared, he is asked to insert them in his file in place of the previous sheets. Unfortunately, he often omits to do so, with the result that his sectional catalogue is seldom or never up to date. By keeping proper bound catalogues for those customers or firms whose size and importance warrant it, and using separate leaflets or sheets, containing exactly the same matter as the corresponding pages in the catalogue and sent out in a loose-leaf cover, for casual persons, the advantages of both methods are secured, and money is saved.

The question of a second colour for emphasis or ornament needs careful thought. If it is decided to use one, this use should be sparing. Many technical catalogues are made hideous by a too lavish employment of red. To splash this brilliant colour here, there, and everywhere over a catalogue

page is mere vulgarity. Red is, in fact, far less serviceable for engineering-catalogues than a more dignified colour, such as royal blue, dark green, etc.

More than two colours are necessary for pictorial purposes only, when the product has to be shown in full war-paint, or when certain scenes of manufacture or use need to be presented with more realism than two colours would allow. In any case, the ink for the letterpress printing should always be black. It is the most legible of all. To use brown and blue and similar colours for the text is simply to take away the legibility that the careful choice of type aims to secure.

Plenty of white space should be left at the margins. Catalogue corners should always be square, never round. They are more dignified and businesslike thus. It will often be found a good plan, giving a neat and tidy effect, to enclose each page in a plain rule border printed in the second colour.

§ 2. *The Engineering House-Organ.*—Having discussed at length the catalogue, one may now turn to another form of engineering publicity, one that is gradually being recognised in this country as among the most important if not itself actually the most important means of increasing turnover. This is the technical house-organ. A good deal of misunderstanding exists as to the exact scope and character of a house-organ, and it will be as well to define from the outset the true significance of the term. A house-organ, then, is a journal published by a manufacturer and distributed externally—*i.e.*, among his friends and customers—for the direct purpose of selling more of his wares. Its main features are interesting, informative articles, authoritatively written, that tell the prospective buyer or user things that matter in connection with the goods. It differs from the works magazine —often called " house-organ " erroneously—in that it contains no account of staff or works doings, which are of interest only to the employés themselves. It is, in its way, as directly technical and practical as a professional engineering journal.

There is scarcely any business that could not, with beneficial

results to itself, produce a house-organ. A catalogue, whatever its virtues, is a fixed and static thing that, once printed and distributed, cannot be altered effectively until the whole edition is exhausted. But between the printing of one edition of a catalogue and the next, any number of slight or considerable changes may occur in the conditions under which the goods are sold, or in the design or composition of the goods themselves. Unless the untidy method of gumming slips in the catalogues is adopted, or those firms to whom the literature has already been sent are circularised, these changes cannot be recorded for the customer's benefit until a new edition is prepared. Thus, to some extent a catalogue is always out of date.

Furthermore, there are always matters of interest to customers that cannot properly be included in sales-literature. Changes of salesmen, of agency, increase or change of directorate, descriptions of exhibition stands, and so forth, are interesting while current, but speedily lose their interest. The circular letter, if used for all these notifications, begins to lose effect through too frequent appearance. The only real solution is the house-organ, appearing regularly.

The function of the house-organ is, briefly, to give news of the product, the firm that makes it, and the organisation that distributes it. The technical house-organ does not compete with the professional engineering journal, though in editorial matters it must adopt a standard as high. It merely supplements it, giving particularised experience where the former can give general experience only. It can at the same time be more controversial and less comprehensive than the trade periodical.

Before going on to give hints on the efficient preparation and distribution of a successful house-organ, it will be as well to say at once that there are sins it must on no account commit. Inexperienced publishers of these journals make three cardinal mistakes. First, they regard the house-organ as a means of issuing naked or thinly veiled " puffs " of themselves and

their manufactures. Secondly, they doubt the reader's interest in technical matters affecting their goods, and therefore interlard their sensible articles with columns of stale jokes or feeble journalistic comment on general matters. Thirdly, they try to save money by making the house-organ serve as works magazine also, and pack into it pages recording social events among the staff and workpeople.

To take the errors in order, the elimination of " puffs " needs serious consideration. It is true that the ulterior motive with which the technical house-organ is published is to make the reader believe in the goods about which he reads. But this aim is not achieved by merely bragging in exaggerated terms. It is useless to issue a house-organ that is not readable in itself and welcomed for what it contains. No sane man will read page after page of vulgar self-praise. If you have something of interest to tell him, he will read it. If you only wish to blow your own trumpet noisily, he will not. The standard adopted should be: print nothing in the house-organ that the editor of a professional journal would refuse to accept. This standard at once rules out all puffs.

The mistake of inserting irrelevant general or humorous matter into what is, or should be, a strictly practical journal, is largely due to false psychology. Technical articles are felt to be " dry," and therefore, it is argued, they must be enlivened every now and then by something in lighter vein. But if the technical stuff is sound, ably written, and interesting, it will not be dry to the technical man. For example, the man whose job is to heat-treat steel is never bored by a good article, full of practical advice, on the heat-treating of carbon tool-steel. Then there is the question of mood to be considered. When a man wants to read jokes, he picks up a professional magazine. He is then in the humour for that sort of stuff. When he is reading technical matter, he is in a serious frame of mind, and his mood is attuned to the class of article he is reading. To shake him out of that serious mood by making him laugh is largely to weaken the pull of the house-organ itself. You

give him an article full of sound information, an article that makes him begin to ask seriously whether or not he would save money by changing his source of supply for a particular product. And then, instead of keeping the tone of the journal at the same level; instead of giving him yet more practical articles that serve to convince him still further of the excellence of your goods; instead of allowing him a little time to think; you dish up a few funny snippets. If they succeed in making him smile, they have turned his mind from the weighty considerations that were engaging it, which he leaves unsettled. If they do not, they merely bore him, and destroy the good effect created.

Assuming that your jokes and light columns are always clever and good—an assumption that cannot often be made, judging by some specimens the writer has seen,—the net result is exactly the opposite of that originally desired. The reader connects your name not with practical common-sense views about the problems with which he grapples daily, but with a column or so of funny bits. In time he skips your really serious stuff, and just reads the idle chatter. This spells failure.

There is no reason why your technical articles should not be brightly and interestingly written. But the jokes and unimportant stuff should be cut out. The professional magazines can do this sort of thing much better.

The objection to combining the works magazine with the house-organ is that the aim of neither form of periodical is fully served. The technical engineer is not interested in the whist-drives and football matches of the staff and workpeople. The staff and workpeople are not often interested in the strictly technical articles meant for the engineer. Both find, therefore, a good deal of stuff that does not interest them in the journal, and in consequence regard it with less esteem. It is sometimes argued that evidence of the social contentment of the employés, and of the attention paid to their welfare, appeals to the humanitarian side of the buyer's character, and

increases the manufacturer's prestige in his eyes. This is a hypothesis that cuts very little ice. Buyers are not usually influenced by specious appeals to any latent sentimentality they may possess. They cannot shut their eyes to the plain fact of recurring strikes, which clearly prove social discontent, however much the staff and works pages of a journal may argue otherwise.

It is clear that the technical house-organ should confine itself to items of practical interest to the user of the goods described. A pitfall to be avoided is excess of technicalities. Not only do technical terms differ in different parts of the country, but there are many buyers of engineering products who do not thoroughly understand the terms in common use. It is a failing of the British manufacturer to believe that everyone knows what he knows himself. This is a fallacy. No buyer living can have at his finger-tips a complete and exhaustive knowledge of every industry. Therefore it is often necessary to explain to him details that are A B C to the actual supplier. Articles in the technical house-organ should, as far as possible, be written so that even a non-technical man may read them with interest, and wherever a highly technical word or phrase is essential, some brief explanation of its meaning should be given. In fact, one house-organ of this kind publishes regularly a number of technical terms in list form, with the definitions attached. The necessity for this practice is seen when one encounters a term such as "semi-steel," which is interpreted in different ways by different persons, so that any manufacturer writing about it would have to define his meaning at the outset.

Turning now to the contents proper, the first question that arises is: what sort of articles should be inserted? The appended list gives a concise and exhaustive reply to this question:—

1. How to use the product.
2. How to order the product.
3. How to buy it.
4. How it is made.

5. What it will do.
6. Who uses it.
7. How it is packed.
8. Reviews of literature published about it.
9. How it originated.
10. How it is tested.
11. Its raw materials.
12. How to recognise it.
13. What to do with it when finished with.

There are other, less regular and important, subjects to be discussed when necessity arises, but those given above are the chief. A few brief explanatory comments on each must be added to ensure full understanding of their scope.

1. This is fairly obvious. Articles should give hints on the correct way of using the product. Any means of ensuring longer life for it should be mentioned. Errors of common occurrence should be enumerated and their effect explained. Articles of this sort are always eagerly read because they are directly beneficial to the user.

2. There are often mistakes made in ordering a product, mistakes that lead to wrong articles being supplied. These should be pointed out. Ways in which time can be saved by giving clearer or more complete details should be specified. The exact information required by the manufacturer should be stated. Include details of any sketches or diagrams required.

3. This deals not so much with the actual ordering of a product as with the general principles of buying. Thus, if it pays to order in bulk, this should be mentioned. Factors that the buyer should take into account when deciding upon his source of supply may be enumerated, such as geographical position, time of delivery, ability and experience of supplier, and so forth. Mention instances in which it is more profitable to order a dearer product than a cheaper one, and *vice versa.*

4. Articles, well-illustrated and not too technical, showing how the product is actually manufactured. This is always interesting to a consumer. Any special features in the manufacturing process that ensure good quality or better finish should be pointed out. Facilities for rapid delivery, output,

modernity of plant, experience of personnel, are all matters that can be dealt with effectively here.

5. The uses to which the product can be put. Mention any novel, special, or little-known applications. Details of these often lead to the discovery by a customer who has been using the product for one purpose only that he can use it for more than one. Any special performance the product has put up should be described, as far as possible in the words of the actual user. Under this head can also be inserted articles giving typical outputs or performances of the product. These, however, should not conflict with those that come under No. 6.

6. A series of illustrated prestige articles, giving an account—wherever permission can be obtained—of important firms who use the product, with details of the uses to which they put it.

7. The precautions taken to ensure safety in transit. Any special packing devices for overseas. Methods of labelling and despatching.

8. A concise review of any catalogue or booklet (see Appendix I.) published, giving an indication of its scope and contents, and reproducing a facsimile illustration of its cover, or of its interior.

9. If the product is of ancient date, such as a file, articles of this sort should describe the evolution of the tool from primitive times to the present day. If it is an invention, details of the inventor and of the experiments that led to this invention should be given. Articles of such a character are always interesting.

10. Particulars of the steps taken by the manufacturer to ensure that the product is thoroughly efficient before it leaves his works. Details of the tests made by customers or their inspectors.

11. Where the raw materials come from. How they are obtained. Their characteristics. Why one source of supply is chosen in preference to another. How the raw materials are delivered. Effect of raw materials on price.

12. How to distinguish between the product and a substitute or imitation. Where to look for the brand or mark. What the brands mean. Their history. How they are put on the product.

13. If there is any way in which the product can be utilised when worn out, state it. If any allowance is made for returned scrap, or if there exists any market elsewhere for the worn-out article, say so.

There are thus given thirteen excellent sources for the articles on which the house-organ depends. Firms making more than one product—as most firms do—can take each product in turn and deal with it in these thirteen different ways. In many instances it will be found that a series of articles can be written on the one subject. Thus, a series could be written on the raw materials of the product, or on how it is made. And when the manufacturer supplies more than one product, it will be seen that the discussion of each in the numerous ways specified will give him ample material for many issues of his journal. It must not be forgotten either that much of the information that first appears in the form of articles for the house-organ can afterwards be embodied in permanent literature, such as catalogues. In addition "news" paragraphs will occur from time to time; appointment of new agents and so forth, as enumerated elsewhere in this section.

But there are one or two additional sources of "copy" for the house-organ that need to be mentioned. It will be found a good plan to devote one page in every issue to a discussion of "Problems Investigated." On this page will be given details of interesting problems of application or use put before the manufacturer, and satisfactorily solved by the use of one or other of his products, or a suitable modification of it. Names need not be mentioned, but a page of this kind will often bring to light many new facts and applications of interest to readers.

Even more important is the insertion of a regular summary of articles in the American and Continental press dealing with

subjects in which the manufacturer's products are concerned. Few technical men have the time or the opportunity to read all that is passing in current engineering literature, and summaries of this kind, enabling them to keep in touch with all developments, will not only prove extremely valuable but will greatly increase the worth of the house-organ in their eyes.

Frequently the daily news will touch upon some subject with which the product is concerned, and this will give opportunity for interesting little articles. For example, a foundation stone for some huge building may be lowered into position by means of a crane. The maker of the crane can then insert a short article on the building and the work done by his crane in erecting it, with suitable photographs.

The house-organ should contain a certain number of the manufacturer's direct advertisements, *set as advertisements*, so that they shall not be confused with the general text. In these he may discuss any of his products he likes. The number of these advertisements should be strictly limited. The back page, two full columns, and a half-column, for a sixteen-page journal, are ample. Journals larger or smaller than this should have a proportionate number. Some house-organs—such as the *Machine Tool Review* and *British Machine Tool Engineering*—admit the advertisements of other firms, but while this has the advantage of making the journal resemble a professional magazine, and thereby raising its prestige, it has the disadvantage that the reader ceases to regard it as an individual publication. He thinks of it impersonally as a magazine rather than as a very useful little paper that John Smith and Co. Limited kindly send him every now and then.

The frequency with which the journal is published depends, of course, on circumstances that vary widely with different firms. If the products of the firm are numerous, copy for articles is plentiful, and a regular monthly journal can be issued. But the editorial staff must be large enough to admit

of this. In most cases the publicity department has to undertake the production of the house-organ in conjunction with its other duties, and in such cases publication every other month is advisable. This gives breathing-space between one issue and another, and prevents a hurried rushing into print with lamentable consequences.

Above all things the house-organ must be accurate. Its facts, figures, and statements must be above suspicion. For this reason every article it contains should be read over by a



FIG. 7.

competent technical specialist in order to ensure that no error occurs.

The writer does not favour the adoption of a designed cover. A straightforward beginning is always best—unless the journal is of such size that a cover is necessary to prevent the pages from becoming detached. A typical example of the business-like front page is shown in the illustration (Fig. 7). The list of contents, the striking but eminently legible title,

the chart, and the clear sensible type, all combine to make the journal appear interesting, practical, and serious. The types used should be similar to those employed by an engineering journal proper. " Fancy " or " artistic " types should be avoided. They smack of the advertising department too strongly—and that is what the house-organ must avoid. Good, clear, legible, business-like type, such as Modern Roman 10-point, is all that is required. The legitimate advertisements may be set in different types, but the text itself should be uniform throughout.

A good super-calendered ivory-finish white paper capable of taking half-tone blocks of 120 or 133 screen should be used. Two colours are unnecessary in the technical house-organ. Charts and diagrams, wherever they can be appropriately employed, always help, because they give a practical appearance to the matter and appeal to the engineer. At the same time, it must be remembered that illustrations are of little use unless they actually illustrate. If dragged in by their hair, so to speak, they weaken rather than support the article in which they figure.

The last point needing to be discussed is the distribution of the journal. An efficient mailing-list should first be built up, a point that will be dealt with fully in a later chapter. Broadly speaking, the journal should go to all customers and to all likely customers. It should be on file in public libraries, university and technical school libraries, engineering club reading-rooms, and so forth. A copy should be sent regularly to the British Museum—who may legally demand it if they so please. Wherever it may bring business, there it should be sent. And even though business does not result for a long time, the manufacturer should still continue to send it to firms whose accounts he wishes some day to have. One never knows when persistence will bear fruit.

It will be found that if the house-organ is practical and interesting many persons not of great immediate value will write for copies, or ask to be put on the mailing-list. It is not

always wise to refuse these requests, because one never knows when a minor official may become important. The difficulty can be got over by fixing a small subscription charge, just sufficient to cover printing cost and postage, and asking the inquirer to remit this amount if he wishes to receive the journal regularly. A price should invariably be printed on the front page of the house-organ. This not only adds prestige, but deters the mere catalogue-hunter from writing.

If it is desired to bring direct and immediate results from the distribution, a good plan is to insert in each issue a loose coloured inset containing a form of request for some booklet or other mentioned in the text, or a request form for prices or further particulars. The number of these returned will form a guide to the interest taken in the journal. It performs the same function as the coupon or request form in an advertisement, enabling the reader to establish direct contact with the manufacturer, and thereby affording opportunities for the application of individual pressure.

Some firms able to afford the expense issue a handy binder enabling the reader to preserve his copies permanently, and supply these free of charge to those who apply. This ensures that copies will be kept for reference, and that the firm's name will be kept prominently before the reader.

§ 3. *Engineering Sales-Literature.*—In a preceding section the question of designing engineering-catalogues was discussed in detail. Catalogues, however, though the most important literature—except, perhaps, the house-organ—designed and published by a manufacturer, are not the only forms of printed publicity. It is not the writer's intention to discuss the publicity-use to which certain recognised pieces of standard printed matter may be put, but only to deal with forms of publicity-literature proper. Some firms print advertising-matter on their invoice-forms or letter-heads; on things, in short, that they would have to send out in the ordinary course of business. With these there is no need to deal here.

The remaining forms of publicity-literature of value to technical-product-manufacturers are as follows :—

1. Sales-booklets.
2. Sales-folders, and broadsides.
3. Envelope-enclosures.
4. Showcards.
5. Instruction-cards.

It will be as well to take each of these in turn and describe its uses and design.

1. The sales-booklet is not a miniature catalogue. While the catalogue makes sales passively, the booklet does the same thing actively. The catalogue is laid aside and kept for reference. The booklet has to argue and convince, after which its work is done. It is, therefore, much more of a " printed salesman " than the catalogue. It has to face different problems, differs in policy and design, and must adopt a different manner and method if it is to fulfil its function properly. The nearer the sales-booklet becomes to the catalogue the less effectively it sells goods in its own distinctive manner. It is important to keep this in mind. There is no despisal of catalogues implied in this assertion, but only a stressing of the fact that their functions and character are not the same as those of the booklet.

The trouble with many sales-booklets issued by engineering-firms is that they ignore this essential difference. They waste pages on lists of directors, elaborate title-pages, price-lists, aggregations of trade-marks, and similar matter. This sort of stuff is appropriate to the catalogue, but out of place in the less voluminous and dignified treatise. One cannot imagine a salesman of the human kind opening his attack upon a buyer by reciting monotonously the names of his firm's directors, its trade-marks, and so forth. A salesman has only a limited period of time in which he may claim the attention of a busy man, and for this reason he is compelled to offer at once the pith and marrow of his argument. It is exactly the same with the booklet.

One of the most important points is the title. This must be more than clever word-play. It must convey in a minimum number of words the scope of its contents. Given this allusion to its character, and there is no reason why cleverness in the use of words should not be employed. But the allusion is the more important item. Examples of titles that fulfil this requirement are: "Saw Service"; "Facts about Files"; "Drill Data"; "Tramway Points"; "The Story of an A.B.C. Audit." Alliteration, it will be noticed, occurs frequently in booklet-titles, the reason being that it helps the reader to remember the name.

Turning now to the text, it is scarcely necessary to say that this should be dignified; clear; broken up into shortish, easily readable paragraphs; and attractively subheaded—*i.e.*, interlarded at convenient points with catchy sub-titles that draw the eye and increase the reader's interest, besides making the text look easier to read than it otherwise would. Sub-titles often serve the purpose of an index, because when turning the pages over quickly the buyer gains from the sub-titles an indication of the booklet's contents. It is often an advantage to word them so that even if the text itself is not read their perusal gives the sum and substance of the argument. In this way the reader receives the message in brief, whether he reads the text through or not.

So far as the style of the text goes, it should follow the same rules as does that of the catalogue, with this one fact emphasised that, whatever else they do, booklets must give convincing arguments, and must be interesting. Like the catalogue, they must not exaggerate, nor must they contain doubtful or misleading assertions.

Far more than a catalogue does a booklet depend for its success upon its arrangement and upon the order of its contents. Although, as has been pointed out, it is not good policy to separate the reader from the text by interposing pages of trimmings such as lists of trade-marks, it is likewise inexpedient to begin too quickly with the presentation of

selling-points and arguments. Though these may be strong and effective, there is always the chance that, if they come too early in the booklet, the buyer will say to himself: "I'll go into that later on, and see if there's anything in it." The result is that he seldom does, and the booklet lies about until it is dusty and dirty enough to be thrown into the waste-paper basket without compunction. The proper thing for a booklet to do is to interest him in the first few lines and make him read on in spite of himself, until, when he reaches the real backbone of the argument, he thinks he might as well go on and finish. That is how a booklet makes sales.

Naturally, circumstances and the character of the product can alone decide the exact order in which the various sections of the booklet should come to have maximum effect. There are, however, at least seven heads into which the text should be divided, and they should follow roughly the order indicated below. This will be found an arrangement suitable for most firms and products, and has the advantage of successful trial behind it.

These are the heads or sections :—

(*a*) Current problems in connection with the use of the particular product.

(*b*) An indication of how these problems can be solved by the use of the product with which the booklet is concerned.

(*c*) The main selling-points of the product, briefly outlined, stressed, and summarised.

(*d*) Paragraphs taking each selling-point in turn and describing it at greater length.

(*e*) Details of price, facilities for speedy production, quality and capacity of plant, terms of delivery and payment, and so forth.

(*f*) Paragraphs that indicate the standing of the manufacturer, the source and quality of the raw materials he uses, the precautions taken to ensure the production of a thoroughly sound article, the experience of the staff and workers, etc.

(*g*) Miscellaneous information ; such as list of other products made, list of agencies, list of catalogues or other publications issued.

This is a skeleton that will meet the needs of most manufacturers. In some instances it may be found a good plan to include sections giving a brief historical survey of the subject, or telling in an interesting way the origin of the product itself. It is also advisable sometimes to open the booklet with a brief paragraph setting out its immediate objects.

The illustrations of a sales-booklet are even more important in some respects than those of the catalogue. Not only must they really illustrate, but they must also be inserted in the appropriate positions. Nothing is more distracting and irritating than an illustration facing or appearing on a page to which it does not belong. To show a photograph of a turret-lathe on a page describing a lathe of quite a different kind is bad. It takes the reader's mind off the argument, and often breaks the thread of interest that is keeping him from putting the booklet aside. This sort of thing is usually done from motives of economy, but it is false economy. Only a little ingenuity is needed to fit the illustrations correctly into the text.

In this connection one other matter is worthy of mention. If the text describes the modernity and efficiency of the machines in a particular department of the works, the proper illustration is a near view or " close-up " of the machines themselves, not an exterior photograph of the building in which they are contained.

Considerations of format must next be discussed. The page-size of the booklet depends chiefly on the product with which it deals, the size and character of the illustrations, and the way in which it is desired to distribute it. The general rule is : the larger the product, the larger the booklet ; with certain definite maxima and minima. Common-sense and the second and third considerations mentioned above will largely decide what size is eventually adopted. One would not publish

a thumb-nail booklet about a steam-boiler, nor would one issue a foolscap-sized book about a nut or bolt.

Although it is true that illustrations are ordered to suit the booklet, and not *vice versa*, they do, nevertheless, with the careful designer, exert considerable influence on the choice of page-size. It is possible to reduce a photograph and prepare from it a block of quite small dimensions that would fit into a relatively tiny page. But what has to be considered is not so much how small the illustration can be made, as at what convenient size it retains effectiveness while not proving too expensive.

Distribution affects page-size in this way: if the booklet has to be sent through the post, it should be of a size suitable for a standard business-envelope, whether large or small. This does away with the expense of ordering special envelopes, often uneconomical in size. If, on the other hand, the booklets are being sent away with goods in cases and crates, greater variations in size can be tolerated, and the shape and size of the package will determine to some extent the dimensions to be adopted. If, again, distribution is to be by hand, " pocket " sizes are preferable, so that they may be carried without undue difficulty.

Whatever be the size eventually chosen, it should be such as will not cut to waste—*i.e.*, when its pages are cut from a standard-sized sheet of paper, the unused margin should not be wastefully wide. Safe and economical sizes are 6in. by 5in., 7in. by 5in., and 9in. by 6in. If extremely large quantities are required, say 100,000—a rare occurrence in the technical world—these sizes need not be so closely followed, because it is sometimes possible to get the paper-mills to put through an order for the special size of paper, so that waste in cutting is completely eliminated.

The shape of the booklet is important. Extravagance does not mean originality. Long and excessively narrow booklets, exceptionally wide booklets, octagonal and triangular booklets, all of which the writer has seen, should be shunned by the

technical-product-manufacturer. They suggest flippancy, catch-penny methods. The booklet most likely to be read is *that which most closely resembles a book.* Extravagance of shape and superfluous embellishment react unfavourably on the reader's mind.

The cover design should be arresting, but dignified. It should hint temptingly at the contents, without telling the whole story. At the same time it should avoid misleading the buyer by suggesting that it contains more than it actually does. For example, if the booklet contains no account of the manufacturer's works, it is wrong to put on the cover the picture of a shop-interior.

With seventy-five per cent. of technical-products, a title set in plain type and a plain tasteful cover-paper will obtain results. There is always a certain risk in the employment of a pictorial design, because one never knows exactly how it is going to strike the consumer. There may be some trivial error in the drawing that creates prejudice in his mind, or something that seems to him ridiculous. With plain lettering, on the other hand, one is always safe. If, in spite of this, a pictorial cover is decided upon, it should be bold and vigorous. It is the faint-hearted cover that fails.

So far as types for text and display-lines are concerned, the recommendations already given in the section on catalogue-design stand for booklets also.

2. Broadsides and folders differ in many ways from both catalogues and booklets; their outstanding and obvious difference is one of size. A folder, when opened out, usually presents a wide expanse of paper. A broadside is merely a large folder. The advantage they offer is the ability to use large sizes of type, large illustrations, and generous margins of white space; or, on the other hand, the ability to present a message with great effect by showing a large number of small units at a single opening. They have, in short, something of the virtue of a poster. Usually they are designed to be read by an individual rather than by a group, and they risk

everything on the one blow. It is seldom that a broadside or folder is intended to be or is kept by the reader.

This being the case, no effort should be spared to see that they are as immediately impressive as human skill and ingenuity can make them. They should be large enough to look striking and effective, but not too large to be comfortably handled. Standard and economical sizes are 19in. by 25in. and 16in. by 22in. Both these sizes can be brought down by right-angled folds to sizes convenient for posting—*e.g.*, 9½in. by 6¼in. The number of folds will depend largely upon the weight and quality of paper selected. The lighter the paper, the greater the number of folds that can be safely employed.

To achieve success, folders and broadsides should detail the selling-points of the product logically and without waste of words. The crisper and more arresting the style, the greater will be the success. Each phase of the subject should be confined to one section of the folder or broadside, and bold clear display-lines should draw the reader's attention irresistibly to each phase, so that he misses none.

The illustrations used are probably more important in this form of literature than in any other, because so much of the effect depends upon their adequacy. They should not vary so widely in size as to present a ragged and irregular appearance when the whole sheet is opened out, but a little variety adds piquancy to the whole. Everything in the picture should be relevant to the text. Not only must it give point and precision to an argument or explanation in the body of the folder, but every unessential detail must be cut out, because otherwise its arresting quality will be impaired. Thus, if a lathe-tool is being shown, it is unnecessary to include the shop in which it figures, unless this has a connection with the story. All irrelevant subjects must be cut out, with scissors if necessary. What is left should then be enlarged so as to attract attention and throw up the details.

The illustrations should not, however, be so large that they

have to be held at arm's length before a proper and comfortable view of them can be obtained by a man sitting at a desk. No attempt should be made to stint expenditure or effort on securing satisfactory engravings and photographs to illustrate broadsides. The better the photograph, the better the eventual block. The better the block, the better the result. Similarly, good paper should always be used for these mailing-pieces. It is always an advantage to notify the block-maker of the kind of paper it is intended to use.

Colour can nearly always be used to advantage in folders and broadsides, and the extra printing-cost involved is amply repaid by the greater attractiveness and better results achieved. Its use should, however, be sparing. Too many spots of colour on a page distract the eye. When it is necessary to draw attention to a particular part of the page, colour can be used with good effect. But these emphasised spots must be reduced to a minimum. It is also legitimate to use colour moderately for ornament, as in initial letters indenting an opening paragraph, and so on.

To secure immediate results, most folders and broadsides are accompanied by a card, request-form, or order-form, which the reader is invited to send back. These can form part of the actual sheet, being separated from it only potentially by perforations ; can be inserted loose ; or can be lightly fastened down to the paper. If a card is used, it is a good plan to put a picture of the product on it. This always increases the number of cards returned. The question of how to send folders through the post can best be discussed in the later chapter on circularising.

To sum up, it may be said that the folder and the broadside are specially suitable for the smaller and less important technical products, such as small tools, files, saws, twist-drills, nuts and bolts, and so forth. They are also valuable as a means of introducing a new product to a class of buyers not previously acquainted with it and as a means of attacking a new market vigorously with an old-established product.

3. Envelope-enclosures, or "envelope-stuffers" as they are sometimes called, are small leaflets or similar pieces inserted in envelopes solely as advertising or publicity-matter. They are not, like catalogues and booklets, sent at request; nor, like folders, sent with a definite immediate sales-objective in view; but are inserted because they add nothing to postage, cost nothing to distribute, and may possibly reach the eye of a buyer and do useful work. Some manufacturers use standard material for envelope-enclosures, such as price-lists, but the writer deals here solely with literature designed specially for the purpose. Usually the enclosure is a small folder or leaflet that fulfils one of two purposes. It either invites an existing customer to consider purchasing some product that he is not already purchasing, or presents him with facts that confirm him in his belief that he buys a good article. The envelope-enclosure should not be sent out with all letters indiscriminately, but only with routine correspondence, invoices, statements of account, dividend cheques, and account-settlement cheques. If enclosed with quotations or sales-letters, it may weaken the appeal or distract the attention, unless it is directly relevant to the subjects discussed.

The motive for the envelope-enclosure is one of selling-opportunity. A postage-stamp will carry a certain weight of paper, and no reduction is made if the contents of the envelope weigh less than the legitimate amount. The difference is, therefore, made up by inserting an envelope-enclosure or two, so that each stamp does its full share of work.

It is quite true that if envelope-enclosures are distributed in the way outlined above, the larger proportion will go to existing customers; but this has its advantages, existing customers being often neglected from a marketing point of view, simply because their orders are assured. The following are all good reasons for sending out envelope-enclosures in letters addressed to customers:—

(*a*) Customers may not be purchasing as much of the product as they might.

(*b*) They may not be aware of the full range of products manufactured.

(*c*) They may not thoroughly understand all the advantages of the product or all the service offered by the manufacturer.

(*d*) It may please them to feel that their orders are appreciated.

(*e*) A testimonial or user's report is always interesting, and confirms a buyer in the belief that he is buying a good article.

(*f*) If he is a dealer, he may not know all the talking-points the product possesses.

Any one of these is an excuse for sending an envelope-enclosure to a regular customer.

Envelope-enclosures must not be designed haphazardly. They should have definite things to say, and should say them briefly and concisely. Below is a list of subjects with which they can adequately deal :—

Expressions of appreciation of orders regularly received.

A summary of the whole range of products manufactured.

A list of the known and possible uses of the product.

Hints on the care or use of the product.

An inquiry whether or not the product is giving satisfaction.

Passing on of testimonials received.

Some of these subjects, such as the third and fourth, may need more than one enclosure, and in many instances it is a good plan to design a complete series of leaflets on a particular subject, posting them successively. Other subjects will suggest themselves as time goes on.

A word of warning should be given. It is not a good plan to insert envelope-enclosures in every day's post, thus making it a matter of routine. A constant succession of leaflets soon becomes monotonous and wearisome to the buyer and loses effect. Decent intervals, say a week or a fortnight, according to the scheme, should be allowed to elapse between each insertion. It is not a bad arrangement to work on a

principle of this kind : post enclosures with invoices one week, with statements the next, with account-cheques the next, and so on. This splits up the work very well.

The great danger of envelope-enclosures is indiscriminate insertion, causing waste. A manufacturer of crushing-machinery will not find a customer for his goods among printers and joiners, however many cheques and enclosures he sends them. The only remedy or safeguard is to fix a definite date for the insertion of enclosures, and instead of trusting them to the tender mercies of the postal clerks to make the publicity department responsible for their correct insertion in the envelopes. On this particular day all envelopes should be sent in to the publicity department, and only returned to the postal department when the enclosures have been properly and discriminatingly inserted.

4 and 5. Showcards and instruction-cards fulfil a similar though not identical function. The showcard is really a diminutive poster, usually mounted on card or canvas, and intended for exhibition in some prominent place where it will catch the eye. Overseas-agents often desire showcards for their windows or office-walls. Dealers, of course, like them for window-dressing and counter-display. They are also useful in exhibitions and trade shows. Little space need be devoted to their design. They should have the simplicity, vigour, and attractiveness of the successful poster. If they use a pictorial design, this should be bold and pleasing. If, on the other hand, they merely illustrate the product, the illustration should be technically accurate and large enough to show up detail and attract attention.

It is best to have a minimum of wording and a maximum of pictorial quality. What wording there is should be in large, clear type, easily readable at a little distance. The manufacturer ordering showcards will save money by giving the order to a printer who caters specially for this class of work. By no means every printer prints showcards, and if they are ordered from a man who has to get a specialist printer to

print them for him—"farming them out," as the phrase goes—the manufacturer has actually to pay two profits where he need not have paid more than one.

Instruction-cards and tables are intended to give essential advice on the use and treatment of the product. In technical-product marketing they are usually intended for workshop use, and should, in consequence, be strong, readily legible, and for preference glazed or varnished, so that the inevitable accumulations of dust can be removed from time to time. It is possible to have them quite large and yet reduce them to a convenient form and dimension for postal purposes by cutting into halves or quarters, and joining the separate sections with strong linen tape. This allows of their being folded, but does not prevent their hanging flat on a shop-wall. This method has great and obvious advantages over the old one of attaching brass strips to the ends and rolling up the charts for post.

Instruction-cards should be very simply and clearly worded, so that no misunderstanding is possible. Wherever the explanation or instructions would be helped and illuminated by their introduction, illustrations should be used. Workers will often understand pictures where they would not understand long descriptions of a mode of procedure.

CHAPTER VI.

§ 1. *Engineering Circularising.*—Circularising is, of all forms of selling, one of the cheapest, most efficient, and most advantageous at the manufacturer's disposal. It is, of course, true that certain engineering products do not at first sight seem to lend themselves to what is known technically as "direct-mail advertising"; but when the subject is gone into with thoroughness, scarcely one technical-product manufacturer in a thousand will be found who could not effectively use the post in his selling-schemes.

The great advantage of circularising is its directional quality. When you advertise, you hit everyone, irrespective of position. Whoever reads the advertisements in a particular journal gets your message. It is hardly possible to localise your effort, to confine your message to a particular class of officials. If you advertise in a journal, for example, that serves the quarry-working class, your advertisement is as likely to be read by the manager's clerk as by the manager. In sending out travellers, you localise your selling to some extent, but at the same time your travellers can only cover a small number of persons a day. It may be necessary to secure quick results. In this case circularising is the best possible medium.

You can direct circulars, in accordance with your own wishes, either to a class of officials, manufacturers or engineers, or to a geographical or occupational class. There is practically no waste circulation. A few circulars may not reach their destination, owing to changes of address; but the percentage is trivial compared with the inevitable waste circulation

involved in advertising in the press. At the same time, the low cost of circularising enables a good deal of it to be done by both small and large firms.

This is not an argument in favour of substituting circularising for other forms of marketing. This form, like the others, has its own special part to play in the sound selling-scheme. It is as essential to it as they are, but not more so—any more than the infantry of an army are more essential than the artillery, or *vice versa*.

But in addition to its directional value, circularising has other important advantages. It is exceptionally useful for opening up a market. When the product has not appeared before, circulars sent through the post form an excellent preparation for press-advertising and salesmen's calls. Then there is the advantage of intimacy. A circular letter can be addressed to a particular person, and can use freer and less formal language than the advertisement. And it has one other great point: *it is bound to reach the person to whom it is addressed*, if it is addressed to a particular person. Whether he reads it or not depends, of course, upon its attractiveness and interest. But the postal authorities, except in a negligible minority of cases, will make sure that it is delivered. An engineer can dodge advertisements simply by refraining, if he is so absurd, from examining them. He cannot quite so easily dodge the circular. It comes in with his morning's post, and whether he suspects it to be a circular or not, he is compelled to give it at least one glance in order to verify his suspicions. It is in the use the manufacturer makes of that one glance that the secret of success lies.

As a rule engineers are pretty busy; they have only a limited time to devote to their correspondence, and of course they receive so many circular letters that, unless their attention is caught and held during the first brief glance, they usually deposit them unread in the office basket. The moral is that the strictest attention should be paid to the design, contents, and character of every circular and circular letter sent out.

The first essential to good circularising is a good mailing-list. The more up-to-date and accurate the list, the more efficient will the circularising be. On the list of people to be circularised should stand only those individuals or firms who can legitimately be expected to order goods of the kind it is desired to sell. A few notes on the efficient compilation of a mailing-list will be extremely relevant at this point.

Present and past customers whose financial standing is assured should form the nucleus. The travellers can supply additional names of buyers and works-managers, or responsible officials generally, with whom they meet during their journeys. It is not wise to saddle salesmen with too much clerical work, but as a rule they appreciate the value to themselves of a good circularising list, and will co-operate heartily in keeping it up to date. An additional reason for this is that a bad mailing-list hits them more obviously than a good one helps them, and does them damage of which they soon become conscious. A circular letter addressed to a buyer who died years ago is sure to lie waiting for the circularising firm's traveller, to be produced next time he calls; and he will either have to put up with a good deal of chaff, or have the unfortunate occurrence put coldly before him as a sample of the inefficient methods to be expected from his employers.

The market-analysis, if efficiently conducted, will have indicated with much clarity the sort of persons whose names ought to be included in the list—*e.g.*, works managers, tool-room foremen, and so forth. If these persons elude the observation and inquiries of the travellers, their names and addresses can often be obtained from directories, small advertisements for assistants or workmen, and so forth. If the product is of such a character that it can be sold efficiently through dealers, the dealer will often be able to supply a good many names of importance. Then there are agencies that exist for the sole purpose of building up classified lists of all sorts of trades, industries, officials, etc., and selling them complete to intending circularisers. The disadvantage with

these is that the purchaser has no guarantee that they are up to date, and may be paying, for all he knows, good money for a worthless list. (It is always better, before buying a ready-made list of this kind, to subject it to the close scrutiny of someone fairly well acquainted with the territory or class covered.) Furthermore, the compiling agencies seldom discriminate closely enough to suit the technical manufacturer's needs. To them an " engineer " is an engineer, and he goes into their lists as such, whether he be merely the owner of a country garage that does a few odds and ends of repairs or the works manager of a huge manufactory. Often, too, they fail to discriminate between the actual makers of a product and the merchants who merely stock and sell it.

But however varied the sources whence the names are drawn it must not be imagined that the work is over once the list has been compiled. The arduous and perpetual task remains of keeping this list up to date. In this, again, the travellers must co-operate for their own sakes. (For instance, nothing is more annoying to a man who has been knighted than to be addressed as plain Mr. within a few weeks of his receiving the honour.) The waste in postage and printing must also be taken into account when considering the disadvantages of an obsolescent list, because there is sure to be a percentage of firms and individuals whose addresses have changed during a given period, which often means lost or returned letters.

The news columns of trade and technical journals give valuable details of the movements of men and firms ; of alterations in style ; changes of occupation ; and so forth. A good plan adopted by one firm is to enclose, every now and then, an inset or loose printed slip with their house-organ, asking the addressee to indicate on this slip any change or error in his address as printed on the covering wrapper or envelope, and to return it so that the list may be corrected.

Returned letters enable the manufacturer to remove from his list firms that have given up business, or have changed their address without leaving a trace behind them. And finally,

as another fruitful source of corrections, come the list of members, with their addresses, issued by various engineering and foremen's societies from year to year.

§ 2. *The Sales Letter.*—One may now consider the circulars themselves. Envelope-enclosures, folders, booklets, etc., which often accompany sales-letters, have been dealt with in a previous chapter. The present takes for its subject the circular letter proper, as distinct from the enclosures that may or may not accompany it. But it ought here to be remarked that *no sales-letter should go out without an enclosure of some sort to reinforce its appeal and give it point and purpose.*

Sales-letters, or form-letters as they are sometimes called, are a valuable part of any campaign. They have this advantage : they can be produced rapidly, much more rapidly than printed matter, and therefore by their means an opportunity for circularising can be seized at the right moment with a facility given by no other method of marketing. For instance, at a recent meeting a well-known and highly respected engineer delivered himself in an emphatic way on the subject of using a certain material for a certain purpose. There had been much controversy on the point, and the favourable opinion of this particular engineer was reported in most of the technical journals. A manufacturer of the material in question sent out, on the same day that the report appeared, 7,000 circular letters quoting extracts from the engineer's speech, and enclosing a booklet dealing with the product to which reference had been made. He obtained £5,000 worth of orders as a direct result. He was not the only maker of this stuff. It was merely that he struck while the iron was red-hot, and for this purpose circularising could not have been excelled by any other selling-method.

Sales-letters are usually duplicated in some way or other in large numbers. There are various kinds of duplicating-machines on the market, and it is not the writer's task to indicate their respective merits. But one point needs to be stressed. The more the sales-letter resembles a letter addressed

to one person alone, the better will be the result. It is true that much of the prejudice against a letter that thousands of others also receive is dying, and that engineers are beginning to look upon the circular letter not so much as a private communication, but rather as a handy and rapid means of telling them about new things; yet there still remains in every man that delicate touch of egotism which makes him prefer to be the only one addressed. It is claimed by some manufacturers of duplicating-machines that letters produced by their particular process cannot be distinguished from individually typed letters; but speaking from an extensive experience, the writer declares frankly that he does not believe this. At all events he has yet to receive a letter that makes him look at it twice to make sure that it is not individually typed or written. Nevertheless, it is true that a close resemblance can be obtained, a resemblance sufficient to meet all needs. The task is to make a facsimile letter look sufficiently like a real letter, when first seen, to prevent the person who receives it from flinging it away immediately after opening it.

The sales-letter (as distinct from its envelope) is either sent out without being addressed to any particular person or firm; or else duplicated, the address being typed in afterwards. If the latter procedure is adopted, care should be taken to see that, if the same colour of ink is used, the shade matches that of the text. Nothing looks worse, simply because it makes the pretence obvious, than a letter with the text in one shade of blue or black, and the address in another shade of the same colour. Unless the operator or typist can be trusted to send out no letter in which the shades do not correspond, it is better to type the address in an entirely different colour—*i.e.*, if text in black, address in red. This latter practice is growing, and has the merit of superior speed.

It is impossible, of course, to send out a large number of sales-letters individually typed, simply because the cost would be excessive, and the time taken up enormous. Imagine

the army of clerks required to produce 7,000 two-page letters in a single afternoon ! Yet with the aid of a duplicator and one operator, this feat has been performed at the writer's command many times.

The only other requirement is an addressing-machine for the envelopes, which machine can be operated by an office-boy, and will turn out neatly-addressed envelopes or wrappers with amazing speed.

Let us now examine in greater detail the actual work the sales-letter has to perform. Broadly speaking, sales-letters can be divided into two main classes, the form-letters and the follow-up letters. The form-letter is sent out simply and solely to attract business, and does not refer to previous correspondence or communications. The follow-up letter, on the other hand, follows up, as its name implies, previous communications in an endeavour to reawaken interest, bring business, or clinch matters that hang fire.

The form-letter (see Appendix II.) is intended for prospective customers, actual users, dealers, and dealers' or merchants' travellers.

Subjects with which it may properly deal are as follows :

(*a*) A direct statement of the case for the product, giving arguments for its use and purchase, related if possible to some known need of the prospective user.
(*b*) An indication of new uses to which the product can be put.
(*c*) A recommendation of the product by some person or firm of standing.
(*d*) An inquiry as to the performance of the product in use.
(*e*) An offer of the product on special terms during a certain definite period.
(*f*) A notification that the manufacturer's salesman will shortly be calling.
(*g*) Announcement of exhibitions or demonstrations at which the product will be displayed, and invitation to the addressee to be present.
(*h*) A change in the methods of selling the product, or of agency, salesman, address, branch office, and so forth.
(*i*) Offer of technical help in the way of expert's assistance, literature, experimental plant, research laboratory.
(*j*) Despatch of new or new edition of catalogue, booklet, or price-list.

When addressed to dealers or dealers' salesmen, it will probably be intended to establish new distribution centres, to pave the way for salesmen's visits, to offer advice on the selling of goods over the counter, to offer help in arranging advertising or demonstration schemes, and so forth.

The follow-up letter (see Appendix III.) generally follows up a quotation that has not been successful or has not been acknowledged ; a catalogue that has not been acknowledged, or has been but briefly acknowledged ; an order that has not been repeated for a considerable period ; a traveller's call that has not led to business ; and so forth.

The manufacturer must decide which class of letter he desires to send, and the subject that best suits his purpose. Then he must set to work to design and write the letter.

As a rule sales-letters are far too long. They open with general remarks or generalisations, whereas it is essential that the first sentence of the letter should be specific and arresting. This does not mean that it should be vulgar, curt, snappy, or facetious ; but only that it must present some fact of intense interest to the reader. A letter reached the writer the other day, beginning : " In these days of fierce competition, every buyer must closely consider the question of getting maximum economy from the goods he orders." There was not a single fact, figure, or falsehood in that sentence. It said nothing specific, presented no new facts or ideas. It was trite, vapid. What followed was never read, because the first sentence failed to arouse interest. On the other hand, another letter received on the same day began : " Have you considered the advisability of getting badges for your stand-attendants at Wembley ? " This letter arrested attention immediately. The idea of badges had never crossed the mind. The letter went on to tell why badges were an advantage, what they cost, how they could be supplied, the speed with which they could be delivered, and so on. Every word was read because every word was important. All feeble generalisations had been cut out. Facts, facts, facts were all it contained.

In its general design and style the sales-letter should follow the rules laid down for the good advertisement. It must attract attention, arouse and sustain interest, create desire, and induce action. But it can approach its subject a little

more intimately than can the advertisement. It has the flavour of a private communication, and can therefore say things more directly and personally. At the same time, it must not be grossly familiar or flippant. Its length should be just as many words as are required to convey the message, and no more. If a hundred words are needed, the letter should be a hundred words long. If five hundred are needed, five hundred should be used. But the writer of the letter should take enormous pains to make sure that every superfluous word, every irrelevant sentence, is cut out. The crisper and more direct his letter, the more likely it is to be read. Nevertheless, too great a condensation is as bad as prolixity if it makes the communication abrupt or unintelligible. The meaning must be clear, or the letter will have no value.

As a general rule, isolated form-letters or follow-up letters are weak. If it is decided to circularise, then a proper detailed campaign should be planned, to consist of a series of letters, each accompanied by an appropriate enclosure. A good number of letters is six. Each letter of the series should take a particular selling-point, or aspect of the subject, and discuss it, so that the whole series forms a complete statement of the product's utility. There is thus a close relation between each letter and that which follows it, and between any two letters of the series, whatever their position; but it must be remembered that no letter is good if it does not also, so to speak, stand on its own bottom, independently of the rest. A series of letters with a definite policy behind them, posted at regular intervals, and related to one another in the manner indicated, is far better from a marketing point of view than odd letters sent at irregular intervals without plan or system. It is true that now and again a letter may have to be got out hurriedly to meet an opportunity or an emergency, but it should be followed eventually by others, more carefully thought out and written.

The first few letters should be sent out at shorter intervals than the later ones. No hard-and-fast rule can be laid down

as to the number of letters that should constitute a series. Six, the number mentioned, is an average ; but if six letters do not cover all the ground, there is no moral objection to seven or eight, and some manufacturers have even gone into double figures. To the writer's way of thinking, this, however, is rather like pestering, and may produce unfavourable reactions.

Great attention should be paid to the day of posting. The law of averages has shown that a letter received on a Wednesday is far more effective than one received on a Monday or Friday. On Monday, with the prospect of a strenuous week's work before him, and suffering from that well-known " Monday morning " feeling, no man is in the best mood to attend to circular letters. On Friday he is thinking of the week-end, and clearing up, with the result that circular letters are left " till Monday," and probably never read. It is waste of time, for obvious reasons, to post sales-letters that will only reach their destination on a Saturday morning. Days immediately following holidays are bad for the receipt of form-letters. Furthermore, a man's occupation often makes him particularly insusceptible to direct-mail attack on certain days of the week, owing to his preoccupation with other duties, or to enforced absence from his office. For example, in many collieries the engineer sets aside certain days in the week for his office-work, and spends the rest of the time under-ground, where no-one from above can readily reach him. The market-analysis will or should reveal these things.

The *cheapest* way of sending out form-letters is by halfpenny post with envelopes unsealed. The *best* way is to send them properly sealed and stamped. The reason is that far more attention is paid to a sealed and fully stamped letter than to one unsealed, which is known to be unimportant before it is opened. Even when the correspondence is opened in bulk by clerks, unsealed letters are often opened separately and dealt with before the main post, so that they can be got out of the way before the serious business begins.

It is argued by experienced advertising men that the colour of the envelope has some effect upon results. Circulars sent in green envelopes have been said to draw better results than the same circulars sent in ordinary white envelopes because they stand out from other letters and invite the eye. This may apply in the case of general products, but the writer doubts whether it has much relevance from the technical manufacturer's point of view. Where correspondence is opened in bulk by clerks, the envelopes are thrown away, and can have little effect on the mind of the person who ultimately receives their contents. And in any case most people open all their letters, whatever the order in which they open them.

§ 3. *Arranging the Mailing List.*—Two points that must be dealt with at length here are the arrangement and classification of the mailing-list, and the system by which the despatch of a series of follow-up letters is regulated to prevent a person who has responded to any particular letter of the series from receiving all the remaining letters. The mailing-list's arrangement will depend largely upon the needs of the particular manufacturer. It may be either alphabetical, geographical, industrial, or professional. For all general purposes an alphabetical list has obvious advantages. It saves much time when quick reference and alteration are desired, it being only necessary to look in one place to find a given name ; but it breaks down—unless duplicate lists are kept—whenever it is desired to circularise a particular class of persons, or a particular locality. If duplicate or triplicate lists are kept, so much the better. They can then be arranged and classified to meet any need that is likely to arise.

A useful and simple plan that has been found effective is to arrange the addresses in salesmen's districts, and alphabetically. This enables the whole of the names in a particular territory to be sent easily to the salesman who covers that territory for revision. In addition, each address (they are carried on metal stencils for the addressing machine, and kept in steel drawers) is numbered consecutively from one

upwards. A book of different classifications is kept—*e.g.*, occupational, manufacturing, and so forth. In this book, under the respective headings, are written the numbers of the appropriate addresses. Whenever it is necessary to send out a circular to a particular class of persons only, the operator of the addressing machine takes the book and prints on the envelopes only those addresses of which the numbers are given under the particular heading, missing all the others. To make this clearer, let us take a typical case. There are eight salesmen : Allen, Brown, Davis, Fry, Green, Holmes, Jones, and Smith. Each of these has a drawer or more of addresses filed under his name. Allen's drawer is the first, his name being the first in alphabetical order ; Smith's is correspondingly the last.

The addresses in Allen's drawer are arranged similarly in alphabetical order, the first name being, perhaps, A. Abel & Sons, and the last R. Ziski & Co., Ltd. This is likewise the case in the other salesmen's drawers. But in addition, each address bears a consecutive number. A. Abel & Sons will be number 1, and R. Ziski & Co., Ltd., possibly number 501, according to the total number of addresses in Allen's drawer. The first address in the next drawer, Brown's, does not, however, begin again at 1. It begins from the end of Allen's drawer, namely, 502. This procedure is followed in all the other drawers, so that at the finish the last address in the last (Smith's) drawer will give the total number of addresses on the list, which may be 5,392.

We have seen that in actual fact the addresses are classified first according to territory, and, secondly, according to alphabetical order. But these classifications will obviously be insufficient to meet all circularizing needs. It may be necessary, for instance, to circularise all collieries. There will be collieries in Allen's as well as in Smith's territory. One does not want to have to go through each drawer tediously extracting the colliery addresses only, putting these in another drawer, and then printing the envelopes.

One takes the book, therefore, when first compiling the mailing-list, and under the heading of " collieries " sets down consecutively the numbers of the various colliery stencils. The book will thus present the following appearance :—

COLLIERIES.

3—9—23—67—132—396—397—403—501—732—736—849—1532—1539
1604—1732—1811—1813—1859—1861—1873—1924—1971—1973—2012
—2114

and so on, until all the colliery addresses are inserted. Whenever it is desired to circularise collieries, therefore, the operator of the machine will take each drawer of stencils in proper order, put it in the machine, and run off only those stencils whose numbers appear under the " colliery " heading. A device of the addressing-machine enables any particular stencil to pass the ribbon without being printed, so he has only to miss the stencils not needed, and print those that are. The order of the addresses in the drawers is thus left undisturbed, and the proper envelopes have been obtained with a minimum of trouble and delay. Furthermore, there is no limit to the number of classifications that can be made—a great advantage. Whenever an address is taken off the list, the necessary adjustment is made to the book. If an address is added, and falls alphabetically between two consecutively numbered addresses, it is numbered (*a*) or (*b*). Thus, an address coming between 300 and 301 would be called 300 (*a*), and if yet another came between 300 (*a*) and 301, it would be numbered 300 (*b*).

The advantage of having the addresses in alphabetical order is that one can discover with maximum rapidity whether or not a particular name is on the list.

Even if an addressing-machine is not possessed, this system can still be followed. Typewritten lists for each salesman can be kept, and each address can have its number typed at the side.

§ 4. *A Simple Follow-up System.*—In most follow-up systems the prospect's name is written on a card and, according to the response he makes, his card is handled in various ways. Thus,

if 7,000 cards are made out, being all those who have received the first letter, 1,000 replies may be received. The respective 1,000 cards are taken out of the drawer in which they have been kept, and are sorted into other drawers according to whether they represent orders, inquiries, or refusals. The remaining 6,000 who have not replied remain in the general drawer, and receive the second letter. And so on, right through the series, until, when it is complete, there remains in the original drawer only an irreducible minimum of persons whom nothing can induce to reply. It will be useful to study closely the reproduced example (Fig. 8) of a typical follow-up card, which shows clearly both the sort of information that should be recorded on them and the way in which they can be

First follow-up	Acknd.	2nd follow	Ackd	3rd follow	Ackd	4th follow	Ackd	5th follow	Ackd.	Dead
NAME John Stone, Engineer, John Smith & Co. Ltd.,										
ADDRESS. 53 Newcastle St., Alnwick.										
PRIVATE ADDRESS (if Known) 8 St Elmo's Terrace, Alnwick.										
DATE		DATE		DATE		DATE		DATE		
3.7.24	sent Cat. G.									
4.7.24	acknd.									
18.7.24.	1st follow									
19.7.24	acknd.									
20.7.24.	Jones calls.									
	Says Stone will send us orders.									
23.7.24.	Special letter									
24.7.24.	Order rec'd.									
	for files									

Dead
Put him on mailing list for our house organ

FIG. 8.

differentiated one from the other without its being necessary to keep them in separate drawers. A brief explanation of this system of keeping the cards is not out of place at this juncture. This system has the essential requirements of simplicity, flexibility, and economy. It cuts right across most other

follow-up systems in that all the cards are kept in one set of drawers in alphabetical order, and that cards are not taken out of one set and filed in another, according to circumstances, as is so often the case.

In the beginning a sales-letter is sent. A clerk makes out a card for each person to whom the letter is despatched, and his name and address are written at the top. In the space provided at the left-hand side is written the date on which the letter was sent and the name of any enclosure or catalogue that accompanied it. If the letter is acknowledged, this acknowledgment is passed on to the clerk, who notes down the date of acknowledgment on the card. If orders are received, the card is taken, the name added to the mailing-list for the house-organ, and the card destroyed, or marked as " dead," and filed in the drawers.

No cards not acknowledged are filed—this is important—until the first follow-up letter has been sent. If this first letter is sent within a reasonable period, say a fortnight, the unfiled cards will seldom be more in number than can be skimmed through quickly. Each day's batch of cards should be kept in date order behind those of the preceding period, assuming that letters are sent out continuously. In this way the cards to be followed up on any particular day will come automatically to the front on that day. Thus, if a dozen cards are made out on 3.7.24, these (allowing a fortnight for the first letter) are due to be followed up on 17.7.24. They are kept all together behind the cards for 2.7.24, which are due to be followed up on 16.7.24. As each day's cards due for following-up are dealt with, fresh lots follow at the back; so that eventually the 3.7.24 cards come to the top on 17.3.24, and are dealt with.

What happens after the first follow-up letter has been sent? In many cumbersome systems the cards are taken from the general stock and filed in a separate drawer. Then, if an order results, they go into another drawer. If no order results and a second follow-up letter is sent still another drawer is

used ; and so on. But this method breaks down in practice, because often an order comes from a " prospect " who has apparently had no previous literature. The clerk remembers his name vaguely, and wonders if it appears on his cards. He wants, if possible, to trace the order to its source. To do this he must go through every classified drawer in order to trace the name. This means a good deal of work, and the temptation is always to let the matter rest. This implies imperfect records, and a sending out of unnecessary follow-up letters to a man who has already responded to the earlier ones.

Obviously what is wanted is a system that allows every card to be filed alphabetically in one set of drawers, whether the prospect be " live," " dead," or " in transit." It should need only one reference to a drawer to find out if a man's name has been carded before. There should be no such thing as a " dead " drawer, a " first follow-up " drawer, and so forth.

In the system now being discussed, steel signals are used. As will be seen in the illustration, divisions are printed at the head of each card. Thus, there appears :—

" 1st follow-up," " Acknowledged," " 2nd follow-up," " Acknowledged," and so on, according to the number of letters it is proposed to send, winding up with " dead."

As soon as the first follow-up letter is sent, a signal is affixed to the card in the little compartment marked " 1st follow-up." Prospects who acknowledge this letter but do not send orders receive a special letter, so that the signal for their cards is moved to the next compartment. If no acknowledgment is received, the second standard letter is sent, and the signal is moved accordingly. This goes on until all the letters have been sent out, when, if there has been no result, the signal is removed, indicating that the card is " dead."

The reason no cards are filed until the first follow-up letter has been sent is that as no signal is on them there would be no means of distinguishing them from the " dead " cards, a " dead " card not needing a signal. It would, of course, be more difficult, also, if they were filed with the old cards, to pick

out the new ones when the time came to follow them up according to their date.

The advantage of the system described is that by means of the signals all the cards for any particular follow-up letter can be picked out at once, yet all are kept together in alphabetical order, so that any individual card can be picked out without needless searching in a dozen different drawers.

If an order is sent, the card becomes " dead " in the sense that no more follow-up letters are sent, but the broad details of the order are noted on the card for possible future reference.

It must be borne in mind that this system does not in itself constitute a mailing-list in the strict sense of the word—*i.e.*, it is not the list of all possible purchasers referred to in preceding sections of this chapter. It is merely a " follow-up " system, and can be adapted to suit any circularising campaign, whether directed to a limited section of the market or aimed at all possible users of the product indiscriminately.

This chapter has dealt with a big subject in a very broad manner, but the essentials of a successful circularising campaign have been detailed, and that is mainly what the technical product manufacturer needs. The next chapter deals with trade exhibitions and their value in the marketing scheme.

CHAPTER VII.

§ 1. *Exhibitions and Marketing.*—From time to time the manufacturer of engineering products will receive invitations to take space at one or other or all of the exhibitions and fairs held in various parts of the country at various times for the purpose of displaying the products of a particular industrial group, or, as in the case of the British Empire Exhibition, of a particular country, group of countries, or locality. His attitude towards these invitations must be one of extreme caution. He should consider the proposition in exactly the same way as if it were an invitation to take space in a particular journal. There are, however, one or two differences between taking space at an exhibition and taking space in a trade journal. First of all, the exhibition, unless it is of a strictly technical and limited character, is bound to attract a large number of mere sightseers. These are, to the technical-product manufacturer, unless he makes goods that have a wide popular appeal, the equivalent of " waste circulation " in a journal. But the fact that a trade journal or daily paper reaches a number of people not immediately interested in technical products does not interfere with the ability of those readers definitely interested to read his advertisement, whereas the presence at an exhibition of a large number of mere sightseers can, and often does, interfere very greatly with the ability of a legitimate buyer to see the exhibits that interest him. Crowds of thronging people impede his progress, increase the physical effort of going round the stands, and

often keep him waiting his turn at a particular stall or stalls. He is likely, therefore, to see less than he would were the exhibition one of purely technical interest. This fact the manufacturer who contemplates exhibiting must bear in mind. Broadly speaking, the more popular the appeal of the exhibition, the less likely it is to bring business to the technical manufacturer. One may put it in this way: a man making concrete-mixing machinery is more likely to get business from a building-trades exhibition than from an ideal-homes exhibition. An exhibition so colossal and comprehensive as the British Empire Exhibition comes, of necessity, in a different category. It is unprecedented, and therefore its value to the exhibitor cannot be estimated in the ordinary way. Technical exhibitors can but "wait and see" before pronouncing a decision.

Taking a very wide survey of the whole question, one can declare with a certain amount of confidence that exhibitions pay the exhibitor of technical products on two conditions: first, that the exhibition itself is of special rather than popular character; secondly, that the manufacturer has some novelty, new development, or spectacular feature to bring before the notice of buyers. Engineers and buyers go up to exhibitions not to see products with whose use and importance they are already familiar, but to see the latest things, those developments in machinery and engineering manufactures with which they are not acquainted, or of which they have but lately heard. A man will look at a stand-handrail made of stainless iron, for instance, whereas one made of ordinary steel would not attract his attention at all.

If, then, the manufacturer feels that he has something fresh and new to bring into prominence; if the exhibition is of such a character that it will attract the visitors with whom he can do business; it will pay him to take space and, having taken space, to see that he uses it to the best advantage.

§ 2. *Designing the Exhibition Stand.*—Using an exhibition to the best advantage means paying care and attention to

four things: (1) the design and arrangement of the stand itself; (2) the selection of stand-attendants; (3) the design and distribution of exhibition literature; (4) the following up of the exhibition. These four essentials must be separately discussed.

Having bought space, and having been notified of the position allotted, the manufacturer should approach the exhibition authorities for a plan of the hall in which the stand is situated. Having obtained this—unfortunately not always an easy thing to do—he should consider the following points :—

(*a*) The position of the stand in relation to the various entrances.
(*b*) The direction of the flow of people past the stall.
(*c*) The situation of the stand in relation to the amount and distribution of daylight.
(*d*) The stand's nearness to or distance away from the electric lamps at night.
(*e*) The width of the gangway or passage past the stall, along which visitors will pass.
(*f*) Will the flow of people past the stand be constant or fluctuating? If fluctuating, why, and when?

(*a*) The stand's position in relation to the various entrances will indicate not only the number of visitors likely to pass before it, but also their state of mind as they pass. For instance, if the stand is placed near the main entrance, it will obviously be noticed by practically every visitor at the time when he is freshest, with his attention unrelaxed. It may also draw a parting glance, the backward look that practically every visitor to a purely temporary spectacle is tempted to give before departing. To know beforehand that the visitor who sets eyes on his stand will not be tired and jaded is extremely valuable to the designer.

(*b*) If the principal direction of the flow of visitors is known, it will help the designer enormously. More than one exhibition stand has been spoilt because devices meant to catch the eye and attract the attention of the passer-by could only be seen when approaching in the contrary direction to that actually taken by the large majority of visitors.

(*c*) and (*d*) Knowledge of the stand's position in relation to lighting, by both day and night, enables the exhibitor to estimate : first, the best position for his exhibits ; secondly, the amount of extra artificial light, if any, he is likely to need. It also helps him to decide whether to place the chief elements of his design in the foreground or in the background ; whether to keep the same arrangement for both morning and night, or to have alternating arrangements.

(*e*) The width of gangways, with which is intimately bound up the problem of forecasting the number of daily visitors to the exhibition, is of special importance to the exhibitor. In certain well-known instances gangways have been so narrow that overcrowding, with its concomitant jostling and pushing, has made it almost impossible to see the various stands, except such parts of them as towered above the heads of the crowd. At exhibitions of this kind half the attention-arresting devices have been wasted owing to their being too low down, too much in the foreground, for any but those in the forefront of the crowd to see. If an exhibition has narrow gangways, and seems likely to be populous, it will pay the exhibitor to concentrate on the loftier portions of his stand, and to flash thence the messages that he wishes to be read. The upturned eyes of the visitors will then be able to read them without difficulty. Possibilities of overcrowding have always to be taken into account at the more popular exhibitions.

(*f*) The constancy or otherwise of the flow will also have considerable influence on the stand's design. For example, the nearer the stand is to the main entrance, the more constant will be the flow—inward in the mornings and outward in the evenings. During the slack period, assuming that the arrangement of the stand is more effective seen from one side than from the other, a readjustment should, if possible, be made to secure the greatest effectiveness. It may so happen, however, that the stand is not close to any of the entrances, but is near the restaurant, if there is one. This means that at certain

calculable periods the flow will pass restaurant-wards, a point that the skilled designer will bear in mind.

Having decided all these six points, the exhibitor should next make a wooden model of his stand, and proceed to elaborate his design. He may decide to entrust this work to a recognised stand-designer; on the other hand he may choose to do it himself, using the services of his publicity and works' engineering departments. This is not only the better and less expensive method, but it has also other advantages. Usually, when an important exhibition is in course of preparation, the really good stand-fitters get a plenitude of orders, and are not always able to cope satisfactorily with the work entrusted to them. If orders are executed in strict rotation, it means that some stands, the ordering of which has been left rather late, are not ready in time for the exhibition opening, and consequently there is for the exhibitor a certain amount of lost opportunity. It is always a good thing to be well in advance of other exhibitors when preparing an exhibition stand, and this can usually be assured when designing and erecting are done by the manufacturer's own staff. To be quite candid, it means that you can dump your packing cases and so forth on other people's empty space while you proceed with the erection of your own stand; it means that you have room in which to work and time in which to consider your final details. If, on the other hand, you get to the exhibition later than your immediate neighbours, you have to fit in as best you can; you have little room for the accumulated paraphernalia of erection; in short, your troubles and worries are doubled and trebled.

The chief aim in designing an exhibition stall is to ensure that one is remembered by the visitor. In an exhibition of any size there are a large number of stands all clamouring for the visitor's attention. The buyer, sitting at a desk or in an armchair, can read the advertisements in a trade journal without great physical exertion, at his leisure, and in comfort. He can turn back to any particular announcement that has

interested him. But when he visits an exhibition he is in different case. He has much to see and little time in which to see it. The exhibition is a vast array of clamouring stands. His attention soon loses its sharp edge, and tiredness speedily assails him. Only the cleverest and most attractive exhibits are going to be remembered. All the rest will be a jumble of confused impressions.

Therefore the manufacturer should concentrate on getting one main idea into the visitor's mind. The more he tries to pack into his stall, the more he weakens his grip on the visitor's interest. One easily assimilable idea that links itself up with his products is worth more than the horrid wilderness of machinery that some exhibitors display when occasion offers.

Often the effectiveness of an exhibit is lessened by the manufacturer's failure to display with sufficient prominence the name of the product or of the producing firm. When so much depends on a casual glance, it is obvious that in some way or other the name of the thing the visitor sees, or that of its makers, should be riveted in his mind as firmly as possible. Every exhibit should be labelled clearly and attractively. Printed and varnished cards are the best and cheapest means of doing this, because they can be cheaply renewed when soiled. Hand-painted or lettered cards are too expensive. Cards should not be too brief and bold in their descriptions. Interest the visitor!

§ 3. *Staffing the Exhibition Stand.*—One now comes to the question of staffing the exhibition stand. It needs only to imagine a shop with no salesmen to destroy the suggestion that the personality of the stand-attendants counts for nothing at an exhibition. A clever and attractive design will bring visitors to the stand, but it is necessary to have a trustworthy and efficient man in charge if this awakened interest is to be made fruitful.

One has nevertheless to face certain difficulties that present themselves immediately one attempts a solution of the problem. Exhibitions usually last at least a week and often

much longer. It is seldom advisable or profitable to take an outdoor salesman away from his district in order to superintend the stand. By doing so one sacrifices the orders he would normally have secured. Furthermore, a salesman is an expensive member of the organisation to keep in comparative idleness for a week or more. Thirdly, he is not always the best man for the work. Sometimes he has not the temperament that enables a man to stay in one place all day for a long period. Often he knows so many people that he spends the larger part of his time in chatting to his particular friends as they reach the exhibition, to the consequent neglect of the new or potential customers for whom the exhibition stand really exists. And, again, the tactics of the outdoor salesman are not always those best fitted for interior salesmanship of the exhibition kind.

But if the trained professional salesman is not to have charge of the stand who is? Directors cannot afford the time to be there; it is difficult and unprofitable to take a departmental manager away from his duties; to send an untrained, unskilled clerk or typist is to court disaster. It is hardly advisable on the other hand to engage someone specially from outside. And unless the goods exhibited are shown under actual working conditions, it is unnecessary to send an expert demonstrator or highly-skilled technician.

The best way out of the difficulty is to adopt the rota system. This means that (according to the length of time they can be spared) two or more specialists are always in attendance at the stand, but the two are changed daily or weekly, fortnightly or monthly, as the case may be. Thus one day the manager and foreman will be in charge; the following week the assistant manager and another foreman will be in charge; after that two other possibly younger members of the organisation, competent to discuss the exhibits, will be in attendance; and so on until the exhibition is over. This method ensures that the stand is efficiently staffed, while obviating the necessity of taking an important

official from his work for a long period. The scheme has other advantages. It enables the young men of the firm, the assistant managers and so forth, to acquire valuable experience, not only in the exercise of responsibility, but also in salesmanship, diligence, punctuality, and organisation. Their horizon will be widened. Contact with strangers and visitors will give them a clearer insight than before into the appearance, manner and requirements of potential customers. Observation of other exhibits will increase their knowledge. And by their behaviour and conduct during the week in which they are in attendance the management will be able to judge their ability to fill the higher positions when vacancies occur.

In addition, the success of the stand itself will be increased. The man in attendance will not have time to become weary of his task. Feeling himself on trial, he will be keen, eager to justify his selection. Having knowledge of manufacturing conditions, he will be able to answer questions intelligently, or discover the answers for himself from the literature with which he is provided.

If, however, this plan is not adopted, and it is decided to entrust the management of the stand to some one person, permanently, attention should be given to certain indispensable requirements that this person should fulfil. He must be educated ; able to describe with fluency and precision. Some acquaintance with the product, its functions and composition, the processes by which it is manufactured, its price, and the productive capacity of the plant that makes it, he should also have.

Wherever possible, he should be of the quieter, more restrained type. Declamation and rhetoric, the weapons of a certain class of outdoor salesmen, are out of place at a technical product manufacturer's stand. The salesman is not in the enemy's territory ; the enemy is in his. Reasoned argument and clever, tactful demonstration will do more than any amount of brag and bluster.

But above all things the stand-attendant must avoid prejudice. Some men in charge of stands kill them with their prejudices. They are prejudiced against advertising, against sales literature, against a particular product, or against a particular way of making a product. This usually means that they voice their prejudices when talking to visitors—a fatal thing.

§ 4. *Exhibition Literature.*—Turning now to the vexed question of exhibition literature, one must begin by pointing out that it requires different treatment from that called for in the preparation of ordinary sales literature. The great difference between ordinary sales literature and literature designed specially for exhibitions is that the former is written for a man who, one may suppose, has never seen the product, or at least the particular manufacturer's variety of it, whereas the latter is for the man who sees the product in front of him, and wants to know more about it. Obviously, therefore, a different style of copy is needed for each, and they are not interchangeable.

Exhibition literature should devote itself more to what the product *does and saves* than to what it *is*. The objection to equipping a stand with ordinary sales literature is not only that it is written from the wrong angle for exhibition purposes, but that it lacks the vigorous pull of the folder or booklet designed specially for the exhibition-visitor. The sales-booklet proper is written of necessity to suit all classes of buyers, and is usually couched in impersonal terms. It may be excellent in a general way without being excellent for this particular purpose. For the person who has brought it all the way from an exhibition so that he may read it at his leisure, it is too formal and detached ; it creates no link between the firm and himself. But the specially designed booklet is, or should be, full of the personal appeal. Its aim is to awaken in the reader's mind memories of what he has seen. Its message from page to page is : " You have been and seen," or " Do you remember seeing that ? " The claim on the

reader's memory is insistent, which in itself makes reading the text enjoyable.

Another important point is that often the folder or brochure specially designed for exhibition use is cheaper to produce and give away in quantities than the standard catalogue or booklet. Usually it is, or at any rate it should be, smaller in form, and therefore easy to carry. If heavy and bulky, it is liable to be carelessly dropped before the end of the day owing to the difficulty of carrying it with comfort.

The writer is strongly opposed to the indiscriminate distribution of literature of the standard type at exhibitions. Matter specially designed for exhibition distribution may be given out freely, assuming the cost is within reasonable proportions. But standard literature should seldom or never be given out except in exchange for a name and address. It is better not to give it at all, but to take the enquirer's name and address, and have it sent from the head office. This enables the firm to follow up the call and possibly turn it into business.

§ 5. *Following up the Exhibition.*—Finally comes the question of following up the exhibition, or, in other words, extracting the maximum number of orders from it. The fact must be faced courageously that however good and interesting the exhibit, however courteous and efficient the salesmen, however well-designed the sales literature, the manufacturer who wants business to result from an exhibition stand must *go after it and get it.*

Before the exhibition begins, invitations to visit the stand should be sent out to all actual and potential customers at home and abroad. These invitations should be more than conventional cards. They should carry a map of the exhibition showing the location of the stand, something that the visitor can slip into his pocket, and that will prove useful to him as a guide. A brief list of exhibits will also be found a useful addition to the card. With the invitation should be enclosed a reply card ready addressed, on which the visitor can

indicate the approximate date of his visit, and the exhibits in which he is particularly interested.

The stand-attendants will report daily the calls made at the stand, with the names and addresses of as many callers as possible. To all these the exhibitor will find it a good plan to send a special souvenir, complete, comprehensive, and illustrated, of his stand. If he publishes a house-organ, this souvenir may take the form of a special exhibition number. In any case it should contain a full account of his various exhibits, with photographs or drawings of each. Likewise, it should include a photograph or drawing of the stand as a whole; some account of the qualifications and experience of the persons who have successively taken charge of it; and particulars of any novel features in the design, construction, or appearance of the stand itself. In sum, it should be, when complete, a miniature catalogue of the manufacturer's exhibits. The visitor who finds that his morning post contains one of these souvenirs will look at it with interest if only because it reminds him of what he has seen. It may possibly remind him that he meant to try out a certain product. In any case it will be as effective a "follow-up" as could be devised. (There is even a great deal of advantage in preparing these souvenirs before the exhibition has run its course, and sending them out to all friends and customers, actual and potential. It may tempt them to visit a stand they would otherwise have ignored.)

It should not be forgotten that the list of callers at the stand comprises a contribution of great value to the mailing-list. The names it contains are the names of interested persons, though their real worth in terms of orders may vary. The regular salesmen should be advised of the more important calls, so that they may get into touch with the callers. If the exhibitor publishes a house-organ, he should add their names to his list, so that through regular receipt of it they may be kept in contact with the firm in whose products they have declared their interest.

But this is not all. A series of good follow-up letters should be written: no fewer than three, but not more than four. These letters should follow each other at regular intervals, the length of these intervals depending, of course, upon the time taken for a letter to reach the addressee. It is necessary that they should be most carefully and tactfully written, and that they should cover an enclosure and attempt to draw a reply. The tone may rightly be a little warmer than is usual in business correspondence, without, one need scarcely say, approaching familiarity. The visitor should be regarded as a welcome guest who has left behind him the pleasantest of memories.

The propaganda in these letters should be effective rather than showy. The visitor should not be badgered to send orders, yet all the time certain vital points should be introduced. Each letter should take a different aspect of the subject, so that none repeats the others. One may enclose a catalogue; the second may enclose photographs of the works; the third may cover an important testimonial; the last may send a trial order form.

In this way, carefully followed up, the exhibition, whatever its character, may be made a vital factor in the marketing of the technical product.

CHAPTER VIII.

Marketing Overseas.—The numerous phases of marketing the technical product have been discussed at some length in the preceding sections, and if the manufacturer has observed all or most of the recommendations laid down, he will have established a fairly sound organisation for the disposal of his products. It still remains, however, to ensure that this organisation shall be as effective overseas as it is in Great Britain.

Consideration must therefore be given to the agencies by which technical products are marketed in lands overseas. Some modification of all the various plans outlined in previous pages will be necessary, and it may be as well to run over these briefly before passing on to a few notes on selling agencies, branch offices, and the like establishments.

To take, first, overseas advertising, This can be divided into two sections : colonial and foreign. In the former case, where English is usually the language spoken and written, not much alteration need be made to the general style of copy employed. Where the difference chiefly lies is in foreign advertising, much of which, if it is to be effective, must be done in another language than English.

Translation is the most difficult problem the technical manufacturer will have to solve. Competent translators of engineering technicalities are scarce, and in England it is almost impossible to discover them. As an example of the kind of mistake to be expected from the average translator,

one may mention " fonte " (which means cast-iron or iron casting) as the equivalent of " steel casting " (for which the expression " moulage en acier " is alone adequate). One translator actually wrote for a manufacturer a circular letter in which he addressed his Spanish customers as " Dear Horses," the word " caballeros " meaning " gentlemen " being written " caballos," which means " horses."

The proper thing to do to obtain competent translations is to forward the English text, whether of advertisement, catalogue, booklet, or circular, to the agent or branch office in the country concerned, with instructions to supervise the work, and entrust it to a good local man, if it cannot be done in the office. This makes the agent on the spot responsible, and for his own sake he will see that the translation is adequate. In addition, being himself accustomed to discuss technicalities of the manufacturer's kind, he will at once detect any glaring error in phraseology.

It must also be remembered that just as idiomatic English is not wholly akin to idiomatic Yankee, so there are discrepancies between national dialects of other languages. Thus, the Portuguese of Portugal is not fully serviceable in Brazil, although it may be understood there. The Brazilian addressed in European Portuguese by an English manufacturer feels pretty much as an Englishman would if addressed in Yankee slang by a Frenchman. Similarly the Spanish used in South America is not altogether like that of Spain. Therefore, when it is required to translate an advertisement into Portuguese or Spanish for publication in Rio de Janeiro or Buenos Aires, the manufacturer should not send the text to the Lisbon or Madrid agent.

There are two or three things to bear in mind in foreign advertising, over and above this matter of translation. Illustrations should, as far as possible, be adapted to the country in which they will appear. The dress of human beings in any illustration should be that of the people of the country in which the advertisement appears. Thus, if it were desired

to advertise a machine in America by picturing an operator using it, it would be mistaken policy to show an English mechanic in typically English cap and overalls. The operator should have the American peaked cap. Similarly, to show as typical a tool-steel user in a huge machine-shop would hardly impress the engineer in charge of a little works out in Singapore, employing native labour only. Typically English illustrations should only be used when they are indispensable to the argument.

Overseas buyers are specially interested in a number of selling-points that do not so closely affect the home buyer, and for this reason the points in question must be dealt with in overseas advertisements more frequently than they are in those for home consumption. These points are : (1) The price of the product ; (2) its portability ; (3) simplicity of operation ; (4) facilities for purchase ; (5) mode of protecting and packing for long-distance shipment ; (6) method of payment ; (7) extent of credit allowed ; (8) time of delivery.

It will readily be understood that in many parts of the world native labour alone is available, and this not of a highly skilled or intelligent type. Simplicity of operation is, therefore, a strong point in any machine or tool, and will have considerable weight in influencing purchase. Portability is another important matter, because in many corners of the world transport by rail beyond a certain point is impossible, and pack mules or native carts are alone available for the conveying of machinery to a given site. Any machine that can be despatched in sections or loose parts, and can be readily assembled on the spot by an ordinary engineer assisted by labourers, will sell far more rapidly than one which cannot be so dealt with. The other points mentioned are self-explanatory, and are included merely to guide the manufacturer in choosing the policy and supervising the execution of his overseas advertising campaign.

The trade-mark is also of great importance, especially in such countries as China, where commerce is carried on by the

big merchants. The native Chinese know no English, but speedily recognise and remember a simple trade-mark, by means of which they indicate their wants to the merchant, imitating it by simple signs. Advertising in China should, therefore, never lose sight of this fact, and the trade-mark should be clearly stamped on the goods and equally clearly indicated in advertisements, so that the merchant may know at once the manufacturer of a particular class of goods, whenever the native orders it from him by mark alone.

Printing in many foreign countries is by no means equal to that in England, as the advertiser will speedily find out if he entrusts the setting-up of his announcements to the overseas compositor, often a native. To overcome this difficulty, which often makes an excellent advertisement appear a bewildering mixture of ugly types and smeary ink, the manufacturer should get an English printer to set up his announcements in type, submit a proof, and when this has been returned corrected, make a matrix and stereos from the complete advertisement. The manufacturer should retain the matrix, from which any number of stereos can be made if required ; but he should send out the stereos, which are cheap and light, to the offices of the various foreign journals in which he advertises, instructing them to print from these. They cost less than blocks to post, and are quite effective. The advertiser can then be sure that his announcements will appear as he originally intended them to appear, and not be rendered unreadable and unsightly by a stupid, underpaid compositor.

Turning now to the subject of overseas catalogues, little need be said, the question of translations having already been discussed, other than to point out the importance of making the illustrations correspond in every respect—and this applies also to the illustrations in advertisements—with the goods themselves. Nothing irritates an overseas buyer more than to order from an illustration, and find that the goods, when received, do not equal the picture that tempted him to

buy. It must be remembered that a buyer disillusioned in this way loses faith not only in a particular firm's goods, but in British goods also. To disappoint a customer wantonly is to strike a blow at British trade as well as at one's own.

Certain aspects of format are likewise important. The country for which the catalogue or booklet is destined will have considerable bearing upon the colour, paper, type, and binding chosen. For hot countries, where strong sunlight will be encountered, it is necessary to choose cover papers that will not fade. Certain countries have partialities for particular colours. (Spain favours red and orange, and dislikes grey, brown, and blue. China asks for nothing better than red or gold.) The agent can supply details of this kind, and should invariably be consulted before a decision is taken. Combinations that to English eyes seem crude and vulgar are often those that please most in tropical lands.

The question of postage will affect the thickness of the paper used, and in selecting paper durability when exposed to particular climatic conditions will have to be guaranteed. In general, types need to be larger and more open for foreign countries than they need be in Great Britain, because the familiarity with or facility for reading print is not always so great abroad as it is here.

Circularising to overseas prospects can best be done by the agent or branch office direct, but there is no reason whatever why the manufacturer should not prepare and send a series of good form-letters to the overseas representative, for him to adapt them to suit local conditions. In all overseas marketing, close co-operation between manufacturer and representative is essential. While it is true that the former has the greater knowledge of manufacturing conditions, the wider experience of the product and its problems, the greater familiarity with selling and marketing plans, the fact remains that the overseas representative has in his turn the greater knowledge of local conditions, the wider experience of overseas buyers and their requirements, the greater familiarity with the technicalities of

selling to his own particular market. Each must contribute his share to the marketing plan, otherwise it cannot wholly succeed.

It is beyond the province of this chapter to discuss purely financial and directorial matters such as the appointing of efficient agents, the granting of credit, the establishment of branch offices, the sending out of representatives to travel abroad, the putting down of stocks, and so forth. It is true that all these things are part and parcel of the distribution-facilities, and that the extent of these facilities greatly affects the successful marketing of the product. But it has to be assumed here that the importance of this side of the organisation is perceived, and that a proper arrangement for the distribution of goods overseas exists; just as it has to be assumed that proper production arrangements exist. To tell the manufacturer how to market scientifically is useless if, to begin with, his methods of production are unscientific and disorderly; but this does not make it the writer's task to discuss scientific methods of production. Manufacturers, therefore, who need guidance on the subject of selecting and managing their overseas branch offices and agencies are in the same boat as those who need guidance on vital questions of production. They must attack and solve these prior problems before they come to consider those of marketing from the scientific point of view. The finest possible system of selling will break down if production and direction are incompetent or inefficient.

It is necessary, however, to point out that there is distinct advantage in maintaining a close relation between the publicity and sales side of a business and the overseas distributors of the product. Whenever the agent or representative from overseas visits the parent firm he should be introduced to the publicity and sales managers, and given an opportunity for conference with them on marketing problems in general and his own in particular. Much can be discussed at these informal meetings that correspondence could never adequately cover.

Every overseas office should possess a complete master-set of the literature issued by the manufacturer, and should be instructed to keep this up to date, new editions being sent out and substituted for their predecessors, and new publications being added, as may from time to time be necessary. This precludes the possibility that the agent may quote from obsolete catalogues and consequently cause trouble with the customer. Agents, it may be mentioned, have a knack of asking for large quantities of literature, simply because it costs them nothing; but they are not always so active in disposing of it to the best advantage. As a result stocks accumulate, and long after the old catalogue has been superseded by a new one, the agent continues to give copies of it out slowly to his customers. To prevent this, the sales manager should instruct the agent to make a yearly return of all publications in his possession, whatever their date. He will then, on receiving this list, be able not only to ask the agent to return or destroy all obsolete matter, but also to discover what new literature the latter requires, and to check his activity or otherwise in utilising what has been sent to him.

Agents and branch offices should, of course, be kept supplied, exactly as the home salesmen are, with information concerning the product and its performance, and with any changes in the marketing plan that affect their territory. They should also be given the opportunity of expressing their views before any such changes are put into operation.

This chapter would not be complete without some reference to the vexed question of co-operative selling in distant lands. There are many different and complicated forms of co-operative selling, but broadly it consists of the establishment, by a number of associated firms, of a representative or representatives in a particular country or countries to dispose of the products they manufacture. This representative is allowed to handle no goods other than those of the associated firms; is directly under their control; and draws remuneration from no other source. The control is exercised by a

central committee, consisting of one member from each of the associated firms, which meets in some convenient centre in England, at regular intervals. The firms invoice direct to their customers, each allowing a small commission to the representative, sufficient in total to cover salaries of himself and staff, and all incidental expenses. Sometimes these salaries and expenses are taken as a separate charge, and the expense is shared equally by the associated firms, commission being kept separate. This is the better plan.

The advantages claimed are that firms have greater and more direct control than they would have over an agent, while the contact between customer and supplier is not broken by the presence of an outside and profit-diverting intermediary. In addition, the arrangement is more stable, because whereas an agent can throw over a manufacturer directly he receives an offer of better terms from some other firm, possibly a competitor, the co-operative selling-office abroad can do no such thing. Furthermore, the cost is much less than would be the case if a separate branch office were established by each individual firm. Economies in selling are likewise claimed, because while a man is selling a machine-tool, for example, there is no reason why he should not at the same time sell tool-steels, since they are allied products, whereas the private representative devotes all of the interview to machine-tools, and the buyer has to interview another man if he wishes to buy tool-steel.

There is a good deal to be said for this method of marketing, but it has certain drawbacks that need to be taken into account. In the first place, co-operative selling appeals much more to the small manufacturer, unable to bear the cost of establishing a great chain of branch offices all over the world, than it does to the heavily capitalised big firm. Obviously a man who has only to consider selling one product can sell that one product more effectively than if he has to sell half a dozen products, and devote strictly proportionate time to each. Therefore it pays the firm that can afford it to have its own

branch office, with its own—preferably works-trained—staff, devoted to the sale of its own products only.

Again, however able an overseas salesman may be, he can hardly be expected to sell with equal facility such widely different products as soap and steel. For this reason it is now coming to be recognised that no co-operative selling-scheme is likely to succeed unless the grouping of the associated firms is arranged on something more than a non-competitive basis. So far as engineering products are concerned, the only satisfactory system is to form a group composed of firms all producing articles consumed in a particular part of the purchaser's works. Thus, twenty firms producing goods required in a machine-shop might combine to sell co-operatively in foreign countries. These products would doubtless range from machine-tools to lubricating oil and belting, but they would all have this one unifying feature, that they are consumed in the same shop, and probably bought by the same buyer.

But the chief weakness of the whole scheme lies, as already hinted, in the fact that to sell technical products efficiently one needs to have something more than salesmanship—*i.e.*, a sound knowledge of engineering practice in general and of the technicalities of the product itself in particular. Obviously, no man can know all that the good salesman should know about machine-tools, belting, lubricating-oil, tool-steel, bolts and nuts, and so forth. A rough idea he may have, but overseas travellers have often to encounter actual problems of practice and application, demanding detailed knowledge of a highly specialised subject. This is where the co-operative salesman might at any time be found wanting.

Furthermore, in practice the executive committee, meeting periodically in order to exercise control, is seldom so efficient as it is in theory. Committees speedily become unwieldy, meetings are not always easy to arrange, loquacity often delays business, and sometimes a conflict of opinion causes dissension, which may affect the whole scheme and throw

it completely out of gear. These are disadvantages that cannot be ignored. At the same time co-operative selling, while it has not the same advantages to offer the individual firm as the individual branch office has, is yet a very effective substitute for the agent, who often receives commission on orders that he has not exerted himself in the slightest degree to obtain, and it is well worthy of study with a view to perfecting its method and practice, especially by the smaller manufacturer, dissatisfied with existing marketing arrangements in countries other than his own.

It may not be out of place to offer a few hints on the manner of inaugurating any such scheme. The manufacturer intent on the establishment of a co-operative selling organisation, in which he shall be included, should carefully select a number of firms whose products have a close connection with his own, as in the example of their applicability to machine-shop use mentioned above. He will do well to select firms of good standing, with similar capital to his own, *and with methods of marketing that show signs of care and thought.* To these he should write individually, setting forth the main objects and advantages of co-operative selling, and inviting them to attend a meeting, convened by himself, for the purpose of discussing it.

Having expounded his views at the meeting, and having obtained a measure of interest, the next step is to appoint a committee from the meeting, this committee's function being to examine the selling arrangements of the various firms, and to ascertain whether a single country can be selected in which to begin operations. It will probably be found that, assuming all the firms to be sufficiently enthusiastic, the general run of them have one country at least in which they are not represented, are dissatisfied with their existing arrangements, or are not unwilling to give up their existing agency. The country favoured by the majority should then be selected as the basis of operations.

The next step, after the committee has reported to a full meeting of the co-operating firms, is to appoint two or more

special commissioners, whose task it shall be to visit the country in question, examine it from the marketing point of view, and endeavour to formulate some scheme for the future working of the co-operative organisation. On their return a draft scheme should be submitted to each firm, and discussed at a final meeting, which will either empower the commissioners to proceed with or modify the scheme, or abandon the attempt for whatever reasons may be adduced.

Thenceforward proceedings will assume an aspect too intricate and particular to be discussed in this section.

Retail Marketing.—Most phases of marketing have now been dealt with in this series, but in this final section it is necessary to deal briefly with one that has not yet been touched upon, that of retail marketing. As a rule, the larger technical products are not dealt with or distributed by retailers, though occasionally a hardware dealer may book an order for a small lathe or some other machine of technical use. But there is quite a large class of technical objects that reaches the public by means of the retail shop, and some notes on effective distribution of this kind are necessary in order to round off the subject. Such things as twist-drills, files, saws, hack-saw blades, and similar small tools, are sold extensively across the counter, and this outlet must not be overlooked in any marketing scheme. Individually a hardware dealer may not sell many files in a year, but when the total number sold by all the hardware dealers in the country is reckoned up, it will be found to reach handsome proportions.

The essence of marketing as it affects retailers is co-operation. A manufacturer's salesman may succeed in booking a good order for hack-saw blades from a dealer in his territory. But if he lets the matter rest there, he has but taken an order at the expense of a repeat order, and in selling to dealers it is repeat orders that alone make the effort worth while. In practice, it amounts to this, that the manufacturer who sells to dealers has to sell twice, once to the dealer and once to the public. The dealer will buy no more blades until

he has cleared the first lot from his shelves. It is the manufacturer's co-operation alone that can help him to do that. The retail shop should be regarded by the former as if it were actually a part of the marketing scheme.

First of all, the dealer himself must be convinced that the manufacturer's goods are the best he can buy. Advertising in trade papers that the dealer reads and uses helps towards this end. And in advertising of this kind it must be remembered that the dealer is not interested in technicalities half so much as he is interested in the amount of profit he can make on a particular product, the time it will take him to pass the product on to his customers, and its general quality. These are the three main points that advertising to dealers should concentrate upon, and the same remark holds good of circulars and folders sent to them in order to persuade them to stock the product.

Having interested the retailer in the product, and having convinced him that it will be to his advantage to stock it, it is next essential to achieve two objectives. First, the retailer's salesmen must be convinced that the product has possibilities ; and secondly, the retailer, who is seldom experienced in the advantages and practice of marketing by modern methods, must be helped to cultivate his territory in order to extract the maximum amount of business from it.

The retail salesmen can be won over by forwarding to them brightly written little brochures, describing briefly the main features of the product, and explaining exactly what customers want to know about it before purchasing. Making allowances for the very dull, shop-assistants in general are only too eager to acquire knowledge that will help them to sell a product more easily. *But most of all they will be convinced that the product is good by the number of people who come in and buy it.*

Conviction of this kind can only be won by enabling the dealer to stir up his customers. He should be given skilled assistance in advertising, circularising, and window-arranging.

Showcards that he can place on his counter or insert in his window should be prepared and given to him. Literature of the right kind should be at his disposal for inclusion with circular letters to his customers, or for handing to prospects over the counter. Attempts should be made to induce him to display the products specially in his window, and this can best be done by presenting him with an attractive scheme of window-decoration in which the particular product figures prominently, and by offering to supervise its carrying out free of charge. If the character of the product affords the opportunity, it is also a good plan to arrange public demonstrations of its properties in his shop.

Of course, the manufacturer whose products sell only incidentally through dealers will not feel inclined to go to all this trouble and expense. In all probability it will not be necessary for him to do so, since he will have a sufficiently large direct distribution. But the manufacturer of a product that can only be sold over the hardware-dealer's counter will find it essential to co-operate with the dealer in arousing the attention of the buying public.

In addition to lending blocks for advertising purposes, and helping him in all the ways indicated, the manufacturer will almost certainly have to do a good deal of advertising himself. In this it will be as well for him to include, wherever possible, a list of the shops in a particular district where his product is on sale. This will not only please the dealer, for whom the publicity is valuable, but it will be a convenience to prospective purchasers.

Conclusion.—This book does not by any means claim to have exhausted the whole subject of marketing. Many of the sections dealt with are in themselves capable of forming the subject of books as long as the present, and the broad way in which they have been handled here might be called rather a preliminary examination of the problems of marketing than a complete and comprehensive treatise on the subject. Nevertheless, within its stated limits, the book does, it is

believed, give a clear and informative account of the questions to be answered and the steps to be taken before any efficient and scientific marketing scheme can be put into operation. Individual manufacturers of technical products may quite safely follow any of its generalised recommendations, modifying these to suit their particular needs, without fear of evil consequences, and with every hope of a considerable increase in yearly turnover. Marketing can never be fully successful until it is scientific, and it is in the hope of making it more scientific than it is at present that this book has been written.

APPENDICES

Appendix I.

As an example of the kind of catalogue review that the house-organ should contain, an actual article which appeared in a well-known English journal of this kind is appended :—

STEEL AND SPEED.

By T. Sullers.

When time is ripe for the story of this century to be written, the philosophical historian, we may be sure, will say even more of the way in which the rate of progress was speeded up than about the magnitude of this progress itself.

Already, in the nineteenth century, such acceleration had shown itself. Society in 1900 differed in its material aspects far more from society a hundred years earlier than that of 1800 from what existed under Elizabeth, or even under Henry IV. Sir Walter Scott would have been more at home in the age of chivalry, when knights fought in armour, than in the age of petrol, when they fought in aeroplanes ; and Stephenson's locomotive was no greater an advance on the chariots of Boadicea than the Rolls-Royce car upon " Puffing Billy," so well calculated to make things awkward for the coo. Wireless telegraphy was not merely unthought of but unthinkable even half a century ago ; and daguerrotype astonished the public under George IV. much more than the kinematograph the subjects of George V.

But in looking back upon the achievements of the first quarter in this twentieth century, our unborn historian may well write at too great a distance in time to perceive the enormous contribution of material to the realised dreams of this age. It is not alone the principle of internal combustion as a motive power that makes horseless vehicles and aeroplanes practicable. Sir Hiram Maxim once or twice induced his steam-driven flying-machine to rise from its rails, and steam waggons still beat petrol lorries for heavy traction. The strength and lightness which the steel-maker has, thanks to his alloys, placed at the disposal of engineers, contribute very largely to the perfection of transport by land and air. If it were possible to imagine an aeroplane and motor-car manufacturer of 1923 going back and contenting himself with steels which did not prevent his creating a world's wonder 25 years ago, it would be as easy to imagine him experimenting with an improved steam motor. Material has progressed alongside of invention, and not less rapidly ; alloy steels are as much ahead of their predecessors as in the engineering science which employs them and with the same characteristic of unsparing exactitude. The wealth of variety and adaptableness shown in the catalogue* under review indicates not more strikingly the enormous progress of steel-making than the accuracy with which the productions of this art are made suitable for their purposes.

This is the glory of alloy steels. The steel parts of a motor-car or an aeroplane require a large number of different qualities ; but one quality, indeed, is common to all—the steel must be strong enough to be used in a light section. A very small part must have strength in ample reserve. It is not enough for it to meet all normal strains. It must be proof against accidental and abnormal, perhaps unforeseen, calls upon its resistance. Other requirements common to all types of steel in this department of engineering are dictated by the peculiar necessities of the product. The

* " Steels for Motor-cars and Aircraft " : Catalogue D, sixth edition. Sheffield : John Smith & Co. Limited ; 4to, pp. 24.

weight of steels used must be reduced to the minimum. They must be proof against failure through fatigue threatened by vibrations of an acerbity undreamed of by engineers of land or marine steam engines, very likely accompanied by great variations in temperature. They must never lose their first qualities. And with all this, they must be sufficiently good-humoured under heat-treatment to put up with a certain amount of possible carelessness without unduly affecting their temper. To keep down to a minimum the number of different kinds of stock necessary to be held, the publishers of " Steels for Motor Cars and Aircraft " contrive that, through certain variations of treatment, the same alloy steel shall be capable of serving several different purposes. The reader will acknowledge that a manufacturer of the machines which alloy steels serve has at his disposal, if he goes for them to the right source, facilities which contribute generally to the convenience and efficiency of his operatives.

This catalogue bears on its title page the name of Mr. J. Robinson, A.M.I.M.E., M.I.A.E., well known as an authority on his subject. In the introductory pages some general principles are laid down for the guidance of designers and purchasing departments in selecting steels for different purposes. These pages should be read with attention. All the John Smith series of catalogues are beginning to be recognised as meriting this. Unlike price lists of the old type, which, if they contained anything but statistical tables of materials, sizes, and prices, filled up spare pages with the opinions of those who issued them concerning their own wares, or pictures serving little purpose except to indicate that large buildings existed, the handsome quarto catalogues of the Royal Steel Works are packed with practical information showing how to get the best service out of the products listed. " Steels for Motor Cars and Aeroplanes " follows the same rule, and not a line of the text should be neglected, as everything included has direct workshop value.

Practical engineers will find tables on pages 12 and 13 of special interest. They include a comprehensive selection of the latest 1923 British Engineering Standards Association specifications, together with various additional and alternative John Smith specifications. These tables show at a glance the chemical compositions, mechanical properties, and heat-treatments. In the following pages the John Smith steels are described in detail.

In such delicate and important work as the designing and construction of the engines whose manufacture this catalogue is designed to assist, it is vital to know accurately the measured efficiency for which materials can be relied upon. Perhaps it is not improper to add, that when a manufactory exists where tests are applied as a matter of routine to everything sent out, so that uniformity can be relied upon, year after year, in parcel after parcel of a steel with a given mark, it is inefficient, and even dangerous, to vary the source of supply, or allow a purchasing department to be unduly influenced by quotations. In buying alloy steels uniformity is worth paying for, and the saving effected by making price the only consideration is no economy.

The charts which show the effect of differing temperatures on the test-figures of various steels are useful and sometimes surprising. They illustrate what has been done at the Royal Steel Works for the convenience of engineers, in a way already mentioned—namely, by making the same steel serve different purposes, without loss of efficiency in any of them. This is another reason for making John Smith steels the only steels used ; and it is important to observe that the figures and tests given apply to

John Smith steels. Only disappointment can result from rashly assuming that one maker's steel is exactly like another's. Considerable differences in treatment are required, and both safety and convenience are sub-served by going to the right place. The table of parts, with the best and the alternative steels for each, on page 9, is very useful as a guide.

It is hardly practicable within the limits of a review-article to describe " Steels for Motor Cars and Aircraft " in detail. To do so would be to transcribe a number of headings and titles, for the pages of textual exposition are so compactly filled with information as to defy summary. The only general remark which can be made, covering the catalogue as a whole, is that whether he is now using any product of the Royal Steel Works or not, no motor-car or aeroplane engineer can afford to neglect this hand-book.

Appendix II.

Below is reproduced a typical sales-letter, showing how a subject can be approached without waste of words :—

Dear Sir,

Last year we spent over £1,500 on protecting polished surfaces in our machines from rust and the corrosive action of acids. This year we have reduced this expenditure to £300. How ? By substituting stainless iron for those polished parts that were formerly made of ordinary mild steel. Could you not effect a similar saving in your own works, or enable your customers to do so by embodying stainless iron wherever possible in the construction of your products ?

Stainless iron has but recently come on to the market, and therefore we enclose a little booklet that puts before you very simply all you need to know about it. We particularly draw your attention to page 16, where a problem somewhat similar to your own, we imagine, is discussed. If you would like further details, a card addressed to the undersigned will bring them.

Yours faithfully,

Appendix III.

A typical follow-up letter, the sort of communication that cannot annoy but can bring business :—

Dear Sir,

Would you mind telling us whether the booklet, " High-speed Steels," sent to you on January 30th, contained all the particulars you were needing at the time you wrote for it ? You will understand that while it is an easy matter for us to send you literature, it is not easy to discover whether its contents have met your needs. Occasionally we find that persons have not found all they wanted in the literature sent to them, but have refrained from saying so in the belief that they would be putting us to extra trouble. Please accept our assurance that we shall be only too glad to give you any technical help you may require in the solution of your problems.

If, on the other hand, you have found in our literature the information required, we should appreciate a line to that effect.

Our aim is to make our catalogues thoroughly efficient and informative from a practical point of view. In this you can help us by criticising or pointing out any defects or insufficiencies you may have discovered.

Yours faithfully,

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