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THE ARMY OF THE INDIAN MOGHULS:

ITS ORGANIZATION AND ADMINISTRATION.

BY

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PREFACE.

In 1894 I began the preparatory studies for an account of the later Indian Moghul system of government and administration in all its branches, being impelled by the belief that some information of the kind was a necessary introduction to a History of that period, which I had previously planned and commenced. Before I had done more than sketch out my first part, which deals with the Sovereign, the Court Ceremonial, and the elaborate system of Entitlature, I noticed the issue of a book on a part of my subject by Dr. Paul Horn [1]. The perusal of this excellent work diverted my attention to a later section of my proposed Introduction, the subject of the Army and Army Organization; and in this way I have been led to write this portion before any of the others. Except incidentally, my paper is neither a translation nor a review of Dr Horn's essay; and though indebted to him, as acknowledged from time to time, my study covers, in the main, quite different ground, forming a complement to what he has done, and, as I think, carrying the subject a good deal farther in several directions. Dr. Horn seems to have read chiefly the authorities for the period before Aurangzeb 'Ālamgīr; while my reading has been confined in great measure to the reigns of Aurangzeb's successors in the

[1] Das Heer- und Kriegswesen der Gross-Moghuls", by Dr Paul Horn, Privat-Dozent an der Universitat Strassburg, 8vo, pp. 160. (E. J. Brill: Leiden, 1894.)

period 1707—1803. The sources upon which we draw are thus almost entirely independent of each other; and I hope that my contribution to this rather obscure corner of Indian history may not be thought inferior in interest to that of my predecessor The first seven chapters have already appeared in the Journal of the Royal Asiatic Society for July 1896.

CHAPTER I.

COMMISSIONED RANK AND MODE OF RECRUITING.

Few soldiers were entertained directly by the emperor himself, and for the most part the men entered first the service of some chief or leader. These chiefs were ranked according to the number of men that they had raised or were expected to raise. In this way originated the system of *manṣab*, first introduced by Akbar (*Āīn*, i, 237). This mode of recruiting the army through the officers, renders it necessary to begin by a statement of the manner in which the officers themselves were appointed and graded.

Manṣab was not a term confined solely to the military service; every man in State employ above the position of a common soldier or messenger, whatever the nature of his duties, civil or military, obtained a *manṣab*. In fact, there were for all grades, except the very lowest, only two modes of obtaining support from State funds: a man must either enter its active service, as the holder of a *manṣab*, or he must petition for a *madad-i-muᶜāsh* (literally, "help to live"), on the ground of being a student of the holy books, an attendant on a mosque (*mutawallī* or *khādim*), a man of learning and religious life (*darvesh*), a local judge (*qāẓī*), or an expounder of the Mahomedan law (*muftī*).

The word *manṣab* is literally (*Dastūr-ul-Inshā*, p. 233) "the place where anything is put or erected" (*naṣb kardan*, to place, fix, appoint); and then, as a secondary meaning, the state or condition of holding a place, dignity, or office. It seems to have been in use in Central Asia before the Moghuls descended into Hindūstān; and Ross translates

it by the vaguer term "privileges". — *Ṭārīkh-i-Rashīdī*, 103. This word *manṣab* I represent by the word *rank*, as its object was to settle precedence and fix gradation of pay; it did not necessarily imply the exercise of any particular office, and meant nothing beyond the fact that the holder was in the employment of the State, and bound in return to yield certain services when called upon.

The highest *manṣab* that could be held by a subject, not of the royal house, was that of commander of 7000 men, though in the later and more degenerate times we find a few instances of promotion to 8000 or even 9000. The *manṣab* of a prince ranged from 7000 up to 50,000, and even higher (*Mirāt-ul-Iṣtilāh*, fol 35). In the *Āīn-i-Akbarī* (Blochmann, 248, 249) sixty-six grades are stated, beginning at commanders of 10,000, and ending at those set over ten men Even at that earlier period there seem to have been only thirty-three of these grades in actual existence (Blochmann, 238). All the later authorities agree in holding that the lowest officer's *manṣab* was that of twenty men; and these writers record, I find, no more than twenty-seven grades, beginning with that of 7000 and ending with that of twenty. In the earlier days of the dynasty, rank was granted with a niggard hand. In Akbar's time the highest rank was for long that of 5000, and it was only towards the end of his reign that a few men were promoted to 7000, while many officers exercised important commands although holding a comparatively low *manṣab*. The great accession of territory in the Dakhin and the incessant wars connected with these acquisitions may account in part for the increase in the number and amount of *manṣabs* granted by Shāhjahān and ʿĀlamgīr. But the relative value of rank was thereby much depreciated; and the author of the *Maāsir-ul-Umarā* (i, 8), while considering Akbar's officers of 500 rank of sufficient importance to deserve separate biographies, contents himself in the later reigns with going no lower than those of 7000 or 5000, men below those ranks

being too numerous and too insignificant to call for detailed mention.

The steps of promotion altered as the officer rose in grade. The usual gradation was as follows (*Mirāt*, B M. 1813, fol. 35; *Dastūr-ul-ᶜAml*, B.M. 1641, fol. 44*b*): —

From	20	to	100	each rise was by		20
,,	100	to	400	,,	,,	50
,,	400	to	1000	,,	,,	100
,,	1000	to	4000	,,	,,	500
,,	4000	to	7000	,,	,,	1000

There is a slight discrepancy between this table and the facts as we find them in practice. It ought to be amended thus. —

From 20 to 60 a man rose by 10 each time
,, 60 to 100 ,, ,, 20 ,,

Otherwise we should exclude the rank of 50, which was common enough. Again, we find in many tables no ranks of 250 or 350, although both of these are required to accord with the above scheme of promotion.

We also find mention in the historians of ranks which do not appear in the above scheme of grades. For instance, in Dānishmand Khān's *Bahādur Shāhnāmah* (fol. 41*b*, 56*a*) we find men appointed to 1200 and 2900, grades which do not fit in with the scheme given above, nor do these grades appear in the pay-table, copied from the official manuals, which we give a little further on.

As an additional distinction, it was the custom to tack on to a *manṣab* a number of extra horsemen. To distinguish between the two kinds of rank, the original *manṣab*, which governed the personal allowances, was known as the *zāt* rank (*zāt* = body, person, self), and the additional men were designated by the word *suwār* (= horseman). Thus a man would be styled "2500 *zāt*, 1000 *suwār*." It is said (*Mirāt*, fol. 35) that men below 500 never had *suwār*

added to their rank, but this is not borne out by what we find in actual practice. For instance, Mirzā Muḥammad (*Tazkirah*, I.O.L. N°. 50, fol. 96*a*) was in Rabīᶜ II, 1119 H., made 400, 50 horse, and his younger brother 300, 30 horse. There are also instances in Dānishmand Khān of 150, 50 horse, 300, 10 horse; 300, 20 horse; 300, 80 horse; 400, 40 horse; and so on. In fact, unless this had been the case, it would be impossible to divide the ranks below 500 into first, second, and third grade, as was actually done. This division into grades we now proceed to describe.

On the distribution of rank into *zāt* and *suwār* was founded a classification into first, second, and third class *manṣabs*, by which the scale of *zāt* pay was reduced proportionately. From this classification were exempted officers above 5000 *zāt*; these were all of one class. From 5000 downwards, an officer was First Class, if his rank in *zāt* and *suwār* were equal; Second Class, if his *suwār* was half his *zāt* rank, Third Class, if the *suwār* were less than half the *zāt*, or there were no *suwār* at all (*Dastūr-ul-Inshā*, 222). I think that here Blochmann (*Āīn*, i, 238, lines 5 and foll.) obscures the subject by using "contingent" as the equivalent of *suwār*, instead of leaving the untranslated original word to express a technical meaning.

Pay was reckoned in a money of account called a *dām*, of which forty went to the rupee. There were also coins called *dām*; but the *dāms* of account, bearing a fixed ratio to the rupee, must be distinguished as a different thing from the coin, though called by the same name. Here Dr. Horn, 16, is of opinion that the reckoning was made in such a small unit as the $\frac{1}{40}$ of a rupee, less to make a grand show with big figures than because the value of the rupee varied. On this head I am of exactly the opposite opinion, for I think that the principal, if not the only object, was to swell the totals and make the pay sound bigger than it really was. That spirit runs through everything done in the East, at any rate in the Indian portion of it, as could

easily be shown were it worth while to labour the point further. As for the second reason, I have considered it as well as I am able, not being a currency expert; and it seems to me that with a fixed ratio between the two coins, it was a matter of indifference to the receiver of pay whether the amount was stated in the one or in the other unit of value. The two units being tied together by the fixed ratio, and the disbursements being in fact made (as we know) in rupees, the payee suffered, or did not suffer, equally by either mode of calculation.

In the following table, which shows all the *manṣabs* with their pay according to class, I have reduced the *dām* to rupees, as being simpler and more readily intelligible. In the present day, this reckoning by *dāms* has quite disappeared. When reading this table of pay, which shows the sanctioned allowances for a year of twelve months, it must be remembered that few of the officers received the whole twelve-months' pay, the number of month's pay sanctioned per annum ranging from four to twelve. Officers were also supposed te keep up an establishment of elephants and draught cattle. Apparently they were also liable to pay a fixed quota of their own allowances towards the expenses of the Emperor's elephants and cattle, an item known as *khūrāk-i-dawābb*, feed of four-footed animals. There were other petty deductions.

TABLE OF *MANSAB-I-ZĀT* WITH YEARLY PAY IN RUPEES.

	Rank (*Manṣab-i-zāt*).	Yearly Pay in Rupees.		
		First Class.	Second Class.	Third Class
1	7000	350,000	—	—
2	6000	300,000	—	—
3	5000	250,000	242,500	235,000
4	4500	225,000	217,500	210,000
5	4000	200,000	192,500	185,000
6	3500	175,000	167,500	160,000
7	3000	150,000	142,500	135,000
8	2500	125,000	117,500	110,000
9	2000	100,000	92,500	85,000
10	1500	75,000	67,500	60,000
11	1000	50,000	47,500	45,000
12	900	37,500	36,250	35,000
13	800	31,250	30,000	28,750
14	700	27,500	26,250	25,000
15	600	23,750	22,500	21,250
16	500	20,000	18,750	17,500
17	400	12,500	12,000	11,500
18	300	10,000	9500	9000
19	200	7500	7000	6500
20	150	6250	5750	5250
21	100	5000	4500	4000
22	80	3500	3250	3000
23	60	2500	2375	2150
24	50	2125	2000	1875
25	40	1750	1625	1500
26	30	1375	1250	1125
27	20	1000	875	750

(*Dastūr-ul-ᶜAml*, B.M Nº. 1641, fol. 44*b*, *id.* BM Nº. 1690, fol. 173*b*, *Dastūr-ul-Inshā*, p. 234.) The rates of pay in Akbar's reign, as given in the last column of Blochmann's table (*Āīn*, i, 248), were much higher than the above, which refers to ᶜĀlamgīr's time and later. It will be noticed that the difference of pay between first, second, and third class is as follows: —

From	20 to 60	5,000	*Dām*, or Rs.	125	yearly.
For	80	10,000	,,	,,	250	,,
From	100 to 400	20,000	,,	,,	500	,,
For	1000	100,000	,,	,,	2500	,,
From	1500 to 5000	300,000	,,	,,	7500	,,

(B.M. 6599, fol. 144*b*).

In addition to the simple division by *manṣab* alone, there was also a grouping of officers into three classes From 20 to 400 they were merely "officers with rank" (*manṣabdār*); from 500 to 2500 they were Nobles—Blochmann, i, 535 (*Amīr*, pl. *Umarā*, origin of our form "Omrah"); from 3000 to 7000 they were Great Nobles (*Amīr-i-Á'zam*, pl. *ʿUzzām*, *Umarā-i-kibār* (Blochmann, i, 529, note), or Pillars (*ʿUmdah*). All *manṣabdārs* were kept on one or other of two lists: (1) *Ḥāẓir-i-rikāb*, present at Court, (2) *Taʿināt*, on duty elsewhere.

Suwār Rank — The grant of *suwār* in addition to *zāt* rank was an honour. Dr. Paul Horn, 15, supposes, however, that these horsemen were paid out of the *zāt* allowances. In that case a man who had no *suwār* would be better paid than another who was honoured with the addition of *suwār* to his *zāt* rank. Naturally Dr. Horn, 16, holds that this "eigentlich nicht recht glaublich ist." He is quite right in his conjecture. The explanation is, that the table of pay in Blochmann, i, 248, and that given above, are exclusively for the *zāt* rank, from which money the officer had to maintain his transport, his household, and some horsemen. For the *suwār* rank there was a separate table, pay for these horsemen being disbursed under the name of the *Tābīnān*. As Orme says ("Hist Frag.," 418), the officer raising the troops was responsible for the behaviour of his men; he therefore brought men of his own family or such as he could depend on. Another rule was, according to the *Mirāt-i-Aḥmadī*, ii, 118, that the *Tābīnan*, if horsemen, must be one third Mughals, one third Afghāns, and one third Rājputs; if infantry, two thirds archers, and one-third matchlockmen.

Tābīnān. — Blochmann, i, 232, note 1, who, apparently, translates this word as well as *suwār* by "contingent," derives it from the Arabic *tābīn*, one who follows. [1] The

[1] Steingass, 272, تابين, A, following in the steps of another; but Pavet de Courteille, Dict. Turc. Oriental, 194, claims it as a Chaghatāe word, with the meanings of "a troop of 50 men, the body-guard, the pages."

books (B.M. 1641, fol. 46*b*, B.M. 6599, 144*b* and 148*b*) give a long table setting forth their pay in *dāms*, beginning with that for five horsemen and ending with that for 40,000, but as the basis for calculation remains the same throughout, it is sufficient here to work out the pay for one horseman. For five horsemen, then 40,000 *dāms* a year were allowed. That would be 8000 *dāms* for one man; and this sum in *dāms* yields Rs. 200 a year (at the fixed rate of 40 *dāms* to the rupee), or Rs. 16 10a. 8p. per man per mensem. Bernier, 217, states the rate as somewhat higher — "he that keeps one horse shall not receive less than 25 rupees a month." For this sum, of course, the man provided his own horse and armour, and paid for his own and his horse's keep. One *Dastūr-ul-ᶜAml*, B.M. 6599, fol. 144*b*, tells us that the number of horses to men among the troopers (*tābīnān-i-barādarī*) was according to the rule of *dah-bist* (lit. "ten-twenty"), meaning apparently that the total number of horses was double that of the number of men. The scale was as follows: —

3	three-horsed	men =	9 horses
4	two-horsed	men =	8 horses
3	one-horsed	men =	3 horses
10	men		20 horses

That is, with 1000 men there would be 2000 horses The pay of the men with the extra horses was higher, but not in proportion. Thus, a one-horsed man received 8000 D. or Rs. 200 a year (Rs. 16 10a. 8p per mensem), while the two- or three-horsed man got 11,000 D. or Rs. 275 a year (Rs 22 14a. 8p. per mensem). In some places we find other rates of pay recorded. For instance, Bahādur Shāh enlisted *Aḥadis*, men a little superior to common soldiers, at Rs. 40 a month (Dānishmand Khān, second Ṣafar of the second year, *i. e.* 1120 H. = 22nd April 1708). A century later, as Fitzclarence tells us, "Journal," 73, 142, the rate was Rs. 40 a month in the Dakhin, and R. 22 in Hindūstān. Service

in the cavalry was socially an honourable profession; thus a common trooper was looked on as being, to some extent, a gentleman, and such men, even when illiterate, often rose to the highest positions

The pay of the *Tābīnān* was drawn by the *manṣabdār*, who was entitled to retain 5 per cent. of their pay for himself (*Āīn*, i, 265). Pay was not always allowed for a whole year; often only for six, five, or four months. This fact renders it impossible to calculate the actual expenditure, for, although we generally can find out whether a *manṣabdār* was first, second, or third class, we rarely know for what number of months in the year his pay was sanctioned.

Chelās. — As a counterpoise to the mercenaries in their employ, over whom they had a very loose hold, commanders were in the habit of getting together, as the kernel of their force, a body of personal dependents or slaves, who had no one to look to except their master. Such troops were known by the Hindī name of *chelā* (a slave). They were fed, clothed, and lodged by their employer, had mostly been brought up and trained by him, and had no other home than his camp. They were recruited chiefly from children taken in war or bought from their parents during times of famine. The great majority were of Hindu origin, but all were made Mahomedans when received into the body of chelās. These chelās were the only troops on which a man could place entire reliance as being ready to follow his fortunes in both foul and fair weather. Muḥammad Khān Bangash's system of chelās is described by me in J.A.S. Bengal, part i, 1878, p. 340.

CHAPTER II.

RULES CONNECTED WITH PAY AND ALLOWANCES.

In the preceding paragraphs have been shown in general terms the rates of pay for the cavalry, and some of the rules by which pay was governed. When we come to the actual working out in detail of this part of the army administration, our difficulties increase. The official manuals, which are our only guide, are couched in the briefest of language, and naturally presume a knowledge of many things of which we are ignorant Nor can we be certain whether the rules that they lay down were of general application or were applicable to certain classes of troops only. Thus the data are insufficient for any complete exposition of this part of the general subject. The matters treated of in the next following paragraphs are, moreover, of a somewhat miscellaneous description, and many of them might be better classed under other heads, such as Discipline, Recruiting, and so forth; but as there is not enough material to yield complete information, I have thought it better to deal with the greater part of them, as the native authors do, in their relation to the calculation of pay.

Rates of Pay. — The rates of pay for officers and men of the cavalry, forming numerically far the most important part of the army, have been already stated when dealing with the *manṣab* system. The rates for Infantry and Artillery, so far as recorded, will be stated when we come to those branches of the service.

Date from which Pay Drawn. — On an officer being first appointed, if by his rank he was exempt from having his

horses branded (*dāgh*), his pay began from the date of confirmation (*ʿarẓ-i-mukarrar*). If such branding were necessary, pay began from the date of branding (the day itself being excluded), and as soon as this condition had been complied with, a disbursement was made of one month's pay on account. In the case of promotion, if it were unconditional, the rules were the same as above; if conditional, the pay began from the date of entering on office (*Dastūr-ul-ʿAml*, B.M. 1641, fol. 37*a*, 58*a*; *id.* 6599, fol. 146*b*, *Dastūr-ul-Inshā*, 233).

Conditional (*Mashrūt*) *and Unconditional* (*Bilā-shart*) *Pay.* — Rank and pay might be given absolutely, or they might be conditional on the holding of some particular office. The temporary or *mashrūt ba khidmat* rank was given as an addition to the permanent, *bilā-shart* rank which a man already occupied. On ceasing to hold the office, such as that of governor (*ṣūbahdār*) or military magistrate (*faujdār*), the *mashrūt* rank and pay were taken away.

Pay always in Arrears. — In later times pay due from the imperial treasury to the *manṣabdārs*, as well as that due from the *manṣabdārs* to the private soldiers, was always in arrears. In fact, we should not go far wrong, I think, if we asserted that this was the case in the very best times. The reasons are obvious. More men were entertained than could be easily paid; Indian Mahomedans are very bad financiers; the habit of the East is to stave off payment by any expedient. To owe money to somebody seems in that country the normal condition of mankind. For example, even such a careful manager as Nizām-ul-Mulk, in his alleged testament, dated the 4th Jamādī II, 1161 H. (31st May, 1748), is credited with the boast that he "never withheld pay for *more than three months*" ("Asiatick Miscellany," Calcutta, 1788, vol. iii, 160). Another reason for keeping the men in arrears may have been the feeling that they were thereby prevented from transferring their services to some other chief quite as readily as they might

have done if there were nothing owing. Disturbances raised by troops clamouring for their pay were among the unfailing sequels to the disgrace or sudden death of a commander. The instances are too numerous to specify. On this head Hajı Mustapha, *Seir*, iii, 35, note 29, says truly enough: — "The troops are wretchedly paid, twenty or thirty months of arrears being no rarity. The ministers, princes, and grandees always keep twice or thrice as many men as they have occasion for, and fancy that by withholding the pay they concern the men in the preservation of their lord's life." We can also quote Lord Clive as to the state of things in the Bengal ṣūbah in 1757 ("Minutes of Select Committee of 1772," reprint, 52) — "There were great arrears due to the army by Sirāj-ud-Daulah as well as by Mīr Jaʿfar, and the sums amounted to three or four millions sterling. It is the custom of the country never to pay the army a fourth part of what they promise them; and it is only in times of distress that the army can get paid at all, and that is the reason why their troops always behave so" (badly?).

Pay in Naqd and in Jāgīr. — Pay (*tankhwāh*: literally, *tan* 'body,' *khwāh* 'need') might be either *Naqd*, that is, given in cash (*naqd*); or *Jāgīr* (literally, *jā* 'place,' *gīr*, taking, from *giriftan*), that is an assignment (*jāgīr*) of the land revenue of a certain number of villages (*mauẓaʿ*) or of a subdivision (*parganah*). A certain number of officers and soldiers, chiefly those of the infantry and artillery, who were, as a rule, on the pay list of the emperor himself, were paid in cash. This seems to have been the case in all reigns up to quite the end. But the favourite mode of payment was by an assignment of the government revenue from land. Such an arrangement seems to have suited both parties. The State was a very centralized organization, fairly strong at the centre, but weak at the extremities. It was glad to be relieved of the duty of collecting and bringing in the revenue from distant places.

This task was left to the *jāgīrdār*, or holder of the *jāgīr*, and unless such a *manṣabdār* were a great noble or high in imperial favour, the assignment was made on the most distant and most imperfectly subdued provinces. [1] On the other hand, a chance of dealing with land and handling the income from it, has had enormous attractions in all parts of the world, and in none more than in India. Nobles and officers by obtaining an assignment of revenue hoped to make certain of some income, instead of depending helplessly for payment on the good pleasure of the Court. Then in negotiating for a *jāgīr* there were all sorts of possibilities. A judicious bribe might secure to a man a larger *jāgīr* than was his due, and if he were lucky, he might make it yield more than its nominal return. Many such considerations must have been present to their minds. Whatever be the true reasons, of this there can be no doubt, that the system was highly popular, and that the struggle for *jāgīrs* was intensely keen. As ʿAbd-ul-Jalīl of Bilgrām writes to his son: "Service has its foundation on a *jāgīr*; an employé without a *jāgīr*, might just as well be out of employ." ("Oriental Miscellany", Calcutta, 1798). A recent French writer, M. Emile Barbé, "Le Nabab René Madec," 117, speaking of a *jāgīr* given in 1775, says: "Cette apparition des jaguirs dans l'Empire Mogol à son declin est un fait sociologique du plus haut interêt." The system of *jāgīr* grants may be an interesting sociological fact — as to that I have nothing to say for or against; but it was not introduced into the Mogol Empire during its decline. *Jāgīrs* existed in that empire's most flourishing days, having been granted as early as Akbar (Blochmann, *Āīn*, i, 261), while under Shāhjahān they existed on a most extensive scale.

If the *jāgīr* were a large one, the officer managed it

[1] This may have been a development of Taimūr's practice of granting the pay of his amīrs from his frontier provinces. — Davy and White, "Institutes," 237.

through his own agents, who exercised on his behalf most of the functions of government. Such *jāgīrs* were practically outside the control of the local governor or *faujdār*, and formed a sort of *imperium in imperio*. The disastrous effects of the system, in this aspect, need not be further dwelt on here. On the other hand, a small *jāgīr* was more frequently left by the assignee in the hands of the *faujdār*, through whom the revenue demand was realized. Gradually, as the bonds of authority were relaxed from the centre, the *faujdārs* and *ṣūbahdārs* ignored more and more the claims of these assignees, and finally ceased to remit or make over to them any of the collections.

I append here the first steps of official procedure followed in the grant of a *jāgīr*. We are to suppose that one Khwājah Raḥmatullah has been recalled from duty in some province, and that on appearing at court he has applied for a new *jāgīr*. Through the *Diwān-i-tan*, a great officer at the head of one of the two revenue departments, a *ḥaqīqat*, or Statement of Facts, was drawn up, in the following form (B.M. N°. 6599, foll. 156*a* to 157*b*): —

Statement (*Ḥaqīqat*).

Khwājah Raḥmatullah, son of Khwājah Ahmad, a native of Balkh, who was attached to the standards in Province So-and-so, having come to the Presence in pursuance of the exalted orders, and the *jāgīr* which, up to such-and-such a harvest, was held by him in the said Province, having been granted to So-and-so, in this matter what is the order as to the *tankhwāh jāgīr* of the above-named.

[on the margin] { Presentation (*mulāzamat*)
Day so-and-so, month so-and-so
Offering (*nazar*)
9 Muhrs (gold coins) and
18 Rupees.

This *ḥaqīqat* was passed on by the *Diwān-i-tan* to the

Diwān-i-ʿālā (or wazīr). The latter placed it before the Emperor. If an order were given for a *jāgīr* to be granted, the wazīr endorsed on the paper, "The pure and noble order issued to grant a *jāgīr* in *tankhwāh* from the commencement of such-and-such a harvest." This paper then became the voucher for the chief clerk to the *Diwān-i-tan*, who wrote out a *siyāha daul*, or Rough Estimate, as follows:

Rough Estimate.

Khwājah Raḥmatullah, son of Khwājah Aḥmad, of Balkh. Whereas he was on duty in Province So-and-so, and according to order has reached the Blessed Stirrup (*i. e.* the Court) —

One thousand, Personal (*zāt*)
200 men, Horse (*suwār*)
Pay in dāms

34 lakhs

Personal	Troopers (*tābīnān*)
18 lakhs	16 lakhs

= Total, 34 lakhs.

Feed of Four-footed animals (*Khūrāk-i-dawābb*) remitted.

Parganah So-and-so, situated in Province So-and-so,	Parganah So-and-so, situated in Province So-and-so,
20 lakhs of Dāms.	14 lakhs of Dāms.

It will be seen, on referring to a previous page, that as the man was 1000 *zāt*, but had only 200 *suwār* rank, he was a third class *Hazārī*. By the table this gives him 18 lakhs, and then 200 horsemen at 8000 dāms each comes to 16 lakhs, making the 34 lakhs which are sanctioned in the above.

The *daul*, or estimate, was made over to the diary-writer (*wāqiᶜah navīs*), who, after he had entered it in the *wāqiᶜah* (diary), prepared an extract called a memorandum (*yād-dāsht*) for submission to the office of the confirmation of orders (*ᶜarẓ-i-mukarrar*, lit. second petition). The *yād-dāsht* repeated the facts much in the same form as the *ḥaqīqat* and the *daul*. On it the wazīr wrote: "Let this be compared with the diary (*wāqiᶜah*) and then sent on to the confirmation office (*ᶜarẓ-i-mukarrar*)." On the margin the diary-writer (*wāqiᶜah navīs*) then reported: "This *yād-dāsht* accords with the *wāqiᶜah*." Next the superintendent (*dāroghah*) of the confirmation office wrote: "On such-and-such a date of such-and-such a month of such-and-such a year this reached the confirmation office. The order given was — 'Approved.'" We need not follow here the further fate of the order after it left the Court and reached the governor of the province referred to.

Loans, Advances, and Gifts. — The technical name for a loan or advance of pay was *musāᶜadat* (Steingass, 1225, A, helping, favour, assistance, aid), and the conditions as to interest and repayment are given in Book ii, *Āīn* 15, of the *Āīn-i-Akbarī* (Blochmann, i, 265). Historians frequently mention the advance of money under this name. In later times, especially from the reign of Muḥammad Shāh, no commander ever took the field without the grant of the most liberal cash advances to meet his expenses. Possibly these were never repaid, or were from the first intended as free gifts. When we meet with the phrase *tankhwāh-i-ināᶜm*, I presume that there can be no doubt of the payment being a gift. Here the word *tankhwāh* seems to denote the order or cheque on the treasury, and the word *ināᶜm* (gift, present), differentiates it from other *tankhwāh*, which were in the nature of payments to be repeated periodically. The recovery of loans and advances came under a head in the accounts called *mutālibah* (Steingass, 1259, asking, claim, due). Another

term of somewhat similar import, *bāz-yāft* (Steingass, 146, the resumption of anything, a deduction, stoppage), seems to have been confined to the recovery of items put under objection in the revenue accounts by the *mustaufīs*, or auditors. At one time the recovery of an advance was made from a man's pay in four instalments; but towards the end of ʿĀlamgīr's reign, it was taken in eight instalments (B.M. Nº. 1641, fol. 58*b*).

Deductions. — Of these I have found the following: *kasūr-i-do-dāmī* (fraction of the two dāms), *kharch-i-sikkah* (expenses of minting), *ayyām-i-hilālī* (days of the moon's rise), *ḥiṣṣah-i-ijnās* (share in kind), *khūrāk-i-dawābb* (feed of four-footed animals).

Kasūr-i-do-dāmī. — *Kasūr* is, literally, fractions, deficiencies, faults. This item was a discount of five per cent., that is, of two dāms in every forty, and therefore styled "do-dāmī" (B.M. 1641, fol. 37*a*). The origin of this is to be found possibly in Akbar's five per cent. deductions from the Aḥadī troopers on account of horses and other expenses (*Āīn*, i, 250, line 14). The rate of deduction is differently stated in fol. 58*b*, B.M. 1641, as four dāms in the 100, if the officer drew seven or eight months' pay, and two dāms in the 100, if he drew less than that number of months.

Kharch-i-sikkah was also deducted: in ʿĀlamgīr's reign the rates were Rs. 1 12a. 0p. per cent. on Shāhjahān's coinage, and Rs. 1 8a. 0p. per cent. on the coin of the reigning emperor. Under the rules then in force, the Shāhjahānī coins, not being those of the reigning emperor, were uncurrent, and therefore subject to a discount. Why a deduction was made on the coins of the reigning emperor, is harder to explain. It was not till Farrukhsīyar's reign, I believe, that the coinage was called in annually, from which time only coins of the current year were accepted, even by the government itself, at full face-value.

Ayyām-i-ḥilālī. — This was a deduction of one day's pay in every month except Ramaẓān. *Manṣabdārs*, *Aḥadīs*, and

barqandāz (matchlockmen) were all subject to it. But, towards the end of ʿĀlamgīr's reign, it was remitted until the Narbada was crossed, that is, I presume, so long as a man served in the Dakhin (B.M. 1641, fol. 55*b*, 62*b*). The reason for making this deduction is difficult to fathom; and about the name itself there is some doubt. In the first of the two entries just quoted, I read the word as *talāfī* (Steingass, 321, obtaining, making amends, compensation, reparation); but this variant, instead of throwing light on the subject, leaves it as obscure as before.

Ḥiṣṣah-i-ijnās. — *Jins* (goods) is used in opposition to *naqd* (cash), and this item (*ḥiṣṣah* = share, *ijnās* = goods) seems to mean the part of a man's pay delivered to him in kind. Apparently this item did not apply to the cavalry. In the case of the matchlockmen, artillerymen, and artificers, the deduction was $\frac{1}{24}$ if the man were mounted, and $\frac{1}{12}$ if he were not. This represented the value of the rations supplied to him. There is another entry of *rasad-i-jins* (supplies of food?), the exact nature of which I cannot determine (B.M. 1641, fol. 62*b*).

Khūrāk-i-dawābb. — This is, literally, *khūrāk*, feed, *dawābb*, four-footed animals. It was a deduction from a *manṣabdār's* pay on account of a certain number of horses and elephants belonging to the emperor, with whose maintenance such officer was saddled. The germ of this exaction can, I think, be found in Akbar's system of making over elephants to the charge of grandees (*Āīn*, i, 126). "He (Akbar) therefore put several *halkahs* (groups of baggage elephants) in charge of every grandee, and required them to look after them." Akbar would seem to have paid the expenses; but in process of time, we can suppose, the charge was transferred to the officer's shoulders entirely, and in the end he had to submit to the deduction without even the use of the animals being given to him. At any rate, the burden became a subject of great complaint. This is shown by a passage in Khāfī Khān, ii, 602.

"In the reign of ʿĀlamgīr the *manṣabdārs* for a long period were reduced to wanting their evening meal, owing to the lowness of the assignments (*pāebāqī*) granted by the emperor. His stinginess reminds one of the proverb 'one pomegranate for a hundred sick men,' *yak anār, sau bīmār.* After many efforts and exertions, some small assignment (*jāgīr*) on the land revenue would be obtained. The lands were probably uncultivated, and the total income of the *jāgīr* might not amount to a half or even a third of the money required for the expenses of the animals. If these were realized from the officer, whence could come the money to preserve his children and family from death by starvation? In spite of this, the Akhtah Begī (Master of the Horse) and other accursed clerks caused the cost of feeding the emperor's animals to be imposed on the *manṣabdārs*, and, imprisoning their agents at court, used force and oppression of all kinds to obtain the money.

"When the agents (*wakīls*) complained of this oppression to the emperor, the head of the elephant stables and the Akhtah Begī so impressed matters on the emperor's mind, that the complaints were not listened to, and all the men were reduced to such an extremity by this oppression, that the agents resigned their agency. In Bahādur Shāh's reign, the *Khān-i-Khānān* decided that when the *manṣabdārs* received a *jāgīr* for their support, the number of *dāms* required for the cost of feeding cattle should be deducted first from the total estimated income, and the balance should be assigned as the income. In this way, the obligation for meeting the cost of feeding the animals was entirely removed from the heads of the *manṣabdārs* and their agents. Indeed, to speak the truth, it was an order to absolve them from the cost of the cattle provender." Dowson (Elliot, vii, 403) could make nothing of this passage.

In the case of officers below a certain rank, the deduction of *khūrāk-i-dawābb* was not made. The rule says that where the pay (*tankhwāh*) did not come up to 15 lakhs

of *dāms*, the deduction was not made; but apparently no lower rank than that of 400 *zāt*, 200 *suwār*, was liable. This rank would by the tables draw a pay of 20 lakhs of *dāms*. As to the rate of deduction, the records are so obscure that I am unable to come to any conclusions. Sometimes we are told that the calculation was made at so many *dāms* on each 100,000 *dāms* of pay; at others, that for each 100,000 *dāms* one riding and five baggage elephants were charged for. A distinction in rates was made between Mahomedans and Hindus, the former paying more; also between officers holding *jāgīrs* in Hindūstān and those holding them in the Dakhin and Aḥmadābād, the former paying slightly less than the latter.

Fines. — We come now to the subject of fines, which were of various sorts, such as *tafāwat-i-asp* (deficiency in horses), *tafāwat-i-silāḥ* (deficiency in equipment), *tafāwat-i-tābīnān* (deficiency in troopers), also called, it would seem, *kamī-i-barādari*, *tawaqquf o ʿadam-i-taṣhīḥah* (non-verification), *saqatī* (casualties), *bartarafī* (rejections).

Tafāwat-i-asp. — This is literally "difference of horses," and refers to a classification of horses by their breed and size, which will be referred to more fully under the head of Branding and Verification. In each rank or *manṣab* a certain number of each class of horse had to be maintained, and if at Verification it was found that this regulation had not been complied with, the result was a fine. In the section on Branding I give the rates so far as recorded.

Tafāwat-i-silāḥ. — This "difference in armour" was a fine for not producing at inspection arms and armour according to the required scale. The amount of fine and so forth I have stated further on under the head of Equipment.

Tafāwat-i-tābīnān (difference of followers) or *kamī-i-barādarī* (deficiency in relations) was a fine imposed on an officer for non-production of the number of men stipulated for by the *suwār* rank. The following rates are stated in BM. 1641, fol. 37*a*, and I presume that the deductions

apply to *manṣabdārs* as well as to *Aḥadīs*, and that they were made from the monthly pay for each man deficient, although the entry is so brief as to remain very obscure: —

	Nunber of Months for which Pay was Drawn.				
	Four Months	Five Months	Six Months.	Seven Months.	Eight Months
Amount of fine in Rupees	R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.
	2 8 0	3 0 0	4 0 0	7 0 0	8 0 0

In another passage, fol. 41, the same authority explains the matter thus. In the twenty-first year of ʿĀlamgīr, a report on this subject having been made, the emperor allowed a term of four turns of guard (*chaukī*) for a *manṣabdār* to produce men of his own class or family (*barādarī*), and for this period pay for the men was passed as if they had been present. But subsequently, on the first Rabīʿ of the twenty-third year, the delay was extended to two months, and for the time during which such men were not actually present, pay at half-rates was sanctioned.

Aḥshām. — In the case of the *Aḥshām*, or troops belonging to the infantry and artillery, we have a little more definite information under this head (B.M. 1641, fol. 64*a*). Officers of this class fell into three subdivisions, *hazārī* (of a thousand), *ṣadīwāl* (hundred-man), and *mirdahah* (lord of ten). The first class was always mounted (*suwār*) and the second sometimes; these mounted officers might be two-horse (*dūaspah*) or only one-horse *yakaspah*) men. Working on these distinctions, we get the following scheme of pay. *Dūaspah Suwār*: Where, inclusive of the officer's own retainers (*khāṣah*), there were one hundred men present per 100 of rank, pay was drawn at *dūaspah* rates. But if the number were under fifty per 100 of rank, pay was passed to the *hazārī* as if he were a mounted *ṣadīwāl*; subject to restoration to *dūaspah* pay when his muster

again conformed to the standard. *Yakaspah*: If, including *khāṣah* men, there were fifty men present per 100 of rank, full pay was given; if only thirty-one or under, then the *hazārī* was paid as a *ṣadīwāl piyādah* (unmounted), and certain other deductions were made. *Piyādah* (unmounted officer). — If a *ṣadīwāl* produced under thirty-one men out of his hundred, he received nothing but his rations. When the numbers rose above thirty, he was paid as a *mirdahah* till his full quota was mustered. In the case of a *mirdahah*, the production of two men entitled him to his pay. If one man only was paraded for inspection, a deduction from the pay was made, varying, on conditions which I have not mastered, from one to three annas per man.

Tawaqquf-i-taṣḥīhah (Delay in Verification). — The rules for Branding and Verification will be found further on. If the periods fixed were allowed to elapse without the verification having been made, a man was reported for delay; and then a *manṣabdār* was cut the whole, and an *aḥadī* the half, of his pay (B.M. 1641, fol. 58*b*).

Saqatī and *Bartarafī*. — The first word is from *saqat shudan* 'to die' (applied to animals, Steingass, 687), and may be translated casualties. The other word means setting aside or rejecting, in other words to cast a horse as unfit. We find the groundwork of the *saqatī* system in the *Āīn-i-Akbarī*. Blochmann, i, 250. In later times there were the following rules for regulating pay in such cases. First it was seen whether the man was *dūaspah* (paid for two horses) or *yakaspah* (paid for one horse). In the first case, (1) if one horse died (*saqat shavvad*) or was cast (*bar taraf shud*), the man was paid at the *yakaspah* rate; (2) if both horses died or were turned out, the man obtained his personal pay for one month, and if after one month he had still no horse, his personal pay was also stopped. In the second case, that of a *yakaspah*, if there were no horse, personal pay was disbursed for one month; but after one month nothing was given (B.M. 1641), fol. 41*a*).

If an *ahadī's* horse died while he was at headquarters, the clerk of the casualties, after having inspected the hide, wrote out his certificate (*saqat-nāmah*), and pay was disbursed according to it. If the man were on detached duty when his horse died, the brand (*dāgh*), and the tail were sent in to headquarters (B.M. 1641, fol. 29*b*).

Other incidents of military service considered as affecting pay. — Among these may be mentioned: (1) *Ghair-ḥāẓirī* (absence without leave); (2) *Bīmārī* (illness); (3) *Rukhṣat* (leave and furlough); (4) *Farārī* (desertion); (5) *Bartarafī* (discharge or resignation); (6) Pension; (7) *Fautī* (death).

(1) *Ghair-ḥāẓirī.* — If a man were absent from three consecutive turns of guard (*chaukī*), his pay was cut; but if he did not attend the fourth time, the penalty was dismissal, and all pay due was confiscated. Absence from night guard or at roll-call (*jaīzah*) involved the loss of a day's pay. If absent at the time of the emperor's public or private audience, or on a day of festival (*'īd*), half a day's pay was taken (B.M. 1641, fol. 39*a*, 62*b*).

(2) *Bīmārī.* — Absence on the ground of illness was overlooked for three turns of guard (*chaukī*), but after that period all pay was stopped, and a medical certificate (*bīmārī-nāmah*) from a physician was demanded (B.M. 1641, fol. 39*a*, 58*a*). The rule is somewhat differently stated in B.M. 6599, fol. 163*b*.

(3) *Rukhṣat.* — Men who went on leave for their own business received no pay while doing no duty (B.M. 1641, fol. 41*b*). In another place in the same work, fol. 64*b*, we find a different statement. We are there told that for one month a man received half-pay; if he overstayed his leave it was reduced to one-fifth or one-tenth; and after three month's absence he was classed as an absconder. Leave on account of family rejoicings or mournings was allowed for one turn of duty; if the man were absent longer his pay was cut (B.M. 1641, fol. 39*a*). Again, on fol. 57*b*, a rule is stated, of which I am not able to understand the bearing. It

seems to be that not more than two months of arrears were to be paid to a man who took leave; but whether that means the arrears due to him when he left, or the pay accruing during his absence, I cannot say.

(4) *Farārī.* — If, among the *Ahshām*, an absconder who had been some time in the service, left after drawing his pay in full, the amount was shown on the margin (*hasho*) of the pay-bill (*qabẓ*) as recoverable, and one month's pay was realized from the man's surety. If a recruit absconded after drawing money on account, the whole advance was recovered, but a present of one month's pay was allowed. If a matchlockman deserted the service of one leader to enter that of another, he was cut half a month's pay (*nīm-māhah*). But, if it were found that the *mirdahah* or *ṣadīwāl*, to whom he had gone, had induced him to desert, such officer had to pay the fine himself (B.M. 1641, fol. 64*b*). Pay of absconders was reckoned up to the date of the last verification, and three month's time was allowed (*idem*, fol. 57*b*). By the last phrase I understand that they were allowed that time to reappear, if they chose. If they were again entertained, their rations only were passed, that is, I presume, for the interval of absence (*idem*, fol. 64*b*).

(5) *Bartarafī.* — If the discharged *manṣabdār* produced a clear verification roll, he received half of the pay of his *zāt* rank, and the full pay of his horsemen (*tābīnān*). Matchlockmen received their pay in full up to the date of discharge (B.M. 1641, fols. 57*b*, 62*a*).

(6) *Pension.* — So far as I have ascertained, there was no pension list, under that express name. No retiring allowances could be claimed as of right. When a man retired from active service, we hear sometimes of his being granted a daily or yearly allowance. Such was the case, for instance, when Nizām-ul-Mulk in Bahādur Shāh's reign threw up the whole of his offices and titles, and retired into private life. But the ordinary method of providing for an old servant was to leave him till

his death in undisturbed possession of his rank and jāgīr.

(7) *Fautī.* — It seems that in the case of deaths a different rule prevailed, according to whether the death was a natural one or the man lost his life on active service. In the one case half-pay and in the other full-pay was disbursed to the heirs on the production of a certificate of heirship (*wāris-nāmah*) attested by the *qāẓī*.

CHAPTER III.

REWARDS AND DISTINCTIONS.

The promise of honorary distinctions has been in all ages and in all countries one of the most potent agencies employed to incite men to exertion. We have our medals, crosses, orders, and peerages. The Moghul sovereigns were even more ingenious in converting things mostly worthless in themselves into objects to be ardently striven for and dearly prized. Among these were: (1) Titles; (2) Robes of Honour; (3) Gifts of Money and other articles; (4) Kettle-drums; (5) Standards and Ensigns.

1. *Titles.* — The system of entitlature was most elaborate and based on strict rule. This subject belongs, however, to the general scheme of government, and need not be set forth at length here. Suffice it to say, that a man would begin by becoming a *Khān* or Lord (added to his own name). After that, he might receive some name supposed to be appropriate to his qualities, coupled with the word *Khān*, such as Ikhlāṣ Khān, Lord Sincerity; an artillery officer might be dubbed Raʿd-andāz Khān, Lord Thunder-thrower, or a skilful horseman, Yakah-Tāz Khān, Lord Single Combat, and so on. Round such a title as a nucleus, accreted all the remaining titles with which a man might from time to time be invested. As the empire declined in strength, so did the titles increase in pomposity, and long before the end of the dynasty the discrepancy between a man's real qualities and his titles was so great as often to be ridiculous. Still, these titles were never given

quite at random, nor were they self-adopted. Yet I read quite recently in a history of India, by a well-known and esteemed author, that one governor of Bengal was "a Brahman convert *calling himself* Murshid Kuli Khan." Now Murshid Qulī Khān no more called *himself* by that name than has Earl Roberts of Candahar called himself by the title he bears. Both titles were derived from the accepted fountain of honour, the sovereigns of the states which those bearing them respectively served.

(2) *Robes of Honour.* — The *khila'at* was not peculiar to the military department. These robes of honour were given to everyone presented at court. Distinction was, however, made according to the position of the receiver. There were five degrees of *khila'at*, those of three, five, six, or seven pieces; or they might as a special mark of favour consist of clothes that the emperor had actually worn (*malbūs-i-khāṣ*). A three-piece *khila'at*, given from the general wardrobe (*khila'at-khānah*), consisted of a turban (*dastār*), a long coat with very full skirts (*jāmah*), and a scarf for the waist (*kamrband*). A five-piece robe came from the *toshah-khānah* (storehouse for presents), the extra pieces being a turban ornament called a *sarpech* and a band for tying across the turban (*bālāband*). For the next grade a tight-fitting jacket with short sleeves, called a Half-sleeve (*nīmah-astīn*), was added. A European writer, Tavernier (Ball, i, 163), thus details the seven-piece *khila'at*: (1) a cap, (2) a long gown (*ka'bah*), (3) a close-fitting coat (*arkalon*), which I take to be *alkhālıq*, a tight coat, (4) two pairs of trousers, (5) two shirts, (6) two girdles, (7) a scarf for the head or neck.

(3) *Gifts, other than money.* — These were naturally of considerable variety. I have drawn up the following list from Dānishmand Khān's history of the first two years of Bahādur Shāh's reign (1708—1710): Jewelled ornaments, weapons, principally swords and daggers with jewelled hilts, pālkīs with fringes of gold lace and pearls, horses

with gold-mounted and jewelled trappings, and elephants. The order in which the above are given indicates roughly both the frequency with which these presents were granted and the relative value set upon them, beginning with those most frequently given and the least esteemed.

(4) *Kettledrums.* — As one of the attributes of sovereignty, kettledrums were beaten at the head of the army when the emperor was on the march; and in quarters they were beaten every three hours at the gate of his camp. The instruments in use, in addition to the drums, will be found in the *Āīn-i-Akbarī* (Blochmann, i, 51). As a mark of favour, kettledrums (*naqqārah*)[1] and the right to play them (*naubat*) might be granted to a subject. But he must be a man of the rank of 2000 *suwār* or upwards. As an invariable condition, moreover, it was stipulated that they should never be used where the emperor was present, nor within a certain distance from his residence. Marching through the middle of Dihli with drums beating was one of the signs by which Sayyad Ḥusain ʿAlī Khān, Amīr-ul-Umarā, notified defiance of constituted authority, when he returned from the Dakhin in 1719, preparatory to dethroning the Emperor Farrukhsīyar. The drums when granted were placed on the recipient's back, and, thus accoutred, he did homage for them in the public audience hall. In Lord Lake's case the investment was thus carried out: "Two small drums of silver, each about the size of a thirty-two pound shot, the apertures covered with parchments, are hung round the neck of the person on whom the honour is conferred, then struck a few times, after which drums of the proper size are made." — Thorn, "War," 356. There is on record another instance of miniature drums being used in this way, as a symbol. When conferring on him the right to the *naubat*, Aḥmad Shāh (1748—1754) gave such drums to Dāīm Khān, a favorite

[1] Khūshḥāl Chand, Berlin ms. 495, fol. 1126*b* uses the word *kūrkah*, (Steingass, 1060, T, "a big drum").

chelā of Aḥmad Khān, Bangash, of Farrukhābād. ("Bangash Nawābs," Journal A. S. B., 1879, p. 161.)

(5) *Flags and Ensigns.* — The flags and ensigns displayed, along with a supply of spare weapons, at the door of the audience hall and at the entrance to the emperor's encampment, or carried before him on elephants, were called collectively the *Qūr* (Pavet de Courteille, "Dict.," 425, ceinture, arme, garde), and their charge was committed to a responsible officer called the *Qūr-begī*. An alternative general name sometimes employed was *māhī-o-marātib* (Fish and Dignities), or more rarely, the *panjah* (literally, Open Hand). It is, no doubt, the *Qūr* which Gemelli Careri describes thus (French ed. iii, 182): "Outside the audience tent I saw nine men in red velvet coats embroidered with gold, with wide sleeves and pointed collars hanging down behind, who carried the imperial ensigns displayed at the end of pikes. The man in the middle carried a sun, the two on each side of him had each a gilt hand, the next two carried horse-tails dyed red. The remaining four, having covers on their pikes, it could not be seen what it was they held."

In the *Āīn*, i, 50, we are told of eight ensigns of royalty, of which the first four were reserved exclusively for the sovereign. The use of the others might, we must assume, be granted to subjects. The eight ensigns are — (1) *Aurang*, the throne; (2) *Chatr*, the State umbrella; (3) *Sāibān* or *Āftābgīr*, a sunshade; (4) *Kaukabah* (plate ix, N°. 2); (5) *ʿAlam*, or flag; (6) *Chatr-tok*, or yak-tails; (7) *Tūman-tok*, another shape of yak-tails; (8) *Jhanda*, or Indian flag. To these we must add (9) *Māhī-o-marātib*, or the fish and dignities.

The origin and meaning of the different ensigns displayed by the Moghul Emperors in India have been thus described, *Mirāt-ul-Iṣtilāḥ*, fol. 5: —

(1) *Panjah*, an open hand, is said to mean the hand of ʿAlī. Taimūr ordered it to be carried before him for

a charm and as a sacred relic. It was said that he captured it when he overcame the Siyāhposh tribe. In 1753 Gentil saw four different "pondjehs" (*ie. panjahs*) carried on horseback in Ṣalābat Jang's cavalcade; they were copper hands fixed on the end of a staff ("Mémoires," 61).

(2) *ʿAlam*, a flag or standard. — This was supposed to be the flag of Ḥusain, and obtained by Taimūr at Karbalah. To it he attributed his victory over Bāyāzīd, the Kaisar of Rūm.

(3) *Mīzān*, a balance, was a reference to the equal scales of Justice, and was adopted as having been the emblem of Nūshīrwān the Just. There is a figure on a plate in Gentil's "Mémoires," which is probably the *Mīzān*.

(4) *Áftāb*, or Sun, was obtained from the fire-worshippers when they were conquered; it was an article used in their worship.

(5, 6) *Azhdaha-paikar*, Dragon-face. — From the time of Sikandar of the Two Horns, the rajahs of Hind had worshipped this emblem in their temples, and when Taimūr made his irruption into India it was presented to him as an offering. It consisted of two pieces, one carried in front and the other behind the emperor.

(7) *Māhī*, or Fish, was said to have been an offering from the islands of the ocean, where it was worshipped.

(8) *Qumqumah* (Steingass, 989, a bowl, a jug, a round shade, a lantern). — This also was obtained from the Indian rajahs. The *Áīn-i-Akbarī*, i, 50, has *kaukabah* for apparently the same thing (see figure N°. 2 on plate ix). There is also what looks like the *kaukabah* in a plate in Gentil's "Mémoires." The definition of *kaukabah* in Steingass, 1063, corresponds with the figure in the *Áīn*, viz. "a polished steel ball suspended from a long pole and carried as an ensign before the king." Careri, iii, 182, tells us that he saw a golden ball hanging by a chain between two gilt hands, and adds that "it was a royal ensign carried on an elephant when the army was on the march."

All these emblems, we are told, were carried before the emperor as a sign of conquest over the Seven Climes, or, in other words, over the whole world.

Māhī-o-marātib — Some words must be added with special reference to this dignity, which was borne on elephants or camels in a man's retinue. It was one of the very highest honours, as it was not granted to nobles below the rank of 6000 *zāt*, 6000 *suwār* (*Mirāt-ul-Iṣṭilāḥ*, fol. 3). *Māhī* (literally, a fish), was made in the figure of a fish, four feet in length, of copper gilt, and it was placed horizontally on the point of a spear (*Seir*, i, 218, note 150, and 743, note 51). Steingass, 1,147, defines *māhī-marātib* as "certain honours denoted by the figure of a fish with other insignia (two balls)" But in careful writers I have always found it as *māhī-o-marātib*, "fish and dignities," and, as I take it, the first word refers to the fish emblem and the second to the balls or other adjuncts which went with it. The *marātib* Thorn, "War," 356, describes as a ball of copper gilt encircled by a *jhālar* or fringe about two feet in length, placed on a long pole, and, like the *māhī*, carried on an elephant. Can this be Gemelli Careri's "golden ball"? Perhaps it was identical with the *qumqumah* or *kaukabah* already described above. The translator of the *Seir-Mutaqherin*, i, 218, note 150, tells us that the fish was always accompanied by the figure of a man's head in copper gilt. This must have been in addition to the gilt balls. The *māhī*, as conferred on Lord Lake on the 14th August, 1804 (Thorn, "War," 356), is described as "representing a fish with a head of gilt copper and the body and tail formed of silk, fixed to a long staff and carried on an elephant." James Skinner, who recovered Mahādajī-Sendhia's *māhī-o-marātib* in a fight with the Rajputs, speaks of it as "a brass fish with two chourees (horse-hair tails) hanging to it like moustachios" (Fraser, "Memoir," i, 152). Gentil, "Mémoires," 62, calls the *māhī* simply "the head of a fish on the end of a pole." As a sign of the rarity of this dignity, he

adds that while in the Dakhin (1752—1761) he only saw four of them.

Sher-marātib, or lion dignity. — This is a name only found, so far as I know, in Gentil, "Mémoires," 62; and he only saw it displayed by Ṣalābat Jang, nāzim of the Dakhin. At the head of the dedication of the above work to the memory of Shujāᶜ-ud-Daulah, are the figures of two elephants; one of which bears a standard that is most likely identical with this *Sher-marātib*. The flag bears a lion embroidered on it, and the head of the staff is adorned with the figure of a lion.

ᶜ*Alam*. — The flags seem to have been triangular in shape, either scarlet or green in colour, having a figure embroidered in gold and a gold fringe. The staff was surmounted by a figure corresponding to the one embroidered on the flag. A plate in Gentil's "Mémoires" shows four of these embroidered emblems — 1st, a *panjah*, or open hand; 2nd, a man's face with rays; 3rd, a lion (*sher*); and 4th, a fish. A flag, or ᶜ*alam*, could be granted to no man under the rank of 1000 *suwār*.

Āftābgīrī. — This sun screen (*āftāb*, sun; *gīr*, root of *girıftan*, to take), shaped like an open palm-leaf fan, was also called *Sūraj-mukhī* (Hindī, literally, sun-face). By the Moghul rules it could only be granted to royal princes (*Mırāt-ul-Iṣtılāh*, fol. 3). In the eighteenth century, however, the Mahrattas adopted it as one of their commonest ensigns, and even the smallest group of their cavalry was in the habıt of carrying one.

Tūman-togh. — This is one of the two *togh* mentioned in Akbar's list, *Āīn* i, 50, and figured on plate ix of that volume. Pavet de Courteille, "Dict," 236, has توغ (*togh*), "étendard se composant d'une queue de قطاس (*qatās*) ou bœuf de montagne (*i. e.* yak) fixée à une hampe, au dessus d'un pavillon triangulaire." This yak's-tail standard was not unfrequently granted to officers of rank, by whom it was esteemed a high honour. The *togh* consisted generally

of three tails attached to a cross-bar, which was fixed at the end of a long pole or staff.

Summary. — Thus, apart from titles or money rewards, or ordinary gifts, a man might be awarded any of the following honorary distinctions, of a more permanent character — (1) the right to carry a flag or simple standard, (2) the right to display a yak-tail standard, (3) the right to use kettle-drums and beat the *naubat*, (4) the right to display the fish and its accompanying emblems, (5) the right to use a litter adorned with gold fringes and strings of pearls. Of course, all these things were dependent on the caprice of the monarch; for in the Moghul, like in all Oriental states — *Ba yak nuktah maḥram* (محرم) *mujrim* (مجرم) *shavvad*: By one spot "confidant" becomes "criminal."

CHAPTER IV.

PROCEDURE ON ENTERING THE SERVICE.

Single men who resorted to the Court in the hope of obtaining employment in the army, were obliged first to seek a patron. A man generally attached himself to a chief from his own country or of his own race: Mughals became the followers of Mughals, Persians of Persians, Afghāns of Afghāns, and so forth. On this point there were certain customary rules, which are thus stated by Khūshhāl Chand, Berlin Ms. 495, fol 1072*b*. A noble from Māwar-un-nahr recruited none but Mughals, if from Irān, he might have one third Mughals and the remainder Sayyads and Shekhs, or if he took Afghāns and Rājputs, of the former he might entertain one sixth and of the latter, one seventh of his total number. Nobles who were Sayyads or Shekhs might enlist their own tribe, or up to one sixth they might take Afghāns Afghāns themselves might have one half Afghāns and the other half Mughals and Shekhzādahs. Rājputs made up their whole force of Rājputs. At times men of high rank who desired to increase their forces would remit large sums of money to the country with which they were specially connected, and thereby induce recruits of a particular class to flock to their standard. For instance, in the reign of Muhammad Shāh (1719—1748), Muḥammad Khān, Bangash, filled his ranks in this way with men from the Bangash country and with Afrīdī Pathāns. According to a man's reputation or connections, or the number of his followers, would be the rank (*manṣab*) assigned to him. As a rule, his followers brought their

own horses and other equipment; but sometimes a man with a little money would buy extra horses and mount relations or dependents upon them. When this was the case, the man riding his own horse was called, in later parlance, a *silahdār* (literally, equipment-holder), and one riding somebody else's horse was a *bārgīr* (burdentaker). The horses and equipment were as often as not procured by borrowed money; and not unfrequently the chief himself made the advances, which were afterwards recovered from the man's pay. The candidate for employment, having found a patron, next obtained through this man's influence an introduction to the *Bakhshī-ul-mamālik* or *Mīr Bakhshī*, in whose hands lay the presentation of new men to the emperor, and on his verdict a great deal depended as to the rank (*manṣab*) which might be accorded.

The Bakhshī. — This officer's title is translated into English sometimes by Paymaster-General, at others by Adjutant-General or Commander-in-Chief.[1] None of these titles gives an exact idea of his functions. He was not a Paymaster, except in the sense that he usually suggested the rank to which a man should be appointed or promoted, and perhaps countersigned the pay-bills But the actual disbursement of pay belonged to other departments. Adjutant-General is somewhat nearer to correctness. Commander-in-Chief he was not. He might be sent on a campaign in supreme command; and if neither emperor, vicegerent (*wakīl-i-mutlaq*), nor chief minister (*wazīr*) was present, the command fell to him. But the only true Commander-in-Chief was the emperor himself, replaced in his absence by the *wakīl* or the wazīr. The word *Bakhshī* means 'the giver,' from *bakhshīdan*, P. 'to bestow,' that is, he was the giver of the gift of employment in camps and armies (*Dastūr-ul-Inshā*, 232); or might it not better be connected with another meaning, "to divide into shares, to distribute," making *Bakhshī* to equal "the

[1] Blochmann, *Āīn*, 1, 161, has Paymaster and Adjutant-General.

distributor, the divider into shares?" In Persia the same official was styled 'The Petitioner' (*ʿāriẓ*). This name indicates that it was his special business to bring into the presence of the emperor anyone seeking for employment or promotion, and there to state the facts connected with that man's case. Probably the use of the words *Mīr ʿArẓ* in two places in the *Āīn-i-Akbarī* (Blochmann, i, 257, 259) are instances of the Persian name being applied to the officer afterwards called a *Bakhshī*. The first *Bakhshī* (for there were four) seems to have received, almost as of right, the title of *Amīr-ul-umarā* (Noble of Nobles); and from the reign of ʿĀlamgīr onwards, I find no instance of this title being granted to more than one man at a time, though in Akbar's reign such appears to have been the case (*Āīn*, i, 240, Blochmann's note).

Duties of the Bakhshī-ul-mamālik. — These duties comprised the recruiting of the army; maintaining a list of *manṣabdārs* with their postings, showing (1) officers at Court, (2) officers in the provinces; keeping a roster of the guard-mounting at the palace; preparing the rules as to grants of pay (*tankhwāh*); keeping up a list of officers paid in cash, and an abstract of the total pay-bills; the superintendence of the mustering for branding and verifying the troopers' horses and the orders subsidiary thereto; the preparation of the register of absentees, with or without leave, of deaths, and dismissals, of cash advances, of demands due from officers (*mutālabah*), of sureties produced by officers, and the issue of written orders (*dastak*) to officers sent on duty into the provinces.[1] One special duty belonging to the *Bakhshī* was, in preparation for a great battle, to assign posts to the several commanders in the van, centre, wings, or rearguard. The *Bakhshī* was also expected on the morning of a battle to lay before the emperor a present state or muster roll, giving the

[1] *Dastūr-ul-Inshā*, 232, *Dastūr-ul-ʿAml*, B.M. 6599, fol. 159*a*, and B.M. 1641, fols. 28, and 17*b* to 22*a*.

exact number of men under each commander in each division of the fighting line.

The other Bakhshīs. — Besides the First *Bakhshī*, ordinarily holding the title of *Amīr-ul-umarā*, and styled either *Bakhshī-ul-mamālik* (B. of the Realms) or *Mīr Bakhshī* (Lord B.), there were three other *Bakhshīs* at head-quarters. It is a little difficult to fix upon the points which distinguished their duties from those of the First *Bakhshī*. The Second *Bakhshī*, usually styled *Bakhshī-ul-mulk* (B. of the Kingdom), was also called the *Bakhshī-i-tan*.[1] As *tan* (literally, body) was a contraction for *tankhwāh*, pay (literally *tan*, body, *khwāh*, desire, need), it might be supposed that his duties were connected with the records of *jāgīrs*, or revenue assignments granted in lieu of pay, just as in the revenue department the accounts of these grants were under a special officer, the *Diwān-i-tan*. But on examining such details of the Second *Bakhshī's* duties as are forthcoming, I find that this supposition does not hold good. On the whole, the duties of the First, Second, and Third *Bakhshīs* seem to have covered much the same ground. The main distinction, perhaps, was that the Second *Bakhshī* dealt more with the recruiting and promotion of the smaller men, while only those above a certain rank were brought forward by the *Mīr Bakhshī*. The Second *Bakhshī* was, it would appear, solely responsible for the bonds taken from officers, a practice common to all branches and ranks of the imperial service. His office would seem also to have been used to some extent as a checking office on that of the First *Bakhshī*, many documents requiring his seal in addition to that of the *Mīr Bakhshī*, and copies of many others being filed with him. The same remarks apply generally to the Third *Bakhshī*, the greatest difference

[1] Dānishmand Khān, 18th Shawwāl 1119, Khāfī Khān, II, 601, Yaḥyā Khān, fol. 114*a*.

being perhaps that he took up only such recruiting work as was specially entrusted to him, and that whatever he did required to be counter-sealed by the First and Second *Bakhshīs*. His duties were on altogether a smaller scale than those of the other two.

From the details in one work, *Dastūr-ul-ᶜAml*, B.M 1641, fols. 28*b*, 29*a*, it might be inferred that the Second *Bakhshī's* duties were connected with the *Aḥadīs*, or gentlemen troopers serving singly in the emperor's own service. The difficulty, however, at once arises that the Fourth *Bakhshī* had as his alternative title that of *Bakhshī* of the *Ahadīs*. The third *Bakhshī* was also called occasionally *Bakhshī* of the *Wālā Shāhīs*, that is of the household troops, men raised and paid by the emperor out of his privy purse. [1]

Provincial and other Bakhshīs. — In addition to the *Bakhshīs* at headquarters there were officers with similar functions attached to the governor of every province. With the office of provincial *Bakhshī* was usually combined that of *Wāqiᶜah-nigār*, or Writer of the Official Diary. And in imitation of the imperial establishments, each great noble had his own *Bakhshī*, who performed for him the same functions as those executed for the emperor by the imperial *Bakhshīs*.

First Appointment of an Officer. — On one of the appointed days, the *Bakhshī* laid before His Majesty a written statement, prepared in the office beforehand and called a *Ḥaqīqat* (statement, account, narration, explanation). The man's services having been accepted, the emperor's order was written across this paper directing the man to appear, and a few days afterwards the candidate presented himself in the audience-hall and made his obeisance. When his turn came the candidate was brought forward, and the final order was passed. The following is a specimen of a *Ḥaqīqat*, with the orders upon it: —

[1] *Kāmwar Khān*, entry of 1st Jamādī I, 1119.

Report

is made that So-and-So, son of So-and-so, in hope of serving in the Imperial Court, has arrived at the place of prostration attached to the Blessed Stirrup (*i. e.* the Court). In respect of him what are the orders?

[First Order.] The noble, pure, and exalted order issued that the above-named be brought before the luminous eye (*i. e.* of His Majesty), and he will be exalted according to his circumstances.

[Second Order in two or three days' time] To day the aforesaid passed before the noble sight; he was selected for the rank (*manṣab*) of One Thousand, Two Hundred Horse (*suwār*).

The next step was the issue of a *Taṣdīq*, or Certificate, from the *Bakhshī's* office, on which the Bakhshī wrote his order. It was in the following form: —

Certifies

as follows, that So-and-So, son of So-and-so, on such-and-such a date, of such-and-such a year, in the hope of serving in this homage-receiving Court, arrived at the Blessed Stirrup and passed before the luminous sight. The order, to which the world is obsequious and the universe submissive, was issued that he be raised to the rank (*manṣab*) of one Thousand, Two Hundred Horse (*suwār*)

One Thousand, *zāt*.
Two Hundred, *suwār*.

[Order thereon of the *Bakhshī*.] Let it be incorporated in the Record of Events (*Wāqi'ah*).

On the arrival of the Certificate (*Taṣdīq*) in the office of the *Wāqi'ahnigār*, or Diary Writer, he made an appropriate entry in his record and furnished an extract therefrom,

which bore the name of a *Yād-dāsht*, or Memorandum. In form it was as follows: —

Memorandum (*Yād-dāsht*).

On such-and-such a date, such-and-such a day of the week, such-and-such a month, such-and-such a year, in the department (*risālah*) of One endowed with Valour, a Shelter of the Courageous, the Object of various Imperial Condescensions, Submissive to the Equity of the world-governing favours, the *Bakhshī* of the Realms So-and-so, and during the term of duty as Event Writer of this lowliest of the slaves So-and-so, it was reduced to writing that So-and-so, son of So-and-so, having come to the place of prostration in the hope of service at the Imperial Court, on such-and-such a date passed before the pure and noble sight. The world-compelling, universe-constraining order obtained the honour of issue, that he be raised to and selected for the rank (*manṣab*) of One Thousand Personal (*zāt*) and Two Hundred Horsemen (*suwār*) in the chain (*silk*) of rank-holders (*manṣabdārān*). — On such-and-such a date, in accordance with the Certificate *Taṣdīq*), this Memorandum (*Yād-dāsht*) was penned.

One Thousand, *zāt*.
Two Hundred, *suwār*.

I. [Order of the Wazīr.]
After comparing it with the Diary (*Wāqi'ah*), let it be sent to the Office of Revision (*'Arz-i-mukarrar*).

II. [Report of the Event Writer.]
Agrees with the diary (*Wāqi'ah*).

III. [Order of the Superintendent of Revision, literally Renewed Petition (*'Arẓ-i-mukarrar*).]
On such-and-such a date, of such-and-such a month, of such-and-such a year, it was brought up for the second time.

In the later notices of the system we find few mentions of the paper called in the *Āīn* (Blochmann, i, 258) the *taʿlīqah*, which was, it seems, an abridgment of the *Yād-dāsht*. This paper the *taʿlīqah*, formed at that time the executive order issued to the officer concerned (*Āīn*, i, 255). I have found *taʿlīqah* used once in this sense as late as 1127 H. (1716), by Sayyad ʿAbd-ul-Jalīl, Bilgrāmī, in his letters sent from Dihlī to his son, "Oriental Miscellany," Calcutta, 1798, p. 247).

The Aḥadīs — Midway between the nobles or leaders (*manṣabdars*) with the horsemen under them (*tābīnān*) on the one hand, and the *Aḥshām*, or infantry, artillery, and artificers on the other, stood the *Aḥadī*, or gentleman trooper. The word is literally 'single' or 'alone' (A. *ahad*, one). It is easy to see why this name was applied to them; they offered their services singly, they did not attach themselves to any chief, thus forming a class apart from the *tābīnān*; but as they were horsemen, they stood equally apart from the specialized services included under the remaining head of *Aḥshām* The title of *Aḥadī* was given, we are told (*Seir*, i, 262, note 201), to the men serving singly "because they have the emperor for their immediate colonel." We sometimes come across the name *Yakkah-tāz* (riding alone), which seems, when employed as the name of a class of troops, to mean the same body of men as the *Aḥadīs*. Horn, 20, 56, looks on the *Aḥadīs* as a sort of body-guard or *corps d'élite*; and in some ways that view may be taken as true, though there was not, as I think, any formal recognition of them as such. The basis of their organization under Akbar is set out in *Āīn* 4 of Book ii (Blochmann, i, 219), and they are referred to in several other places (i, 20, 161, 231, 246, 536) In the strictest sense, the body-guard, or defenders of the imperial person, seem to have been the men known as the *Wālā Shāhī* (literally, of or belonging to the Exalted King), and, no doubt, these are the four thousand men referred to by

Manucci ("Catrou," English ed. of 1826, p. 297) as 'the emperor's slaves.' [1] Whether slaves or not, the *Wālā Shāhī* were the most trusted troops of the reigning sovereign. From various passages I find that they were chiefly, if not entirely, men who had been attached to his person from his youth and had served under him while he was still only a royal prince, and were thus marked out in a special manner as his personal adherents and household troops. The *Yasāwals* or armed palace guards were something like the *Wālā Shāhī* so far as they were charged with the safety of the sovereign; but they differed from the latter in not having the same personal connection with him. The *Aḥadīs* received somewhat higher pay than common troopers. In one instance we are told expressly what those rates were in later times. On the 2nd Ṣafar of his second year (1120 H. = 22nd April, 1708), Bahādur Shāh, as Dānishmand Khān tells us, ordered the enlistment of 4,700 extra *Aḥadīs* at Rs. 40 a month, the money to be paid from the Exchequer.

Towards the end of the eighteenth century the household troops, we are told, *Seir*, i, 94, note 90, amounted to 40,000 men, all cavalry, but usually serving on foot in the citadel and in the palace They consisted then of several corps besides the *Aḥadīs*, such as the *Surkh-posh* (wearers of red), the *Sultānī* (Royal), the *Wālā Shāhī* (High Imperial), the *Kamal-posh* (Blanket Wearers). Haji Mustapha is not, however, quite consistent with himself, for elsewhere (*Seir*, i, 262, note 201), when naming still another corps, the *A'lā Shāhī* (Exalted Imperial), he asserts that the *Surkh-posh* were all infantry, eight thousand in number. The curious title used above, *Kamal-posh*, comes from the Hindī word *kammal*, a coarse blanket, having also the secondary meaning of a kind of cuirass (*Seir*, i, 143, note 105). The latter is no doubt the signification here.

[1] The word meant may be *Bandahhāe*, or, perhaps preferably, the *Qūl*, the Chaghatāe for 'slave' — P de Courteille, 433

CHAPTER V.

BRANDING AND VERIFICATION.

False musters were an evil from which the Moghul army suffered even in its most palmy days. Nobles would lend each other the men to make up their quota, or needy idlers from the bazaars would be mounted on the first baggage pony that came to hand and counted in with the others as efficient soldiers. Great efforts were made to cope with this evil, and in the earlier times with some success. In the later reigns, notably from the middle of Muhammad Shāh's reign (1719—1748), all such precautions fell into abeyance, amid the general confusion and ever-deepening corruption By 1174 H. (1761) the system had so entirely disappeared from the *ṣūbah* of Ahmadābād, that clerks acquainted with the rules could not be found there (*Mirāt-i-Aḥmadī*, ii, 118).

Mustapha, the translator of the *Sīyar-ul-mutākharīn*, gives us an instance of the length to which this cheating was carried (*Seir*, i, 609, note). In Bengal, in the year 1163 H. (1750), when ʿAlī Wirdī Khān, Mahābat Jang, was nāzim, an officer receiving pay for 1700 men could not muster more than seventy or eighty. Mustapha, who wrote in 1787—8, adds from his own experience — "Such are, without exception, all the armies and all the troops of India; and were we to rate by this rule those armies of 50,000 and 100,000 that fought or were slaughtered at the decisive battles of Palāsī [Plassy] and Baksar [Buxar] (and by some such rule they must be rated), we would have incredible deductions to make. Such a rule, however, would not answer for Mīr Qāsim's troops (1760—1764), where there was not one single false

muster, nor would it answer for Ḥaidar ʿAlī's armies." The admitted difference between recorded and actual numbers is emphazised by Khūshḥāl Chand's expression, Berlin Ms. 495, fol. 1091*a*, *Maujūdī, nah kāghazī*, "actually present, not merely on paper", used in reference to the force brought to Dihlī by Burhān-ul-mulk at the time of Nādir Shāh's invasion.

It was to put down these evil practices that the emperor Akbar revived and enforced more strictly than before a system of descriptive rolls of men and horses, the latter being branded with a hot iron before they were passed for service. This branding, with the consequent periodical musters for the purpose of comparison and verification, formed a separate department under the *Bakhshī* with its own superintendent (*dāroghah*), and this was known as the *dāgh-o-taṣḥīhah*, from *dāgh*, a brand, a mark, and *taṣḥīhah*, verification. The usual phrase for enlisting was *asp ba dāgh rasānīdan*, "bringing a horse to be branded." Branding was first introduced by ʿAlā-ud-dīn Khiljī in 712 H. = May, 1312—April, 1313, but on his death it was dropped (*Dastūr-ul-Inshā*, 233). The emperor Sher Shāh, Afghān, started it again in 948 H. = April, 1541—April, 1542. Akbar (*Āīn*, i, 233) re-established the practice in the eighteenth year of his reign (about 981 H., 1573—4), and it was continued until the time when the whole system of government finally broke down in the middle of the eighteenth century. At first many difficulties were made (*Dastūr-ul-Inshā*, 234), and evasions were attempted, but at length the system was made effective. The great nobles, holding the rank of 5000 and upwards, were exempt from the operation of these rules; but when ordered, they were expected to parade their horsemen for inspection (*Dastūr-ul-ʿAml*, B.M., No. 6599, fol. 144*b*). The technical name for these parades was مَحَلّه *maḥallah* (Steingass, 1190), a word evidently connected with that used in Akbar's time for branding, viz. *dāgh-o-maḥallī* (*Āīn*, i, 242; *Budāonī*, ii, 190). The germ of the *dāgh* system may perhaps be found

in the practice in Transoxiana of annually branding the colts. This was done so far back as the twelfth century; see E. G Browne on the *Chahār Maqālah* of ʿArūḍī (composed about 1161 A.D.), Journal R. Asiatic Soc. (1899), pp 771 and 776.

As said before, the recruit was supposed, at any rate so far as the State was concerned, to furnish his own horse. Orme states the case thus: — "Every man brings his own horse and offers himself to be enlisted. The horse is carefully examined: and according to the size and value of the beast, the master receives his pay. A good horse will bring thirty or forty rupees a month. Sometimes an officer contracts for a whole troop. A horse in Indostan is of four times greater value than in Europe. If the horse is killed the man is ruined, a regulation that makes it the interest of the soldier to fight as little as possible." — "Historical Fragments," 4to edition, 418. Along with his horse the man brought his own arms and armour, the production of certain items of which was obligatory. In actual practice, however, the leaders often provided the recruits with their horses and equipment. When this was the case the leader drew the pay and paid the man whatever he thought fit. Such a man, who rode another's horse, was called a *bārgīr* (load-taker); while a man riding his own horse was in modern times called a *silaḥdār* (weapon-holder). The latter word is the origin of the Anglo-Indian phrase of "Sillidar cavalry," applied to men who are paid a lump sum monthly for themselves, horse, uniform, and equipment.

Descriptive Rolls. — When an officer entered the service (B.M. Nº. 6599, fol. 160*a*) a *Chihrah* or descriptive roll[1]

[1] Literally 'face,' 'countenance.' It must not be confounded with *chīrah*, which means (1) a kind of turban, (2) a pay-roll, on which the recipients signed, (3) the pay itself *Chīrah* is used in the second sense in *Aḥwāl-ul-khawāqīn*, fol. 230*b*; and also by Ghulām Ḥasan, Samīn, when telling us of the taunt addressed in 1170 H (1757) by Aḥmad Khān, Bangash, to Najīb Khān, Najīb-ud-daulah, of having been once a private trooper in Farrukhābād, where his pay-rolls (*chīrah-hāe*) were still in existence.

of the new *manṣabdar* was first of all drawn up, showing his name, his father's name, his tribe or caste, his place of origin, followed by details of his personal appearance. His complexion might be "wheat-colour" (*gandum-rang*), "milky," *i. e.* white (*shīr-fām*), "red" (*surkh-post*), or "auburn" (*maigun-rang*). His forehead was always "open" (*farāgh*); his eyebrows either full (*kushādah*) or in whole or in part *moshah* (?); his eyes were sheep-like (*mīsh*), deer-like (*āhū*), ginger-coloured (*adrak*), or cat's eyes (*gurbah*). His nose might be "prominent" (*buland*) or "flat" (*past*). He might be "beardless" (*amrad*) or "slightly bearded" (*rīsh o barwat āghāz*); his beard might be "black" (*rīsh o barwat siyāh*), or "slightly red" (*siyāh ı maigun-numā*), "thin" (*khall*?), "shaven" (*mutaraash*), "goat-shaped" (*kosah-i-khurd*), or "twisted up" (*shaqīqah*). So with any moles he might have; the shape of his ears, whether projecting or not, whether the lobes were pierced or not, and whether he was pock-marked or not — all these things were noted. Ashob, *Shahādat*, fol. 84*a*, tells us that in the imperial service the *chihrahs* were written on red paper sprinkled with gold leaf.

Roll for Troopers — The troopers (*tābīnān*) were also described, but not quite so elaborately. A specimen is as follows (B.M. N°. 6599, fol. 163*a*): —

Troopers' Roll (*Chihrah-ı-Tābīnān*).

Qamr ᶜAlī, son of Mīr ᶜAlī, son of Kabīr ᶜAlī, wheat complexion, broad forehead, separated eyebrows, sheep's eyes, prominent nose, beard and moustache black, right ear lost from a sword-cut. Total height, about 40 *shānah*.

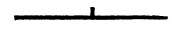
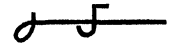
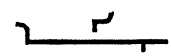
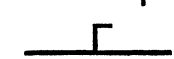
Horse. — Colour *kabūd* (iron-grey?). Mark on left of breast. Mark on thigh on mounting side. *Laskar* (?) on thigh on whip side. Brand of four-pointed stamp +

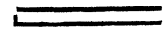
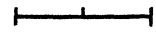
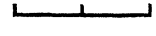
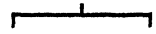
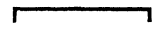
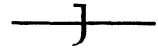
Descriptive Roll of Horses (*Chihrah-i-aspān*).

The next thing done was to make out an elaborate description of the horse or horses (B.M. N°. 6599, fol. 106*b*). There were twenty principal divisions according to colour, and eight of these were again subdivided, so that there were altogether fifty-eight divisions. Then there were fifty-two headings for the marks (*khāl-o-khat*) which might occur on the horse's body.

The Imperial Brand.

The hot iron was applied on the horse's thigh (*Seir*, i, 481, note 27). The signs used in Akbar's reign are given in the *Āīn*, i, 139, 255, 256; but in the end he adopted a system of numerals. In ʿĀlamgīrs reign and about that time there were twenty different brands (*tamghah*), of which the shapes of fifteen have been preserved and are reproduced below (B.M. N°. 6599, fol. 161*a*). I am not certain of the spelling, and in most instanees I am utterly unable to suggest a meaning for the names.

Name.	Form of Brand
1. *Chahār parhā* (four feather?)	
2. *Chahār parhā jomar-khaj*	
3. *Chahār parhā dūr khaj*	
4. *Chahār parhā sihsar khaj*	
5. *Chakūsh*	
6. *Istād* (upright)	
7. *Uftādah* (recumbent)	
8. *Istādah o uftādah*	

Name	Form of Brand.
9. *Yak ba do* (one with two)	
10. *Asaran*	
11. *Togh* (horse-tail standard)	
12. *Panjah-i-murgh* (hen's foot)	
13. *Mīzān* (balance)	
14. *Do dārah taur*	
15. *Chahār bārah makar khaj*	

The Noble's Brand.

It is obvious that in addition to the imperial brand, a second mark was required by each noble for the recognition of the horses ridden by his own men. Accordingly we find direct evidence of this second marking in Bernier, 216, and again 243, when he speaks of the horses "which bear the omrah's mark on the thigh." Towards the end of the period the great nobles often had the first or last letter of their name as their special brand (*Seir*, i, 481, note 27), as, for instance, the *sīn-dāgh* (س) of Saʿdat ʿAlī Khān, nāzim of Audh. The brand of Sayyad ʿAbdullah Khān, was عبد (*ʿabd*), according to Khushḥāl Chand, Berlin Ms. 495, fol. 1020*a*. Ghulām ʿAlī Khān (B.M., Add. 24,028, fol. 63*b*) tells us that about 1153 H. (1740—41) Muḥammad Isḥāq Khān used the last letter of his name, a *qāf* (ق), as his brand. The way of selecting the brands is further illustrated by a passage in Kām Rāj's *Aʿzam-ul-harb*. When Aʿzam Shāh in 1119 H. (1707) was on his march from the Dakhin, some new brands were chosen. "As the brand of the *Wālā Shāhī* (personal troops) was *ʿAzmā*, that of Bedār Bakht, the eldest son, was *mankab*, and of Wālā Jāh, the second son, was *khail*, it was thought

fit to fix on the word *hashm* (حشم) as that of ʿAlā Tabār, the youngest son." It is to be niferred from this passage that in each instance the first letter of the word was used.

Classification of Horses.

According to the *Āīn*, i, 233, there were seven classes of horses founded on their breed — (1) *ʿArabi*, (2) *Persian*, (3) *Mujannas*, resembling Persian, and mostly Turkī or Persian geldings, (4) *Turkī*, (5) *Yābū*, (6) *Tāzī*, (7) *Janglah*.

In ʿĀlamgīr's reign we find (B.M. Nº. 6599, fol. 163*a*) the following classification: (1) *ʿIrāqī*, (2) *Mujannas*, (3) *Turkī*, (4) *Yābū*, (5) *Tāzī*, (6) *Janglī* This is practically the same as Akbar's, except that Arab horses are not mentioned. This must be an oversight, since we learn from many passages in the contemporary historians that Arab horses were still in use. The *Tāzī* and *Janglī* were Indian horses, what we now call countrybreds, the former being held of superior quality to the latter. The *Yābū* was, I suppose, what we call now the *Kābulī*, stout-built, slow, and of somewhat sluggish temperament. The *Turkī* was an animal from Bukhārā or the Oxus country; the *ʿIrāqī* came from Mesopotamia.

In ʿĀlamgīr's reign the proportion in which officers of the different ranks were called on to present horses of these different breeds at the time of branding was as follows: —

Rank of Officer.	Class of Horse.				Total
	ʿIrāqī.	Mujannas	Turkī.	Yābū	
400	3	1	1	0	5
300—350	2	1	1	0	4
100—150	0	0	3	0	3
80—90	0	0	2	0	2
50—70	0	0	1	1	2
40	0	0	1	0	1

These figures differ from those in the *Āīn*, i, 248—9, where the number of horses is given for all *manṣabs*, up to the very highest. Some figures are also given in *Mirāt-i-Aḥmadī*, ii, 118, which agree on the whole with those in the above table.

According as the standard was exceeded or not come up to, the branding officer made an allowance or deduction by a fixed table. This calculation was styled *tafāwat-i-aspān* (discrepancy of horses) — B.M. N°. 6599, fol. 163*a*. The extra allowances were as follows: —

Horse Required by Regulation	Horse Produced.	Additional Allowance
		Rs.
Turkī	*ʿIrāqī*	12
Turkī	*Mujannas*	6
Tāzī	*Turkī*	8
Yābū	*Turkī*	9

When an inferior horse was produced the following deduction was made: —

Horse Required by Regulation	Horse Produced.	Deduction
		Rs
Turkī	*Janglī*	12
Yābū	*Janglī*	10
Tāzī	*Janglī*	8

Subordinate Establishment.

An establishment of farriers, blacksmiths' forges, and surgeons had to be maintained by each *manṣabdār*, according to the following scale (B.M. N°. 1641, fol. 38*b*): —

Rank of Officer	Numbers of Establishment.		
	Farriers (*Na'lband*)	Blacksmiths' Shops (*Āhangar*).	Leeches or Surgeons (*Jarāḥ*).
4000	8	2	2
3500	7	2	2
3000	6	2	2
2500	5	1	0
2000	4	1	2
1500	3	0	1
1000	2	0	1

Or, according to a more recent scale: —

1500—4000	6	3	0

The *Mirāt-i-Aḥmadī*, ii, 118, states that thirty men on foot were required to be entertained for every 1000 of *manṣab* rank. These included water-carriers, farriers, pioneers, matchlockmen and bow-men.

Verification (*Taṣḥīḥah*).

Something on this subject will be found in the *Āīn*, i, 250, where the reference is confined to the *aḥadīs*; Dr. Horn, so far as he goes into the matter at all, deals with it on p. 49 of his work. In later times, at all events, the rule of mustering and verification seems to have been of almost universal application. For example, in a work called the *Guldastah-i-Bahār*, a collection of letters from Chhabīlah Rām, Nāgar, compiled in 1139 H. (1726—7), of which I possess a fragment, I find on fol. 18*a* an instance of the verification rules being enforced against a *manṣabdār* in the end of Bahādur Shāh's reign (1118—24 H.). Chhabīlah Rām, who was then *faujdār* of Karrah Mānikpur (ṣūbah Allahābād), complains to his patron that the clerks had caused his *jāgīr*, in parganah Jājmau, bringing in ten lakhs of *dāms*, to be taken away from him, because he had not

produced vouchers of *dāgh-o-taṣḥīḥah*. He sends the papers by a special messenger, and prays his correspondent, some influential man at Court, to obtain the restoration of the *jāgīr* in question.

The intervals after which verification was imperative varied according to the nature of the man's pay. If he were paid in *jāgīr*, he had to muster his men for verification once a year, and, in addition, a period of six months' grace was allowed. If the officer were paid in *naqd* (cash), the time allowed depended upon whether he was — (1) present at Court (*ḥāẓir-i-riqāb*), or (2) on duty elsewhere (*taʿīnāt*). In the first case he had to procure his certificate at six-month intervals, or within eight months at the outside. In the second case he was allowed fifteen days after he had reported himself at Court. An *aḥadī* seems to have been allowed, in a similar case, no more than seven days. Where an officer drew his pay partly in *jāgīr* (assignment) and partly in *naqd* (cash), if the former made more than half the total pay, the rule for *jāgīrdārs* was followed; if the *jāgīr* were less than half, the *naqdī* rule was followed. (B.M. 1641, fols. 31*a*, 39*b*).

When the interval and the period of grace had elapsed, the man was reported for *tawaqquf-i-taṣḥīḥah* (delay in verification). A *manṣabdār* lost the whole of his pay for the period since the last verification, or, if he were important enough to have been presented to the emperor (*rū-shināś*, known by sight), he might succeed in obtaining his personal pay. An *aḥadī* lost half his pay, and it was only by an order on a special report that he could be excused the penalty. The proportion of horsemen (*tābināń*) that a *manṣabdār* must produce differed when he was at Court and when he was on duty in the provinces. In the first case he was bound to muster one-fourth, and in the second one-third, of his total number or as the case is stated in the *Maʾāsir-ul-umarā*, ii, 444, "In the reign of Shāhjahān it was decided that if an officer held a *jāgīr*

within the *ṣūbah* to which he was attached, he should produce one third of his *tābīnān* for Branding. Thus if he were 3000 *zāt*, 3000 *suwār*, he would produce 1000 horsemen. If sent to another *ṣūbah* of Hindustān, then one fourth had to appear. During the campaign in Balkh and Badakhshān, owing to the great distance, one fifth was held to be sufficient." There were three seasons appointed for verification, from the 26th Shawwāl to the 15th Zū'l Qa'dah (twenty days), the 19th Ṣafar to the 15th Rabī' I (twenty-five days), and the 16th Jamādī II to the 15th Rajab (twenty-nine days). (B.M. 1641, fols. 31*a*, 39*b*, 58*b*; B.M. 6599, fol. 148*a*).

Officials and their duties. — At head quarters officers entitled Amīn, dāroghah, and mushrif were appointed by the emperor to the Verification department, which was under the supervision of the chief bakhshīs. The Bakhshīs made the appointments for the provinces. In addition to his personal rank (*manṣab*), the Amīn received a *manṣab* of 10 horse while in office (*Mirāt-i-Ahmadī*, ii, 118). The duties are thus described by Hidāyatullah, Bahārī, in his *Hidāyat-ul-quwāid*, fol. 13*a*. The dāroghah should compare the marks and points (*khat-o-khāl*) of the horses with the descriptive roll (*chihrah*), and inspect the horses to see whether they were fit for the service or not. If fit for branding, he should cause the brand to be imposed, signing the descriptive roll, adding the day, month and year, with the words "Two horses such-and-such branded." If it were a two-horse man, he should certify for two horses and send the original descriptive roll to the office of the Bakhshī, retaining a copy sealed by the Bakhshī among his own records. Two months having passed, he should in the third month inspect and verify according to the copy of the roll, looking to see if the marks correspond. His inspection report was entered on the back of the roll, giving day, month, and year, thus: "So-and-so with his horses and arms was inspected." If it was a one-horse man, the dāroghah wrote:

"Man and one horse inspected." If it were a foot matchlock-man or an archer, he wrote on the back of the roll: "Man and arms inspected." For carpet-layers and servants belonging to the court establishment he wrote on the back of the roll. When the paper was full, another sheet was attached. The peshkār (head clerk) of the dāroghah drew up according to rule a present state, giving details of those present and absent and the receipts. He then brought it up for orders. The dāroghah attached his seal to the report and sent it on to the Bakhshī's office. In accordance therewith an order (*barāt*) on the Treasury was prepared for each man. The dāroghah ought to see that the horsemen and infantry are present on the march and on guard. He should enjoin on the guard-clerk to make an inspection at midnight of the men posted on guard, and write down the names of those present. According to the *Mirāt-i-Aḥmadī*, ii, 118, the officials after the mustering and verification made out certificates (*daṣtak*) bearing the seals of the dāroghah, amīn, and mushrif, which were delivered to the *manṣabdār* concerned.

CHAPTER VI.

THE DIFFERENT BRANCHES OF THE SERVICE.

Although in writing this essay I think it better to retain the divisions of the original authorities, who distribute the army into *manṣabdārs* (with their *tābīnān*), *aḥadīs*, and *aḥshām*, it is quite true that, as Dr. Horn says, p. 11, the Moghul army consisted of cavalry, infantry, and artillery. But the second and third branches held a very subordinate position towards the first. The army was essentially an army of horsemen. The Moghuls from beyond the Oxus were accustomed to fight on horseback only; the foot-soldier they despised; and in artillery they never became very proficient. Until the middle of the eighteenth century, when the French and English had demonstrated the vast superiority of disciplined infantry, the Indian foot-soldier was little more than a night-watchman, and guardian over baggage, either in camp or on the line of march. Under the Moghuls, as Orme justly says "Hist. Frag.," 4to, p. 418, the strain of all war rested upon the numbers and goodness of the horse which were found in an army. Their preference for hand to hand fighting and cavalry charges is well illustrated by the remarks attributed to Prince A^{c}zam Shāh in 1707 by Bhīm Sen, *Nuskhah-i-dilkushā*, fol. 162*a*, that "to fight with artillery was a stripling's pastime, the only true weapon was the sword."

There was no division into regiments. Single troopers, as we have already said, enlisted under the banner of some man a little richer or better known than themselves. These inferior leaders again joined greater commanders, and thus

by successive aggregations of groups, a great noble's division was gathered together. But from the highest to the lowest rank, the officer or soldier looked first to his immediate leader and followed his fortunes, studying his interests rather than those of the army as a whole. [1] It was not till quite the end of the period that, under the influence of European example, and also partly in imitation of the Persian invaders, it became usual for the great nobles to raise and equip at their own expense whole regiments without the intervention of petty chiefs. In Audh, Ṣafdar Jang and Shujāᶜ-ud-Daulah had such regiments, as, for instance, the *Qizzilbāsh*, the *Sher-bachah*, and others, which were all clad alike, and apparently were mounted and equipped by the Nawāb himself

When Akbar first introduced the *manṣab* system, which ranked his officers according to the number of men supposed to be under the command of each, these figures had possibly some connection with the number of men present under those officers' orders, and actually serving in the army (Horn, 39). But it is tolerably certain that this connection between the two things did not endure very long: it was, I should say, quite at an end by the reign of Shāhjahān (1627—58). Indeed, if the totals of all the personal (*zāt*) *manṣabs* in existence at one time were added together, we should arrive at so huge an army that it would have been impossible for the country, however heavily taxed, to meet such an expense. If paid in cash, the army would have absorbed all the revenue; if paid by assignments, all the land revenue would have gone direct into the hands of the soldiery, leaving next to nothing to maintain the Court or meet the expenses of the other branches of the government. The inference I wish to draw is, that from the grant of rank it does not follow that the soldiers implied by such rank were really added to the army. The system required that a man's rank should be stated in terms of so many soldiers;

[1] For remarks to the same general effect, see W. Erskine, "History," II, 540.

but there is abundant testimony in the later historians that *manṣab* and the number of men in the ranks of the army had ceased to have any close correspondence.

Thus it seems to me a hopeless task to attempt, as Dr. Horn does, p. 39, following Blochmann (*Āīn*, i, 244—7), to build up the total strength of the army from the figures giving the personal (*zāt*) rank of the officers (*manṣabdārs*). The difficulty would still exist, even if we had sufficiently reliable accounts of the number of such officers on the list at any one time. For we must remember that the number of men kept up by any officer was incessantly varying. On a campaign, or on active employment in one of the provinces, either as its governor or in a subordinate position, an officer kept up a large force, generally as many as, if not more than, he could find pay for. On the other hand, while attached to the Court at Dihli, his chief or only duty might be to attend the emperor's public audience twice a day (a duty which was very sharply enforced), and take his turn in mounting guard at the palace. For duties of this sort a much smaller number of men would suffice. If we reckoned the number of men in the *suwār* rank, for whom allowances at so much per man were given by the State to the *manṣabdār*, we might obtain a safer estimate of the probable strength of the army. But for this also materials fail, and in spite of musterings and brandings, we may safely assume that very few *manṣabdārs* kept up at full strength even the quota of horsemen (*tābīnān*) for which they received separate pay. In these matters the difference between one noble and another was very great. While one man maintained his troops at their full number, all efficiently mounted and equipped, another would evade the duty altogether. As, for instance, one writer, Khūshhāl Chand, in his *Nādir-uz-zamānī* (B.M. Or. 1844, fol. 140*a*) says: Lutfullah Khān Ṣādiq, although he held the rank of 7,000, "never entertained even seven asses, much less horses or riders on horses." In Muḥammad Shāh's reign he lived

quietly at home at Pānīpat, 30 or 40 miles from Dihli, his attention engrossed by his efforts to get hold of all the land for many miles round that town, and passing his days, in spite of his great nominal rank, like a mere villager.

It seems to me equally hopeless to attempt a reconstruction of the force actually present at any particular battle by adding together the numerical rank held by the commanders who were at that battle. This Dr. Horn has tried to do on p. 67, without feeling satisfied with the results. But, as far as I can see, there was little, if any, connection between the two matters. The truth is that, like all things in Oriental countries, there existed no rules which were not broken in practice. A man of high rank would, no doubt, be selected for the command of a division. But it was quite an accident whether that division had more or fewer men in it than the number in his nominal rank. The strength of a division depended upon the total number of men available, and the extent of the contingents brought into the field by such subordinate leaders as might be put under the orders of its commander. It was altogether a matter of accident whether the number of men present corresponded or not to the rank of the commanders.

Bernier, 43, has an excellent remark on the vague way that numbers were dealt with by historians: "Camp-followers and bazar-dealers . . . . I suspect, are often included in the number of combatants." Again, on p. 380, he seems to come to the conclusion that it would be a fair estimate to take the fighting men at about one-third of the total numbers in a Moghul camp. I have seen somewhere (I have lost the reference, but I think it was in Khāfī Khān) an admission that the gross number of a so-called "fauj" (army) was always reckoned as including no more than one-third or one-fourth that number of fighting men. I give below, for what it is worth, a tabular summary of Dr. Horn's figures (pp. 39—45) —

ESTIMATED NUMBERS OF MOGHUL ARMY

Period.	Cavalry	Matchlockmen and Infantry	Artillery-men	Authority
Akbar	12,000	12,000	1000	Blochmann, i, 246
Do.	384,758	3,877,557	—	*Āīn-i-Akbarī* [1]
Shāhjahān	200,000	40,000	—	*Badshāhnāmah*, ii, 715, *Āīn*, i, 244
Aurangzeb	240,000	15,000	—	Bernier.
Do.	300,000	600,000	—	Catrou
Mḥd. Shāh	200,000	800,000	—	*Tārīkh-i-Hindī* of Rustam ʿAlī

NUMBERS PRESENT ON PARTICULAR OCCASIONS

Name of Battle or Commander	Number of Imperialists				Number of Enemy.				Authority.
	Cavalry	Infantry	Artillery	Elephants	Cavalry	Infantry	Artillery.	Elephants	
Sarkhej .. Under Khān	10,000	—	—	100	40,000	100,000	—	—	*Akbarnāmah*, iii, 424
ʿAẓim . Under Khān	10,000	—	—	—	30,000	—	—	—	*Id.* iii, 593
Khānān .	1200	—	—	—	5000	—	—	—	*Id.* iii, 608.
Sādiq Khān	3000	—	—	—	8000	—	—	80	*Id* iii, 714.
Qandahār (1061 H).	50,000	10,000	—	10	—	—	—	—	Elliot, vii, 99.
Jahāngīr (1016 H.). .	12,500	2000	—	60	—	—	—	—	*Id* vi, 318.
Aḥmad Abdālī (1174 H)...	60,000	20,000	—	—	—	—	—	—	—

[1] These include all the militia levies and zamīndār's retainers throughout the provinces, besides the army proper

CHAPTER VII.

EQUIPMENT. — (A) DEFENSIVE ARMOUR.

The generic name for arms and armour was *silah*, plural *aslāh* (Steingass, 693). Weapons and armour of all kinds were much prized in India, much taste and ingenuity being expended on their adornment Every great man possessed a choice collection. The following extract describes that of the Nawāb Wazīr at Lakhnau, in 1785: — "But beyond everything curious and excellent in the Nawāb's possession are his arms and armour The former consist of matchlocks, fuzees, rifles, fowling-pieces, sabres, pistols, scymitars, spears, syefs (long straight swords), daggers, poniards, battle-axes, and clubs, most of them fabricated in Indostan, of the purest steel, damasked or highly polished, and ornamented in relief or intaglio with a variety of figures or foliage of the most delicate pattern. Many of the figures are wrought in gold and silver, or in marquetry, with small gems. The hilts of the swords, etc., are agate, chrysolite, lapus-lazuli, chalcedony, blood-stone, and enamel, or steel inlaid with gold, called *tynashee*[1] or *koft* work. The armour is of two kinds, either of helmets and plates of steel to secure the head, back, breast, and arms, or of steel network, put on like a shirt, to which is attached a netted hood of the same metal to protect the head, neck, and face. Under the network are worn linen garments quilted thick enough to resist a sword. On the crown of the helmet are stars or other small device, with a sheath to receive a plume of feathers. The steel plates are handsomely decorated with gold wreaths and borders, and the network fancifully braided." ("Asiatic Miscellany," i, 393. Calcutta, 1795. 4to.)

[1] Probably for *tah-nishānī*, inlaid with gold or studded with jems *Koft* (beating) is gold or silver wire beaten into iron or steel.

The fines for not producing at inspection a man's own armour and that of his elephant (*pākhar*) were as follows (B.M. 6,599, fol. 162*a*): —

Rank of Officer	Amount of Fine for non-Production of				
	Headpiece (*Khūd*)	Body Armour (*Baktar*).	Elephant Armour (*Pākhar*)	Greaves (*Rānak*)	Harhai(?) [1]
	Rs. a p	Rs a p	Rs a p	Rs a p	Rs a p
400	2 0 0	5 0 0	4 0 0	2 0 0	1 0 0
350	2 0 0	4 0 0	3 12 0	1 12 0	0 15 0
300	1 12 0	4 0 0	3 8 0	1 8 0	0 14 0
250	1 8 0	3 8 0	3 4 0	1 4 0	0 13 0
200	1 0 0	3 0 0	3 0 0	1 0 0	0 12 0

Armour was worn by all horsemen who could afford it; nay, officers of a certain rank were required to produce it at the time of inspection, subject to a fine if it were not forthcoming. Its use was never discontinued; it was even worn by men of European descent when they entered the native service. For instance, James Skinner, writing of the year 1797, says, "as I was exercising my horse *in full armour*" (Fraser, "Memoirs," i, 125); and again, "I was only saved by my armour" (*id.* 127). George Thomas, the Irish adventurer, also wore armour (*id.* 229). Nor is the use of armour entirely discontinued even to this day, as those can testify who saw the troops of the Bundelkhand States paraded before the then Prince of Wales at Agrah in January, 1876.

The armour was worn as follows (W. Egerton, 112, note to N°. 440): — Depending from the cuirass was generally a skirt, which was at times of velvet embroidered with gold. Underneath the body armour was worn a *qabchah*,[2] or jacket quilted and slightly ornamented. Silken trousers

[1] Read *sarı-asp* in B.M. 1641, fol. 37*a*, but to neither reading can I assign a meaning.

[2] Apparently the diminutive of *qabā*, a close long gown or shirt (Steingass, 950).

and a pair of kashmīr shawls round the waist completed the costume of a nobleman of high rank. As to these quilted coats, we are told elsewhere (*Seir*, i, 624, note) that "common soldiers wore an ample upper garment, quilted thick with cotton, coming down as far as the knee. These coats would deaden the stroke of a sabre, stop the point of an arrow, and above all kept the body cool by intercepting the rays of the sun." Or as a still later writer tells us (Fitzclarence, "Journal," 143)[1]: — "The irregular cavalry throughout India are mostly dressed in quilted cotton jackets; though the best of these habiliments are not, as I supposed, stuffed with cotton, but are a number of cotton cloths quilted together. This serves as a defensive armour, and when their heads are swathed round, and under the chin, with linen to the thickness of several folds, it is almost hopeless with the sword to make an impression upon them. They also at times stuff their jackets with the refuse silk of the cocoons, which they say will even turn a ball." This habit of swathing the body in protective armour till little beyond a man's eyes could be seen, gives the point to the scoffing remark of Dāūd Khān, Pannī, at the battle against Ḥusain ʿAlī Khān, fought on the 8th Shaʿbān, 1127 H. (6th Sept., 1715), that his assailant, one Mīr Mushrif, "came out to meet him like a bride or a woman, with his face hidden" (Ghulām ʿAlī Khān, *Muqaddamah-i-Shāh ʿĀlam-nāmah*, fol. 22*b*).

I now proceed to describe each part of the armour, *seriatim*, beginning with the helmet.

Khūd, Dabalghah, or *Ṭop*. — This was a steel headpiece with a vizor or nose-guard. There are several specimens in the Indian Museum; and in W. Egerton, "Handbook,"

[1] Lieut.-Col. Fitzclarence was created Earl of Munster in 1831, and he is the Lord Munster referred to by Dr. Horn on p. 8 as the author of a series of questions on Mahomedan military usages. His "Journal," the work of a close observer and graphic writer, proves that he was quite competent to write for himself, and not merely "schreiben zu lassen," the history that he had planned.

several of these are figured, Nos 703 and 704 on plate xiii, N°. 703 on p. 134, and another, N°. 591, on p. 125. *Khūd* is the more usual name, but *dabalghah* is the word used in the *Āīn* (Blochmann, 1, iii, N° 52, and plate xiii, N°. 43). The latter is Chaghatāe for a helmet, and Pavet de Courteille gives four forms, داوولغان, داوولعا, دبولغه (p. 317), and دولوغه (p. 322). I have only met with it once in an eighteenth-century writer (*Aḥwāl-ul-Khawāqin, c* 1147 H., fol 161*b*), and then under the form of دوبلغه, *dobalghah*. *Ṭop*, for a helmet, appears several times in Egerton, for instance, on p 119 and p. 125. This is apparently an Indian word (Shakes., 73), توپ, which must be distinguished from the word *top*, توپ, a cannon, to which a Turkish origin is assigned. A helmet seems to have been called a *top* by the Mahrattas and in Maisūr, but the word is not used by writers in Northern India If we disregard the difference between ت and ط, then we can derive *ṭop*, 'a helmet,' and *topī*, 'a hat,' as does the compiler of the "Madras Manual of Administration," iii, 915, from the ordinary Hindī word *topnā*, 'to cover up.' But I hardly think this is legitimate.

Khoghī. — The next name to the *dabalghah* on the *Āīn* list, the *khoghī*, N°. 53, must be something worn on the head; but there is no figure of it, and I fail to identify the word in that form. From the spelling it is evidently of Hindī origin, and a note in the Persian text has *ghokhī* as an alternative reading. Has it anything to do with *ghoghī*, a pocket, a pouch, a wallet (Shakespear, 1756), or *ghūnghī*, cloths folded and put on the head as a defence against the rain (Shakes., 1758)? The latter may point to a solution: the *khoghī*, or, better, the *ghūghī*, may have been folds of cloth adjusted on the head to protect it from a sword blow.

Mighfar is defined (Steingass, 1281) as mail, or a network of steel worn under the cap or hat, or worn in battle as a protection for the face, also a helmet. It is evidently

the long piece of mail hanging down from the helmet over the neck and back, as shown in N°. 45, plate xii, of the *Āīn*, vol. i, and called there and on p. 111, N°. 54, the *zirihkulāh* (cap of mail). It was through the *mighfār* that, according to Ghulām ʿAlī Khān's history, the arrow passed which wounded ʿAbdullah Khān, Qutb-ul-Mulk, just before he was taken a prisoner at the battle of Ḥasanpur (13th Nov., 1720), and the following verse brings in the word, as also the *joshan*: —

Chah yāre kunad mighfar o joshan-am,
Chūn Bārī na kard akhtar roshan-am.

"What aid to me is vizor and coat of mail,
"When God has not made my star to shine." [1]

Baktar or *Bagtar*. — This is the name for body armour in general, whether it were of the cuirass (*chahār-āīnah*) or chain-mail (*zirih*) description. Steingass, 195, defines it as a cuirass, a coat of mail See also the *Dastūr-ul-Inshā*, 228. The *bagtar* is N°. 58 in the *Āīn* list (i, 112), and is shown as N°. 47 on plate xii. From the figure it may be inferred that, in a more specific sense, *baktar* was the name for fish-scale armour. *Bargustuwān*, as Mr. H. Beveridge has pointed out to me, is a general name for armour used in the *Tabaqāt-i-Nāṣirī*, text 119 (Raverty, 466 and note); but that work belongs to a period long before the accession of the Moghuls. Steingass, 178, restricts *bargustuwān* to horse armour worn in battle: the *Aḥwāl-ul-Khawāqīn*, fol. 218*b*, applies it to the armour worn by *elephants*, and I have found it in no other late writer.

Chahār-āīnah. — This is literally 'four mirrors': it

[1] *Muqaddamah-i-Shāh ʿĀlam-nāmah* by Ghulām ʿAlī Khān, B.M. Add. 24,028, fol. 40*a*. The last line probably contains an allusion to Roshan Akhtar, the original name of Muḥammad Shāh, to whom ʿAbdullah Khān succumbed.

consisted of four pieces, a breast plate and a back plate, with two smaller pieces for the sides. All four were connected together with leather straps. Steingass, 403, has 'a kind of armour.' It is N°. 50 in the *Ā'īn*, i, 112, and figure N°. 49 on plate xiii It is also shown in Egerton, plate ix, and again on p. 144. The specimens in the Indian Museum are N° 364 (p 103), 450, 452 (p. 112), 569, 570 (p. 119), 587 (p. 124), 707 (p. 135), 764 (p. 144).

Zirih. — This was a coat of mail with mail sleeves, composed of steel links (*Dastūr-ul-Inshā*, 228). The coat reached to the knees (W. Egerton, 125, note to N°. 591). It is N°. 57 in the *Ā'īn*, i, 112, and N°. 46 on plate xiii of that volume There are six examples in the Indian Museum—W.E. 361, 362 (p 103), 453 (p. 112), 591, 591 T (p. 125), 706 (p. 135). Apparently, judging from the plate in the *Ā'īn*, the *baktar* (fish scales) or the *chahār āīnah* (cuirass) was worn *over* the *zirih*. W. H. Tone, "Maratta People," 61, note, gives a word *beuta* as the Mahratta name for the chain-mail shirt that they wore. I cannot identify or trace this word.

Jaibah. — Blochmann, *Ā'īn*, i, 111, N°. 56, and his note 4, says it was a general name for armour. He gives no figure of it. Erskine, "History," ii, 187, has *jaba*. Steingass, 356, says it is from the Arabic *jubbat*, and spells it *jubah*, a coat of mail, a cuirass, any kind of iron armour. The word is used in the *'Alamgīrnāmah*, 245, l. 7: — "*Tan ba zeb-i-jabah o joshan pairāstah*" — "body adorned with the decoration of *jabah* and *joshan*." It is also used in *Aḥwāl-ul-Khawāqīn* (*c.* 1147 H.), fol. 164*a*, in the form *jaibah*. Some variety of the *jaibah* is spoken of in the *Akbarnāmah*, Daftar II, p. 249, line 4 (Lucknow edition), where we are told that a Rajput of distinction in the garrison of Chitor wore a *jaibah-i-hazār-mīkhī*. Apparently it was covered with small studs or knobs (*mīkh*).

Other items of body armour (*Dastūr-ul-Inshā*, 228) were the *joshan*, the *jihlam*, the *angarkhah*, the *daghlah*. In

other authorities we also meet with the *jāmah-i-fatāḥī*, the *chihilqad*, *ṣādiqī*, the *kothī*, the *bhanjū*, and the *salhqaba*. Of the last, the *salhqaba*, *Āīn*, N° 66, we have no figure, and I am unable to identify it, as I have never seen the word elsewhere. Other words which have defied identification are *harhai*, as I read it (B M. 6599, fol. 162*a*; B.M. 1641, fol. 37*a*), and three articles in the *Dastūr-ul-Inshā*, p. 228, which I read *sūbī*, *malk*, and *masarī*. We have also the *kamal*, the *ghughwah*, the *kanthā-sobhā*. Finally, there were the *dast-wānah* or arm-pieces, the *rānak* or greaves, and the *mozah-i-āhanī*, a smaller pattern of leg-piece

Joshan. — This is N°. 59 of the *Āīn*, list, p. 112, and is figured as N°. 48 on plate xiii. It appears to be a steel breastplate extending to the region of the stomach and bowels. Blochmann, p. xi, calls it an armour for chest and body; Steingass translates more vaguely 'a coat of mail.'

Jihlam. — According to the dictionary (Shakes., 825), this is the Hindī for armour, coat of mail, vizor of helmet; but I do not know what was its special nature or form. Steingass, 405, has *chahlam*, a sort of armour, also *chihaltah*, a coat of mail. Kām Rāj, 58*b*, has a passage — "Mīr Mushrif came quickly and lifted his *jihlam* from his face." This makes the word equivalent to vizor. It is not in the *Āīn*.

Angarkhah. — Hindī for a coat, possibly identical with that sometimes called an *alkhālıq* (a tight-fitting coat). Probably this coat was wadded so as to turn a sword-cut. It is N°. 63 of the *Āīn*, i, 112, and figure N°. 52 of plate xiv, where we see it a long, loose, wide coat worn *over* the armour.

Daghlah or *Daglā*. — The second of these is the Hindī form of the word. It was a coat of quilted cloth.

Jāmah-i-fatāḥī. — This word is employed in the *Akbar-nāmah* (Lucknow edition), ii, 89, line 3. According to the editor's note it is "a robe which on the day of battle is

put on beneath the coat of mail, and on it extracts from the Qurān, such as *Annā fatahnā*, are inscribed." Steingass, 351, defines it as "a fine silken robe" The coats worn by the Khalīfah's men in the Sūdān, and now at the United Service Institution, must be specimens, as they have words embroidered or sewn on to them.

Chihilqad. — This is N°. 67 of the *Āīn*, 112, and is shown as figure N°. 54 on plate xiv Muhammed Qāsim, *Ahwāl-ul-Khawāqīn*, 161*b*, spells it چهلقه, *chalqat*. It was a doublet worn over the armour, and possibly identical with the *chiltā* or *chihal-tah*, literally forty-folds (Shakespear, 884; Steingass, 398).

Ṣādiqī. — *Āīn*, 112, N°. 62, and N°. 51 on plate xiv, a coat of mail something like the *joshan* in shape, but with epaulettes.

Kothī — We have this in the *Āīn*, 112, N°. 61, and it appears on plate xiv, N°. 50, as a long coat of mail worn under the breastplate and opening down the front.

Bhanjū. — This is N°. 64 of the *Āīn* list, i, 112, but I have never seen the word anywhere else, it must be a Hindī word, but it is not in Shakespear's Dictionary The only figure is the one reproduced from Langlès by Egerton, N°. 9 on plate i, opposite p 23. This might be almost anything; the nearest resemblance I can suggest is that of a sleeveless jacket.

Kamal. — This word is literally 'a blanket,' and from it the corps known as the *kamal-posh* (blanket-wearers) derived its name. The word seems to have had the secondary meaning of a cuirass or wadded coat, possibly made of blanketing on the outside There were wadded coats of quilted cotton, as well as of wool, which would stand the stroke of a sabre. Some stuffed with silk refuse were considered capable of withstanding a bullet (*Seir*, i, 143, note 105). This sort of protection was very common. "Almost every soldier in the service of a native power has his head secured by many folds of cotton cloth, which not only pass round but likewise over it and under the chin;

and a protection for the back of the neck is provided of similar materials. The jacket is composed of cotton thickly quilted between cloths, and so substantial as almost to retain the shape of the body like stiff armour. To penetrate this covering with the edge of the sword was to be done only by the practice of cutting." (Valentine Blacker, "War," 302).

Ghughwah. — This must, from its position in the *Āīn* list, N°. 55, be some kind of armour, but I cannot identify the word, which is of Hindī form. In plate xiii, N°. 44, the *thing* is shown as a long coat and cowl of mail, all in one piece. In Egerton's plate (N°. i, figure 4) it is something quite different, of a shape which it is difficult to describe, and for which it is still more difficult to suggest a use The *word* seems to have some affinity to *khoghī* or *ghūghī* (see *ante*). It represents the Eastern Hindī form of *ghoghā*, following the usual rule of vowel modification, thus: H. H., *ghoṛā*; E. H., *ghurwā*, 'a horse.' There being also a slight indication of the diminutive in this form, *ghughwā* would be a small *ghoghā*. There is a chain epaulette shown in one of the plates in Rockstuhl and Gille, which suggests the shape of the *ghughwā* figured by Egerton, and possibly that was its purpose.

Kanthā-sobhā. — This is N°. 70 in the list in the *Āīn*, 112, and, as we can see from figure 7 on plate i of W. Egerton's catalogue, it was a neck-piece or gorget. N°. 69 (*rānak*) and N°. 71 (*mozah-i-āhanī*) are both worn by the man and not the horse; then why does Blochmann, in his note, suggest that N°. 70 (*kanthā-sobhā*) was attached to the *horse's* neck? The derivation is from *kanthā* (Shakes., 1616) a necklace, and *sobhā*, *id.* 1338, ornament, dress, decoration.

Dastwānah. — This was a gauntlet, or mailed glove, with steel arm-piece. It is N°. 68 of the *Āīn*, 112, and is shown as N°. 55 on plate xiv. The specimens in the Indian Museum are N°s. 452, 453, 454, 455 (Egerton,

p. 112), 568, 570 (*id.* 119), 587, 590 (*id.* 124), 745 (*id.* 139). Three of these are shown, two on plate xii, opposite p. 122, and one on plate xiv, opposite p. 136.

Rānak. — In the *Āīn* list, 112, N°. 69, appears the word *rāk* or *rāg*, which is quite unmeaning. When we turn to N°. 56 on Blochmann's plate xiv, we see that the thing itself is an iron leg-piece or greave. Now, wherever there are lists of armour in the MS. *Dastūr-ul-ᶜAml*, I find a word رانک, which is invariably shown with a fourth letter of some sort; it might be read *rātak*, *rālak*, *rānak*, but never *rāk* As *rān* means in Persian the 'thigh,' I propose to substitute for Blochmann's *rāk* the reading *rānak*, the diminutive ending being used to denote relation or connection, a formation like *dastak* (little hand), a short written order, fit to be (as it were) carried in the hand. The word *rānak* is not in Steingass.

Mozah-i-āhanī. — This "iron-stocking" is N°. 71 on page 112 of the *Āīn*, and N°. 56 on plate xiv. It is a smaller form of the *rānak*.

Patkah. — I find in Ghulām ᶜAlī Khān, *Muqaddamah*, fol. 38*b*, an epithet پتکه پوشان, *patkah-poshān*, applied to both Sayyads and horse-breakers (*chābuk-suwārān*). It appears to refer to some part of military equipment, but what it is I do not know. It is evidently used in a depreciatory sense.

Having enumerated the man's defensive armour, we go on to that of the horse. The elephant armour I will leave till we come to the special heading devoted to those animals.

Kajīm. — This is in *Āīn*, 112, N°. 72 (*kajem*), and is shown as figure N°. 57 on plate xiv. Erskine. "History," ii, 187, has the form *kīchīm*. It was a piece of armour for the hind-quarters of a horse, and was put on over a quilted cloth called *artak-i-kajīm* (*Āīn*, 112, N°. 73).

The other pieces of armour for the horse were the frontlet (*qashqah: Āīn*, 112, N°. 74, and plate xiv, N°. 60) and the neck-piece (*gardani: Āīn*, 112, N°. 75). Blochmann's

description of the latter (p. 112, note 3) does not seem very appropriate, as he makes it a thing which hangs down in front of the horse's chest. *Gardani*, however, is the name still applied to the head and neck-piece, the hood, of a set of horse-clothing. It is the neck-shaped piece in figure N°. 58 of Blochmann's plate xiv, and is separately shown in Egerton's plate i, figure N°. 3. *Qashqah* is the word used in Persian for the Hindu sect-mark or *tilak*, applied on the centre of the forehead. R. B. Shaw, J. A. S. Bengal for 1878, p. 144, gives *qashqah* as the Eastern Turkī for an *animal's* forehead.

Horse trappings were often most richly adorned with silver or gold, embroidery or jewels. When so enriched they were styled *sāz-i-tilāe*, or *sāz-i-maraṣṣa*ᶜ The names of the various articles are as follows (W Egerton, 155): *paltah* (headstall) and *ʿinān* (reins), *zerband* (martingale), *dumchī* (crupper), *khogir* (saddle), *ūstak* (shabracque), *bālā-tang* (surcingle), *rikāb* (stirrups), *shikārband* (ornamental tassels at corners of saddle). The bow or pommel of a saddle was either *qarbūs* (Steingass, 963) or *qāsh* (id. 947). The former word is used by Shekh Ghulām Ḥasan, (Samīn) Bilgrāmī, in his *Tazkirah* written in 1198 H. (1783); the second, by Rustam ʿAlī, Bijnorī, in his Urdū "History of the Rohelas," written about 1803, fol. 28*a*. Nizām-ud-dīn (ʿIshrat, Siyālkūtī) in his *Nādir-nāmah*, fol. 50*a*, speaks of *yaltang-posh* as some sort of horse equipment. I have not been able to find out what this was. The list of stable requisites can be seen in *Āīn*, i, 136.

CHAPTER VIII.

EQUIPMENT. — (B) OFFENSIVE ARMS; I, "SHORT" ARMS.

The cavalry seem to have carried a great variety of arms. The most relied on were those they styled the *kotah-yarāq* or short arms, that is, those used at close quarters, corresponding to the European "arme blanche." Probably the *kotāh silāh* of Budāonī, i, 460, (Ranking, 593) has the same meaning, and not as Ranking suggests that of a deficiency or shortness of weapons. These short arms may be ranged into five classes (I) Swords and shields, (II) Maces, (III) Battle Axes, (IV) Spears, (V) Daggers. Weapons for more distant attack were (A) the bow (*Kamān*) and arrow (*Tir*) (B) the Matchlock (*bandūq* or *tufang*) and (C) the Pistol Rockets were also used, but they were in charge of the artillery (*topkhānah*) and will come under that head.

Out of the wealth of weapons, a description of which follows, it is not to be supposed that the whole were carried by any man at one time; but a great number were so carried, and, in a large army, all of them were to be found in use by some one or other. The great number of weapons that a man carried is graphically depicted by Fitzclarence, in the case of a petty officer of the Nizām's service, who commanded his escort (*Journal*, 134). "Two very handsome horses with superb caparisons belong to this jamadar, who is himself dressed in a vest of green English broad cloth [1] laced with gold, and very rich embroidered belts. A shield of buffalo hide with gilt bosses

[1] By Indian writers of the 18th century broad cloth of all colours is called *sqarlāt*, سقرلاط, i. e. scarlet.

is hung over his back. His arms are two swords and a dagger, a brace of English pistols, and he has his matchlock carried before him by a servant." The following satirical description from Moor's *Narrative*, 98, also shows what a number of different weapons would sometimes be carried. "Many of the sardars" (i. e. of the Nizām's army in 1791) "were in armour, and none of them deficient in weapons of war, both offensive and defensive. Two swords, a brace to half a dozen pistols, a spear, a crees, and matchlock-carbine constituted the moving arsenal of most of them. One man was mounted upon a tall, thin, skeleton of a horse, from whose shoulders and flanks depended, as a barricading, twenty or thirty weather-beaten cows' tails: two huge pistols appeared in his capacious holsters, while one of still larger dimensions, placed horizontally upon the horse's neck and pointed towards his ears, which were uncommonly long, dreadfully menaced the assailants in front. His flanks and rear were provided with a similar establishment of artillery of different sizes and calibres; one piece was suspended on each side of the crupper of the saddle, and a third centrically situated and levelled point blank at the poor animal's tail . . . . . The rest of his armament consisted of a couple of sabres, a spear, a matchlock and shield . . . . . He wore besides a rusty coat of mail from the lower part of which a large red quilted jacket made its appearance." The variety of weapons is again dwelt on with great effect in Wilks, iii, 135, "no national or private collection of ancient armour contains a weapon or article of equipment which might not be traced in this motley crowd" i e. Nizām ʿAlī Khān's cavalry in 1791.

I. Swords.

As to the mode of carrying the sword, Fitzclarence, *Journal*, 69, describing some irregular horse in the Company's service (1817), says "they have a sort of foppery with

respect to their sword-belts, which are in general very broad and handsomely embroidered; and, though on horse-back, they wear them over the shoulder." But the sword was not always carried in a belt hung from the shoulder. On plate 8 in B.M. Or. 375 (Rieu, 785), Aʿzam Shāh carries his sword by three straps hanging from a waist-belt. The generic name of a sword was *tegh* (Arabic), *shamsher* (Persian) or *talwār* (Hindī). The Arabic word *saif* was also used occasionally. One kind of shortsword was called the *nīmchah-shamsher* (Steingass 1445). It was the weapon carried by Ibrāhīm Qulī Khān in 1137 H. (1725), when he made his attack on Ḥāmid Khan at the governor's palace in Ahmadābād (Gujarāt), *Mirāt-i-Ahmadī*, fol. 179*a*. It is also to be found in the *Akbarnāmah*, Lucknow edition, ii, 225, second line. I have not seen in Indian works the word *palārak* used for a sword in *Mujmil-ut-tārīkh baʿd Nādirīyah*, p. 110, line 3.

Names of the various parts are (B.M. Nº. 6599 fol. 84*a*), *teghah*, blade, *nābah*, furrows on blade, *qabẓah*, hilt, *jāe-narela* (?), *sarnāl* or *muhnāl* and *tahnāl*, metal mountings of scabbard, *kamrsāl* (the belt?) [1], *bandlār* (?). The quality or temper of a blade was its *āb* (water) or *jauhar* (lustre). One name of the belt was *hamāʾil* (Steingass, 430, plural of *himālat*); and Khair-ud-dīn, *ʿIbratnāmah*, i, 91, uses the word thus, in repeating the speech of one Daler Khān and another man to Shāh ʿĀlam (1173 H.), "*fidwī az waqte kih sipar o shamsher rā ḥamāʾil kardah-em, gāhe ba dushman-i-khūd pusht na namūdah*": "Since we hung from our shoulders sword and shield never have we shown an enemy our back." Another word that I have seen used for a sword-belt is *kamr-i-khanjar*, see Steingass 1049; also Budāonī, text, 441, Ranking 566.

Shamsher. This word when used with a more specific

[1] This is described in *Qanoone Islām*, app. XXVIII, as a belt worn by *women*, consisting of square metal tablets hinged together. I find it named in native authors as part of men's equipment.

meaning, was applied to the curved weapon familiar to us as the oriental sword, or as it is frequently called, the scimitar. It is purely a cutting weapon, as its shape and the small size of the grip sufficiently demonstrate.

Dhūp. There was a straight sword, adopted from the Dakhin, of which the name was *dhūp*, it had a broad blade, four feet long, and a cross hilt. It was considered an emblem of sovreignty and high dignity, and was therefore displayed on state occasions, being carried in a gorgeous velvet covering by a man who held it upright before his master. It also lay on the great man's pillow when he was seated in darbār, engaged in the transaction of public business This kind of sword was conferred as a distinction upon successful soldiers, great nobles, or court favourites, (*Seir*, i, 549, note 54, i, 551, note 55, ii, 95, note 80, iii, 172, note 39). The *dhūp* was also spoken of as *ʿaṣā-shamsher*, i e staff-sword (*Dānishmand Khān*, 22nd Rajab, 1120 H.). Instances of its being conferred are found in the same historian (22nd Ramaẓān, 1119 H., twice, and 22nd Rajab 1120 H., once) Mr. Egerton, p 117, N°. 527, note, quotes from the *Āīn-i-Akbarī*, "Dhoup, straight blade, used by most of the Deccanees." I am unable to verify the reference; I cannot find the passage in Vol. I, (translation), and the word is not in Mr. Blochmann's index.

Khandā. This weapon is N°. 2 of the list on p. 112, *Āīn*, Vol. I, and from figure 2 on plate xii it would seem to be idential with the *dhūp.*

Sirohī. The *Maāsir-ul-Umarā*, iii, 152, tells us that these blades obtained their good repute from the work done with them in 1024 H. (1615), during a fight at Ājmer between Rājah Sūraj Singh, Rāthor, and his brother, Kishn Singh. "Whoever was struck on the head by these Indian blades was cleft to the waist, or if the cut were on the body, he was divided into two parts." Egerton, 105, says this sword had "a slightly curved blade, shaped like that of Damascus." There is no specimen in the India Museum. Hendley,

"Memorials of the Jeypore Exhibition," 1883, Vol. II, plate xxix, N°. 4, has a sword from the Alwar armoury, which he calls a *Shikārgah* or *Sirohī gaj bail* (?). The blade appears slightly lighter and narrower than that of the ordinary *talwār*. Evidently the name is obtained from the place of manufacture, Sirohī in Rājputānah, of which "the sword blades are celebrated for their excellence now as formerly," Thornton, 874. The town is situated in Lat 24° 59′, Long. 72° 56′, 360 miles S. W. of Āgrah.

Patta. This is a narrow-bladed, straight rapier, and is to be seen now chiefly when twirled about vigorously by the performers in a Muharram procession. It has a gauntlet hilt. The specimens in Egerton are N°. 402, 403, 404 (p. 110), 515 (p. 117) 643 (p 131) There are figures of N°. 403 and 404 on p. 104 of his catalogue

Guptī. In the *Āīn*, I, 110, this is N°. 3, and was a straight sword having a walking stick as its sheath, the name being from H *gupt*, concealed See also figure 3 on plate xii of the same volume. Egerton's entries are N°. 516, 517, 518, 519 (p. 117), 641, 642 (p 131) The head or handle in Blochmann's figure shows that the sword-stick and the fakir's crutch were closely allied in appearance, and might at times be united. The crutch is depicted in Egerton, p. 47, and again on plate xiii (opposite p. 126) N° 639 (p. 131), which is however only of dagger length. One of these crutches played a conspicuous part in the battle of Jājau in June 1707, Aʿzam Shāh, one of the contenders for the throne, whirling his crutch frantically, as he stood up on his elephant to urge on his troops. Jonathan Scott, II, part IV, 34, note 4, calls it "a short crooked staff, about three feet in length, not unlike a crozier, used by fakeers to lean on when they sit, and often by persons of rank as an emblem of humility."

Shields. Along with the sword naturally comes the shield, the two being almost as closely connected as the arrow and the bow. A shield (A. *sipar*, H. *ḍhāl*) was inseparable

from the sword as part of the swordsman's equipment. It was carried on the left arm, or when out of use, slung over the shoulder. The shield appears at Nos 47 and 48 in the *Ā'īn*, i, 111, and is shown on plate xiii as Nos 40 and 41. They were of steel or hide, generally from 17 to 24 inches in diameter. If of steel, they were often highly ornamented with patterns in gold damascening; if of hide, they had on them silver or gold bosses, crescents, or stars. Egerton in a note to N°. 695 (p. 133) gives a description of two magnificent steel shields which once belonged to the emperor Bahādur Shāh (1707—1712). The kinds of hide used were those of the Sāmbhar deer, the buffalo, the nīlgau, the elephant, and the rhinoceros, the last being the most highly prized Brahmans who objected to leather had shields made of forty or fifty folds of silk painted red and ornamented (Egerton, 111, note to N°. 434). More about shields can be seen in the same work, pp. 47, 48, 49 The specimens in the Indian Museum are numerous, see Egerton pp. 111, 118, 134, 139. The curious snake-skin (*nāgphanī*) shield, N°. 365 (p. 103), is not a Moghul weapon.

Chirwah and *Tilwah*. — According to the *Ā'īn*, Blochmann, i, 252, these were the shields carried by the *Shamsherbāz*, or gladiators, groups of whom always surrounded Akbar on the march, *Akbarnāmah*, (Lucknow edition), ii, 225, second line.

Fencing Shields. Following the *ḍhāl* or shield the *Ā'īn*, i, 111, has N°. 49, the *kherah*, کھیرہ, but there is no figure of it. I presume that this is the same word as گیروہ, *girwah* (Shaks., 1695) or گرواہ *garwah* (Steingass, 1081), both meaning a shield. I can find no word *kherah* in the dictionaries, but it might be *gherā*, घेरा, a round, a circle (Shakes. 1759), with allusion to the form of a shield. Again N°. 50 *Pahrī*, (*Ā'īn*, i, 111) is described by Blochmann, p. xi, as a plain cane shield. It is shown as N°. 42 on plate xiii. This must evidently be *Pharī*, फरी, Hindi for a small shield of cane or bambu

(Shakes. 580). The quaint implement, *mārū* or *singauta*, made of a pair of antelope horns tipped with steel and united at the butt-ends, Egerton, p. 111 and p. 133, also the *sainti* (id. 118 and plate x), may be classed as parrying shields.

II. The Mace.

This formidable-looking weapon, the mace (*gurz*), usually formed part of the panoply of a Moghul warrior, at any rate if he were of any considerable rank. It appears as N°. 25 in the *Āīn* list, i, 111, and varieties of it are entered under N°. 26 (*shashbur*) and N°. 29 (*piyāzī*). Blochmann gives no figure of the latter, N°. 29, and from his remarks on p. x he seems a little doubtful as to what it was. The *gurz* is shown in figure 23, plate xii, of the *Āīn* as a short-handled club with three large round balls at the end. Another kind, the *shashbur*, or lung-tearer [1], figure 21, has a single head, of a round shape; and from Egerton, 23, plate i, N°. 35, I should suppose that it was made up of semi-circular, cutting blades arranged round a centre. Of the *gurz*, or mace proper, there are three examples in the Indian Museum. N°. 466 (p 115 and plate x) is 2 feet 7 inches long, with a many bladed double-head, that is one head above the other; N°. 574 (p. 123 and plate x) has a globular head of 3 inches in diameter and a shaft of steel gilt, length 2 feet 2 inches; N°. 616 (p. 130) is 2 feet 2 inches long and has a steel shaft with a six-bladed head. Other weapons of a similar kind named by Egerton are the *Dhara*, the *Garguz* and the *Khandlī-Phānsī*. The *Dhara*, N°. 468 (p. 115), has a six bladed head and octagonal steel shaft; it is 2 feet long, and came from Kolhāpūr. Of the *garguz* there are four specimens. N°s 373 and 374 (p. 108 and plate x) have eight-bladed heads and basket hilts, one is 2 feet 7 inches

[1] Egerton, 21, says this weapon is mentioned by Bābar, but I have been unable to find the passage in P de Courteille's translation of the "Memoirs."

and the other 2 feet 8 inches long; N°. 467 (p. 115) is 7-bladed with basket hilt, length 2 feet 4 inches; N°. 469 (p. 115) is eight-bladed with a similar hilt, length 2 feet 10 inches. The *Khundlī Phānsī*, N°. 470 (p. 115 and plate x), is 19 inches long, has a head of open scroll work, and is probably one of the Bairāgī crutches already referred to. *Phānsī* means a noose in Hindi, but I do not see the appropriateness of the name here, nor do I know what *Khundlī* can mean.

The Flail (H. *sānt*) is another weapon that may be classed with the Mace. These are two specimens in the Indian Museum, Egerton N^os^ 62, 63 (p. 78), and one is shown as N°. 24 on plate i opposite p 23. I should also class among maces the *Pusht-khār* or back-scratcher, *Āīn*, i, 111, N°. 41, made of steel in the shape of a hand. It is shown as N°. 35 on plate xiii of Blochmann's volume The same is the case with the *Khār-i-māhī*, or fishback-bone, of steel spikes projecting from each side of a straight handle, *Āīn*, i, 111, N°. 41, and N°. 37, plate xiii. The *Gajbāg* put among weapons in the *Āīn*, i, 111, N°. 46, and N°. 39, plate xiii, is only the common elephant goad or *ankus*.

III. The Battle Axe.

The battle-axe (*tabar*) will be found at N°. 28 of the *Āīn*, i, 111 and on plate xii, figure N°. 22. This figure shows a triangular blade with one broad cutting edge. When the head was pointed and provided with two cutting edges, the axe was called a *Zāghnol*, or crow's beak (id. N°. 30, and plate xii, fig. 24). A double headed axe, with a broad blade on one side and a pointed one on the other side of the handle, was styled a *Tabar zāghnol* (id. N°. 32, and plate xii, fig. 26). An axe with a longer handle, called *Tarangālah*, was also in use (id. N°. 33 and plate xii, fig. 27, see also Egerton plate i, N°. 22).

Of the *Tabar* there are seven entries 375, 376, 377 (p. 108), 711, 712, 713 (p. 137) and 746 (p. 144). There is a figure of N°. 376 on plate x opposite p. 114. The shafts of these range from 17 inches to 23 inches in length; the heads measuring from 5 to 6 inches one way and 3 to 5 inches the other way. Some of the heads are crescent shaped, and one of the shafts is hollowed and contains daggers. I omit Egerton's *Parusa* (p. 7) and *Venmuroo* (N°. 89, 90) as not being Moghul weapons. There is also a weapon styled *Basolah*, N°. 31 of the *Āīn* list, i, 111. The name sounds as if it were derived from the Hindī *basūlā*, a carpenter's adze, but the figure, N°. 25, plate xii, looks more like a chisel than any other tool.

Silver axes highly ornamented were carried for display by the attendants in the hall of audience (Egerton, note to N°. 375, p. 108). These attendants were the *Yasāwal*, and Anand Rām calls the axes they carried *Chamchāq Mirāt-ul-Iṣṭilāḥ*, fol, 193*b*). Besides this form of the word, we find also *Chamkhāq*, *Chakhmāq*, *Chakhmāgh*, Steingass, 388, 399, "a battle axe fastened to the saddle."

IV. Spears.

The usual generic name used for spears of all kinds was the Arabic word *sinān*, pl. *asnān*, Steingass, 60, 698 The head or point was called *sunain*, *Mirāt-i-Aḥmadī* 176*a*, Steingass, 704; and the butt was the *bunain*, Steingass, id. There were several varieties of this class of weapon. The cavalry, however, seem to have confined themselves to the use of the lance (*nezah*), and the other kinds were used by foot soldiers and the guards surrounding the emperor's audience hall. There is also some evidence for the use, at any rate among the Mahrattas, of a javelin or short spear, which was thrown (Journal As. Soc. Bengal, XLVIII, 1879, p. 101). The kinds of spear mentioned in the *Āīn-i-Akbari*, i, 112, are five the *Nezah*, N°. 20, *Barchhah*, N°. 21, *Sānk*, N°. 22, *Sainthī*, N°. 23, and *Selarah*, N°. 24.

Nezah. This is the cavalry lance, a small steel head with a long bambu shaft. Steingass, 1442, has *Nezah* "a short spear, demi-lance, javelin, dart, pike" But this is not borne out by the usage of Indian writers, who by this word intend a long-shafted spear. It appears in the *Āīn*, i, 111, as N°, 20, and is shown at N°. 16 of plate xii. *Bhālā* I take to be only the Hindī equivalent for *Nezah*. Shakespear, 386, says *Bhālā* is from Sanskrit भल्ल, a spear about 7 cubits or $10^1/_2$ feet long, a lance with a narrow head. Including *Nezah*, *Bhālā* and *spears* (unclassed), I find nine entries in W. Egerton, vizt. 463 (p. 115) 606, 607, 608, 609, 610, 611, 612 two (p. 130). Of these one has a small head and long bambu shaft; another a palmwood shaft and small triangular head, four have bambu shafts 12 to 15 feet in length, with heavy bossed butts and small heads, N°. 611, length 8 feet, head 16 inches; N°. 612 (two), length 9 feet and 9 feet 3 inches, head 21 inches.

The *nezah* or lance was so prominent a part of the Mahratta equipment that one writer Mhd Qāsim, Aurangābādī, (*Ahwāl-ul-Khawāqīn*, fol. 201*a* and elsewhere) instead of the usual "accursed enemy" (*ghanīm-i-laʿīm*) calls them *nezah-bāzān*, "lance-wielders." He thus describes, fol. 205*b*, their mode of using the lance: "They so use it that no cavalry can cope with them. Some 20,000 to 30,000 lances are held up against their enemy, so close together as not to leave a span between their heads. If horsemen try to ride them down, the points of the spears are levelled at the assailants and they are unhorsed. While the cavalry are charging them, they strike their lances against each other, and the noise so frightens the horses, that they turn round and bolt."

As to the usual mode of wielding the spear, we see in a picture of a battle, inserted between fol. 14*b* and fol. 15*a* of B.M., Or: 3610 (Rieu, Supp. p. 54, N°. 79) showing an attack on the elephant of Rafīʿ-ush-shān, that the man on horseback (ʿAbd-uṣ-ṣamad Khān) who is attacking the prince,

held his spear uplifted above his head at the full length of his arm. In other pictures the same attitude is seen in the case of horsemen attacking horsemen.

Barchhah. This is a Hindī word, also spelt *Barchhā* and *Barchhī*. W. Egerton, note to N°. 461, p. 115, quoting Tod's "Rajasthan," says "the Mahratta lance is called 'Birchha." This statement taken literally may be true; it is false, if taken as suggesting that the *Barchhah* is an exclusively Mahratta arm. We find the *Barchhah* in the *Āīn* list of Moghul arms, drawn up long before the Mahrattas had been heard of as a military power. It is a well known word and weapon all over Northern India, hundreds of miles from the Mahratta country. We have it figured as N°. 17 of plate xii of the *Āīn* (vol. I). Its distinctive feature is its being made wholly of iron or steel, shaft as well as head. See also Egerton's description, p. 123, note preceding N°. 574, of two specimens in the Codrington collection. This heavy spear could hardly have been wielded by a man on horse-back, and was no doubt confined to the infantry.

Sānk This form of the word is Blochmann's translitération, *Āīn*, i, 110, N°. 22. According to present day pronunciation it would be *Sāng*. The second mark over the letter *kaf* is very often omitted by scribes, and thus ک might easily stand for گ. *Sāng*, (Shakes. 1239) is from the Sanskrit शङ्कु or शक्ति, *shanku*, *shakti*. It was entirely of iron, but according to the figure in the *Āīn*, i, plate xii, fig. 18, it was much shorter than the *Barchhah*. On the other hand, those in the Indian Museum are 7 feet 11 inches in total length, of which the head occupies 2 feet 6 inches. They have long, slender, four-sided or three-sided heads, steel shafts, and the grip covered with velvet, (Egerton, N°. 72, p. 81, and figure on p. 79), N°. 461, two, (p. 115).

The Indian name for the modern bayonet is *sangīn*. This may probably mean a little *sāng*; and is possibly formed from *sāng* by a shortening of the vowel and the

addition of the diminutive termination ی nasalized. The long, slender, three sided or four sided head of the *sāng* presents a resemblance to the shape of a bayonet; and in Hindī it is not uncommon, in the case of inanimate objects, to employ the feminine termination "*ī*" as a diminutive, thus *golā*, a ball, *golī*, a bullet, *hāṇḍā* a cauldron, *hāṇḍi*, a small pot, *chakkā* a wheel, *chakkī*, a hand-mill.

Sainthī. This is a Hindī word, also spelt *saintī*. Shakespear, 1370, defines it as a dart, javelin, short spear, bolt. It is N°. 23 in the *Āīn*, i, 111, and appears as N°. 19 on plate xii. The shaft is still shorter than that of the *sāng*. It is not given in Egerton. Has the name any connection with *senṭhī*, Hindī for a kind of reed?

Selarah. This is N°. 24 of the *Āīn* list, i, 111, and it is figured on plate xii (N°. 20) as a spear with a head and shaft longer than those of the *sainthī* but not so long as those of the *sāng*. There is no mention of it in Egerton, and outside the *Āīn* I have never either seen the weapon or come across the word. Possibly the word has some connection with the Hindī *sel*, سیل, a spear, said to be (Shakes. 1368) from Sanskrit शल्य.

Other kinds of spears. Four names, *Ballam*, *Pandī-ballam*, *Panjmukh*, and *Lānge* occur in Egerton as kinds of spears, though omitted from the *Āīn*.

The *Ballam* is well-known in moderm Hindī, and is defined, Shakes. 354, as a spear, pike, lance. Egerton has two specimens, N^os^ 27 and 28 (p. 78), which are described as having barbed heads and wooden shafts, total length 5 feet 11 inches, of which the blade takes up 18 inches. On p. 123, quoting from the Codrington catalogue, Mr. Egerton says the *Ballam* is a short spear with broad head, used by infantry.

Pandi-ballam (Egerton N°. 29, p. 78) is a hog-spear with leafshaped blade, and bambu shaft, total length 8 feet 3 inches (blade 2 feet 3 inches).

Panjmukh is described on p. 137 in a note to N°. 710,

on the authority of the Codrington catalogue, as a "five-headed spear used by the people of Guzerat." The derivation is, of course, *panj*, five, *mukh*, head.

Lānge is mentioned on p. 123 in a quotation from the Codrington catalogue, and it is suggested that the word is a corruption of "lance." It has a four-cornered iron head with a hollow shaft.

Other designations for a spear are also to be found in Shakespear, vizt.:

Garhyā, (col. 1705), Pike, javelin, spear;

ᶜAlam, (1458), Spear (properly a standard or banner);

Kont, (1637) spear from Sans. कुन्त.

ᶜAlam I have heard used, but I never met with the two other words. To complete the long list I may as well add the sort of bill-hook or pole-axe, *gandāsā*, a steel chopper attached to a long pole, which is the weapon of the modern *chaukidār* or village watchman.

V. Daggers and Knives.

These were of various shapes and kinds, for each of which there was a separate name.

Kaṭār, *katārah*, *katārī*. This is a Hindī word, *kattār* (Shak., 1556), probably from the same root as the verb *kāṭnā*, to cut. The translator of the *Seir* (i, 549, note 53) thus describes it, "A poignard peculiar to India made with a hilt, whose two branches extend along the arm, so as to shelter the hand and part of the arm. The blade is very thick with two cutting edges, having a breadth of three inches at the hilt and a solid point of about one inch in breadth. The blade cannot be bent and is so stiff that nothing will stop it but a cuirass. The total length is 2 to 2½ feet, one half of this being the blade." The hilt has at right angles to the blade a cross-bar by which the weapon is grasped, and it is thus only available for a forward thrust. It is named in the *Āīn*, i, 112, being N°. 10 and it is fig. 9 on plate xii. There the blade is slightly

curved; Mustapha's description corresponds perhaps more nearly to fig. 4 of the same plate, the *jamdhar*. There are about twenty five specimens entered in Egerton (pp. 102, 109, 116, 131) and five of these are shown on plates ix, x (two) and xiii (two). The blades are of various patterns, and the length varies from 9 to 17½ inches. One N°. 340 is forked or two-bladed. Yule, "Glossary" 815, refers to two from Travancore which had blades of 20 and 26 inches. Others of great length are described by Mr. Walhouse in the "Indian Antiquary," vii, 193. The *Bānk* is called in Egerton, N°. 335, p. 102, the B. *katārī*, but the figure on plate ix shows it as being like a knife and without the handle characteristic of the *katār*. Stavorinus, quoted by Yule, "Glossary," 816, speaks of a dagger, the name of which he translates as *belly piercer*. No one seems to know what Indian word was intended unless it were the *kattār*, which may be translated the "cutter" (*quasi*, "piercer").

Jamdhar. This is N° 4 in the *Āīn*, i, 112, and figure N°. 4 in plate xii. This figure has the same handle as a *kattār*; but the blade is very broad and straight, while the *kattār* is given a curved blade. On the contrary Mr Egerton, p. 102, and plate ix, N^os^ 344 and 345, shows the *jamdhar katārī* with a straight blade and a handle to be held like one holds a table-knife or a sword. The etymology of the word as given by J Shakespear, 1790, is *jam*, from the Sanskrit यम, death, and *dhar*, from धार्, a sharp edge. But see also Yule, "Glossary", 358, under "Jumdud" (*jamdad*).

Khanjar. We are told by Steingass, 476, that this is A., for dagger, poinard. There are eight specimens in the Indian Museum, Egerton, 502 to 506 (p. 116), 626, 627*a*, 627 (p. 131): two are shown on plate x (opp. p. 114). Most of these have doubly-curved blades, and are about 12 inches long. The *Khanjar* is N°. 5 in the *Āīn*, i, 110; and on plate xii, N°. 5, it is shown as a bent dagger with a double curve in the blade and a hilt like a sword.

Figures Nos 5 and 7 on W. Egerton's plate vi (opp. p. 53) appear to be *Khanjar*. Mustapha, *Seir*, i, 152, note 114, says that "the *Khanjar* is a poinard, with a bent blade, peculiar to the Turks, who carry it upright and on the right side; but it is occasionally worn by both Persians and Indians, the latter wearing it on the left side and inclined." Our word "hanger" is derived from *Khanjar* (Yule and Burnell, 312). Then we have the

Jamkhāk, *Āīn*, i, 110, N°. 7, plate xii, N°. 7. If it were not for the middle letter *kāf* ک, I would have suggested that this word was a misreading for *chamkhākh* چمخاخ, a battle axe (Steingass, 389), see ante, under iii, Battle Axes. The figure in the *Āīn* shows a dagger and not an axe. — Could it be intended for *Chāqchāq*, a kind of knife?

Jhambwah, *Āīn*, i, 110, N°. 9, plate xii N°. 9 and Egerton 106 (p. 82), 486—9 (p. 116), 798—9 (p. 145). He also gives figures on plate i, N°. 29 (p. 23) and fig. 17 on p. 79. The *Jambwah* is also mentioned by him on p. 124 in a note to N°. 581. Steingass, 373, only gives *jambīyah*, "a kind of arms or armour." Shakespear, 789, has "a dagger." There are also some interesting remarks by Yule, "Glossary", 357, under "Jumbeea." He inclines to a derivation from *janb*, A., the side.

Bānk, *Āīn*, i, 110, N°. 8, and figure N°. 7, plate xii, Egerton, Nos 480—1 (p 115), and note to N°. 581 (p 124), figure 31 on his plate i, (opp. p. 23). The name evidently comes from its curved shape (बांक, a curvature, a bend, Shakes 275*a*).

Narsingh moth, *Āīn* i, 110, N°. 11 and figure 11, plate xii; Egerton, fig. N°. 30 on plate i (opp p 23).

All four of these weapons seem of the same class as the *Khanjar*, though varying slightly in form. The same may be said of the *Bichhwā* and the *Khapwah*. *Bichhwā*, literally "scorpion", had a wavy blade. It is mentioned by Egerton, 27, and there are specimens in the India Museum, Nos 490—8

CHAPTER IX.

EQUIPMENT. — (C) OFFENSIVE WEAPONS; II, MISSILES.

I exclude from this heading what is generally classed as artillery, weapons of attack which were not carried by the individual soldier nor discharged by him without assistance. The three kinds of weapon included are I, Bows and arrows, II, Matchlocks; III, Pistols. Of these the first was without comparison the favourite weapon, the cavalry nearly all carried it, and the Moghul horsemen were famed for their archery. It was feigned that the Bow and arrow were brought down straight from Heaven, and given to Adam by the archangel Gabriel. Weapons were estimated in the following order. The sword was better than the dagger, the spear better than the sword, the bow and arrow better than the spear, (*Risālah-i-tīr o kamān*).

The use of the bow persisted throughout the 18th century, in spite of fire-arms having become more common, better made, and their handling better understood. Nay, somewhat to our astonishment, we read in W. Forbes Mitchell's "Reminiscences of the Great Mutiny," p. 76, that he saw the bow used by the rebels at the second relief of Lakhnau in Nov. 1857. "In the force defending the Shah Najaf, in addition to the regular army, there was a large body of archers on the walls, armed with bows and arrows, which they discharged with great force and precision, and on a serjeant of the 93rd raising his head above a wall, an arrow was shot right through his feather bonnet. One man raising his head for an instant above the wall got an arrow right through his brain, the shaft projecting more than a foot

out at the back of his head. In revenge the men gave a volley. One unfortunate man exposed himself a little too long and before he could get down into shelter again, an arrow was sent right through his heart, passing clean through his body and falling on the ground a few yards behind him. He leaped about six feet into the air, and fell stone-dead."

One would have thought this to be the last occasion on which the bow was used in serious fighting by any but the merest savages. But Mrs. Bishop, writing from Chefoo on the 18th Oct. 1894 (St. James' Gazette, Dec 1st 1894), speaks of meeting large numbers of carts "loaded with new bows and arrows, with which to equip the Banner men of the capital (Pekin)." And this in the days of Krupp and Maxim guns!

The Matchlock, a cumbrous and probably ineffective weapon, was left mainly for the infantry. Pistols seem to have been rareties.

I. Bows.

The Moghul bowmen were considered to be especially expert with their weapon; as Bernier says, 48, "a horseman shooting six times before a musketeer can fire twice." The word *oqchī* quoted by Horn, 108, from the *Akbarnāmah*, is hardly to be found in the later writers, those of the 18th century; an archer is styled by them a *Tīr-andāz* (literally, arrow-thrower), not *oqchī* [1]. But that word is used by Anand Rām once in reference to Aḥmad Abdālī's first invasion in 1161 H. (I.O.L. N°. 1612, fol. 70*b*), though there the scribe has spelt it *aunchī*. Shakespear, 219, has what he classes as a Hindī word, *opchī*, defined as "A man armed with weapons or clothed in mail." May this not be a corruption of *oqchī*, an archer? This word, *opchi*, is used by Shridhar Murlīdhar in his poem on Farrukhsīyar, line 594, (Journal A.S.B. (1900) Vol. LXIX, i, 14, 39):

[1] Pavet de Courteille, Dict., 68, أوق, an arrow

पिले ओपची तोपची तोपी घनेरे
Pile opchī topchī topo ghanere.

"Gathered archers, gunners, guns, without end." Of course, this may be simply the reduplication so common in Indian vernaculars, such as *khānā-wānā*, food, *pānī-wānī*, water. Mhd Qāsim, Aurangābādī, *Ahwāl-ul-khawāqīn*, 288*a*, and a rather later writer, Khair-ud-dīn (c. 1203 H.), *ʿIbratnāmah*, 105, have *kamāndār* (bow-holder) for archer.

Charkh. In the *Jahān kushāe Nādirī* of Mirzā Mahdī, p. 233, (year 1151 H.) we have a reference to the *Charkhchi-bāshī*, or head of the *charkh* men. W. Jones, "Nader Chah", ii, 66, renders this by "maitre de l'artillerie", and is followed by the German translator, 293. Steingass has neither *charkhchi* nor *charkhchi-bāshī*. *Charkh* has many meanings: among them being "a wheel," "a cart," "a crossbow." Here I suppose we ought to render *charkh* by "cross-bow", and not by "artillery." *Charkhchī* is to be found in the *Mujmil-ut-tārīkh baʿd Nādirīyah*, p. 95, line 13.

Kamān. The Moghul bow (*kamān*) was about 4 feet long, and generally shaped in a double curve. The bow was of horn, wood, bambū, ivory, and sometimes of steel (Egerton, 81, note to N°. 80). Two of these steel bows, in the Emperor of Russia's collection at Zarkoe Selo, belonged to the emperor, Bahādur Shāh (1708—1712); they bear verses in his honour and are covered with rich gold damascened work (Egerton, 114, note to N°. 457). The grip was generally covered with velvet. Mr. Egerton, 144, describes the Persian bow in detail, and the same description applies, there can be little doubt, to the bows used in India, for there they copied everything Persian, and in fact many of the principal officers were themselves Persians.

Mr. Egerton says "the concave side of the bow (the convex when strung) was lined with several strings of thick catgut to give it elasticity and force. The belly is made of buffalo or wild goats' horn, jet black and of a

fine polish; glued to this is a thin slip of hard, tough wood. The ends are fashioned to represent snakes' heads. The horn is left plain, while the wooden back is decorated with rich arabesques of birds, flowers or fruit intermingled with gilding." Captain Thomas Williamson, "Oriental Field Sports", 87, describes thus the construction of the Indian bows kept for show or amusement, and also carried by travellers. They were of buffalo horn in two pieces curved exactly alike, each having a wooden tip for the receipt of the string; their other ends were brought together and fastened to a strong piece of wood that served as a centre and was gripped by the left hand. After being neatly fitted, they were covered with a size made of animal fibres, after which very fine tow was wrapped round, laid on thin and smooth. They were then painted and varnished.

The notch. The notches at the ends into which the string was fixed were called *goshah* (Steingass, 1104), literally "corner," also *sūfār* (*Dastūr ul Inshā*, 228, Steingass 709). The latter word is used in *Ahwāl-ul-khawāqīn* (c. 1147 H.), fol. 12*a*.

The string. This was called either *zih* or *chillah.* Hindī names are *rodā* [1], Shak., 1195, catgut, a sinew used as a bow-string, and *panach* or *panchak* (id. 552, 553). Bow strings were made of strong threads of white silk laid together until of the thickness of a goose quill. Whipping of the same material was then bound firmly round for a length of three or four inches at the centre, and to this middle piece large loops of scarlet or other colour were attached by a curious knot. These gaudy loops formed a striking contrast to the white silk (Egerton, 144). Captain Williamson, on the contrary, says, p. 87, that the string was composed of numerous thin catguts laid together without twirling, then lapped with silk in the middle and at the ends.

The finger stall. This was called *zihgīr* (Steingass 631),

[1] *Rodā*, a bow string, is in Steingass, 592. Is it Persian or Hindi or both?

bow-string holder, or *shast* (id. 743). It was also styled *Shast-āwez* (Anand Rām, *Mirāt-ul-Iṣtilāh*, fol, 155*b*, 182*a*). Of this last the etymology would be *shast*, the thumb, *āwez*, attached or fastened to, that is, a thumb-stall. Blochmann, *Āīn*, i, 111, N°. 42, and note 3, says the *shast-āwez* was a weapon resembling the *girih-kushā*, N°. 43, that is, a kind of spear. He has no figure of it. May he not have been mistaken, and is not Anand Rām's direct assertion to be preferred?

The bowman drew with his thumb only, the bent forefinger being merely pressed on one side of the arrow nock to secure it from falling, or as Dr. Weissenberg (quoting v. Luschau) says, p. 52, the forefinger was pressed on the nail of the thumb to strengthen the pull without increasing the exertion. To prevent the flesh being torn by the bow string the *zihgīr* had been invented (Egerton, 114). It was a broad ring, and according to a man's rank and means was of precious stone, crystal, jade, ivory, horn, fishbone, gold or iron. A very valuable *zihgīr*, part of the Lāhor booty, one that had belonged to Lord Dalhousie, is described in the "Daily Telegraph" of the 10th November 1898. It was formed of a single emerald and was $2\frac{3}{8}$ inches across at the widest part and $1\frac{1}{4}$ inches in depth. It bore an inscription which is thus translated: "For a bow ring for the King of Kings, Nādir, Lord of the Conjunction, from the Jewel House it was selected, 1152" (= A.D. 1739). From the date and the wording of this inscription it is to be inferred that it was part of the spoil carried off from Dihli. How it found its way back to Lāhor we do not know. Sometimes two thimbles were worn instead of a *zihgīr*, on the first and second fingers of the right hand. Upon the inside of this ring (the *zihgīr*), which projected half an inch, the string rested when the bow was drawn, on the outside the ring was only half the breadth, and in loosing the arrow the archer straightened his thumb; which set the arrow free. (Egerton, 114, quoting the *Book of Archery*,

136). By the use of the ring the distance to which an arrow could be shot was increased. But its use required skill and practice; the Hindūs used instead a thumbstall of leather (*Mirāt-ul-Iṣtilāḥ*, fol. 155*b*). These rings with a spare string were usually carried in a small box suspended at the man's side (Egerton, 114). Dr. S. Weissenberg, of Elisabethgrad, Russia, has devoted an article to these rings in the *Mittheilungen der anthropologischen Gesellschaft in Wien*, Band XXV (1895) pp. 50—56, where he gives figures of eight of them. He divides them into two classes 1) cylindrical, 2) with tongue-like projection. Those described by him are of bone or stone, and six out of thirteen were found in the ruins of Sarae, a former capital of the Qipchāq. See also a thumb ring of ivory (now in the Nuremberg museum) figured on the plate at p. 887 of A. Demmin, "Die Kriegswaffen", 4th ed., 1893.

Takhsh kamān. This is N°. 13 of the *Āīn* i, 110, and it is described by Blochmann, p. v, as a small bow It is shown in figure N°. 12 of plate xii Steingass, 288, defines *takhsh* as a cross-bow, an arrow, a rocket.

Kamān-i-gurohah. This was a pellet-bow, identical, I presume, with the modern *gulel*, with which boys scare birds from the ripening crops. It is N°. 38 in the *Āīn* i, 111 and appears as N°. 32 of plate xiii Steingass, 1085, has for *guroha*, a ball or spherical figure.

Gobhan. The sling, *Āīn* i, 111, N°. 45 and plate xiii, N°. 38, may as well be included here. The form in Shakespear 1727, is *gophan*. Khāfī Khān, ii, 656, uses the word *sang-i-falākhan* for the slings brought by the villagers who assembled in 1710 to aid in the defence of Jalālābād town against the Sikhs led by Bandah. Steingass, 936, has فلاخن, فلاخان, فلاسنگ, *falākhan, falākhān, falāsang*, a sling.

Kamthah, kamanth. This is the long bow of the Bhīls. We find it named in the *Āīn* list, i, 111, as N°. 39 under the first form; the second is that used by Anand Rām, Mukhliṣ, *Mirāt-ul-Iṣtilāḥ*, fol. 184*b*. Blochmann, p. x, in

describing fig. 33 of his plate xiii confounds the *kamṭha* with the *Kamān-i-guroha* or pellet bow. I think this must be wrong. Steingass, 1051, has a word *kamnait*, an archer, which he thinks might be from P. *kamān*, bow, *plus* Sanskrit, *netā*, owner. The word might, with more probability, be connected with the above words *kamṭha* or *kamanth*, just as *ḍhalait*, a man with a shield, comes from *ḍhāl*, a shield; or *gorait*, a watchman, from *agornā*, to watch According to Shakespear, 2258, *kamṭhā* is Hindī for a bow of bambu

The Bhīls held the bow by the foot, drawing the string (*chillah*) with the hand, and shooting so strongly that their arrows could penetrate an elephants' hide. W. Egerton, 75, quoting Tod's "Rajpoot Tribes" (a reference which I have failed in verifying) says the principal weapon of the Bhīls was the *kamptī* or bambū bow, with a string made of a thin strip of the elastic bark of the bambu. In their quiver were sixty barbed arrows each a yard long, those intended for striking fish having heads which came off the shaft on striking the fish. A long line connected this head and the shaft, so that the shaft remained on the water by way of a float.

Nāwak. This was a pipe through which an arrow was shot. As I understand it, this was either a cross-bow, or formed in some way a part of the ordinary bow. It was not, I think, a mere blow-pipe, like those used by the Malays for their poisoned arrows, as mentioned by Egerton, 97, 98, Nos 263—268. Those specimens of the pipe are 6 feet 6 inches to 7 feet 6 inches long, and the arrows used with them 12 inches long. The *nāwak* is N°. 14 of the *Āīn* list, i, 110, but there is no figure of it. The weapon was known at Farrukhābād in the 18th century (Journal A. S. B., XLVII, 331). Steingass 1382, has *nāo*, a trough, a pipe, and *nāwak*, dim. of *nāo*, a small arrow, an arrow for shooting birds, with notch on side; a tube through which an arrow is projected; a cross-bow; a reed or anything hollow.

Tufak-i-dāhan. The *Āīn* has also a blow-pipe, which it calls *tufak-i-dāhan* (lit mouth-tube), N⁰. 40, i, iii and N⁰. 34, plate xiii. Steingass, 314, defines this as a tube for shooting clay balls through by force of the breath.

Arrows. The arrow (*tīr*) is given at N⁰. 15 of the list in the *Āīn* i, 110, and it is shown as fig. 14*a* on plate xii. Another name, *sihām* is found in the *Mirāt-i-Ahmadī*, fol. 178*a*; it is the plural of *sahm*, an arrow, Steingass, 710; see also Lane, "Lexicon," 1454, *sahamahu*, iii. Captain Williamson, "Oriental Field Sports," 87, says that in Bengal there were two kinds of arrow shafts, the common kind made of reeds, and those used against tigers, made of wood. To the first kind the heads were attached by resin; in the second kind, a hole was bored and the head while red-hot was forced into it Some arrows in the India Museum are 2 feet 4 inches long (Egerton 130, N⁰ 604) One as long as 6 feet, obtained at Lakhnau in 1857, must have been used with a large bow. The names of the parts of an arrow were for the shaft[1] P. *kilk*, lit. reed, Hindī, *sārī* (Shakes. 1285, also the name of a kind of reed), for the head, P. *paikān*, H. *bhāl*, for the feathers, P *par*. The feathers were frequently black and white mixed (*ablaq*). Ordinarily the head was of steel, but the Bhīls used arrow-heads of bone

Tukah, Tukkah — This was the name of an arrow without a head. One was said to have been fired in anger by Āᶜzam Shāh at his principal general, Ẓu'lfiqār Khān, at Jājau on the 18th June 1707, - Yaḥyā Khān, fol. 113*b* Steingass, 819, explains the word as "an arrow without a point, but with a knot at the end."

In the 18th century the kinds of arrows in use among the

[1] In Budāonī (Printed Text, i, 418, l. 3) there is an expression, *katībah-i-bāsh*, which Blochmann marked as doubtful in his copy (now in my possession), without suggesting any alternative, Ranking, 537, substitutes *katāh-i-bās*, and translates "bamboo shaft" I cannot find *katah* in the dictionaries, Persian or Urdū, unless it be a form of कठ *kaṭh*, "wooden." If so, "wooden-bambu" seems an odd combination.

Pathans of Farrukhābād (Journal A. S. B., XLVII, 332) were 1) *Lais*, Shakes., 1809, twig, practising arrow, 2) *qalandara* 3) *kohar-tarāsh*, 4) *ghera*, broad-headed, 5) *nuktah*, or perhaps *na-katta*, headless arrow, lit. non-cutting; compare Egerton 137, note preceding N°. 710, as to the blunt, heavy arrow used in Sind, 6) *thūth*, or perhaps better, *thonṭh*, Shakes 743, H. for beak, bill, 7) *ankrī-dār*, with a bent head shaped like a saddle-maker's needle (*ankrī*, a hook), i. e barbed. In his time (1780—1807) Captain Williamson, 87 found some very broad arrow heads in use in the west o Bengal, towards Bahār. There was one of crescent shape more than four inches across at the barbs. Though they did not penetrate easily, yet when they happened to graze a limb, they cut desperately. When discharged among bodies of troops they were found to do amazing mischief. The following names of arrows are found in *Dastūr-ul-Inshā* 228, 1) *gherah*, broad-headed, 2) *do muhānah*, two pointed or barbed, 3) *tarah-i-māh*, fullmoon or circular head 4) *tarah-i-halāl*, crescent shaped head, 5) *tarah-i-bādām* almond-shaped head, 6) *tarah-i-toko?*, 7) *sih-bhālah*, three-spear headed, i. e. trident-shaped, 8) *tarah-i-khornī*, 9 *tarah-i-khār*, thorn-shaped, 10) *tarah-i-khāki*, Shakes. 974 epithet of a kind of arrow, what kind he does not say James Fraser, *Nadir Shah*, 143, note, thus describes the arrow used for practising at the earthen target described a little further on. "The arrows for this exercise have the iron part quite round, about four fingers long, of the size of the reed until near the point, where they are somewhat thicker, from which part they taper gradually to a sharp point. The length from the thickest part to the point is from a quarter to one inch."

Symbolical use of arrows. — The pagan Arabs used arrows in a game of chance, Hughes, "Dict. of Islam," p. 309, under *Al maisir*, الميسر. Divining by arrows was forbidden by Muḥammad, *see* Sale's "Preliminary Discourse" section v, and the Qurān, v, where the word used is

zalmun (singular) *azlāma* (plural), an unfeathered, unpointed arrow. The mode of procedure is set out in E W. Lane's Lexicon, p. 1247, under *zalamun*, "he cut off", section viii. The practice, however, survived in spite of the prohibition; and in 1544 we find Humāyūn getting into trouble with Shāh Tahmāsp on this account. He marked twelve of his best arrows with his own, and eleven inferior ones with Tahmāsp's name-Erskine, "Baber and Humāyūn," ii, 289.

Shooting an arrow into the air is said by Portuguese writers to have been a recognized mode of declaring war in the Vijyanagar state and Malabar The particular instance is of 1537 at Diū, where Bahādur of Gujarāt ordered an arrow to be shot into the air as a declaration of war - Whiteway, "Portuguese in India", 249, note 1, on the authority of Castanheda, ii, 16 (reprint of 1833) and Correa, iv, 708, "Lendas da India", 4 vols, 1858—61. I have not met with mention of this practice in any native author, and Major J. S. King informs me that he knows of none. Perhaps it was of Hindu origin.

At the same place Mr. Whiteway mentions the gift of an arrow from the King's quiver as a security for peace. The King's quiver was also used as a symbol of authority (Whiteway, *loc. cit*). The instance given is from the *Mirāt-i-Sikandarī*, where Humāyūn in 1537 released Bahādur Shāh's minstrel, and bound his own quiver round the man's loins. Clothed with this authority, every prisoner that the minstrel claimed as his relation was released (Bayley, "Gujarāt", 389) Another instance of this practice is to be found in the *Tārīkh-us-Sind* of Muhammad Maʿsūm, under the year 924 H. (1518), where Shāh Beg, Arghūn, gave an arrow to the *qāẓī* of Taṭṭah (Malet, p 80)

Quiver. The Persian name is *tarkash*: but I have found the Arabic word *jaʿbah* used once on fol. 59*b* of the *Farrukhnāmah* of Shekh Muḥammad Munʿīm, Jaʿfarābādī (4th year of Farrukhsīyar). It was generally a flat case, broad at the mouth, one side straight and the other sloping to a

point, provided with a strap for carrying over the shoulder. This broad shape is due apparently to the fact that the quiver was used to hold the bow as well as the arrows, see plate xvii in B. M. Addl. 5254 (Rieu, 780), and the plate in Valentyn, opposite iv, 304. There must have been, however, separate bow-cases, *qirbān*, for they are named as well as the *tarkash*, or quiver, in Kāmwar Khān's entry of the 21st Zūl Qa'dah 1134 H. In the India Museum are five specimens, Egerton, Nos 367, 369 (p. 108), 460 (p. 115), 601, 602 (p. 130). Of these one is of an unusual shape, namely, cylindrical. Common quivers were covered with leather, more costly ones with blue or red velvet, and these were often embroidered on one side in gold or silver. These covers sometimes were applied to strange uses. During Humāyūn's exile in Persia (1544), Shāh Tahmāsp folded up his carpet, so that no one could share any portion. Humāyūn would thus have been forced to sit on the bare ground, when one of his followers took off the ornamented cover of his quiver, tore it open and spread it as a seat for his master, Erskine, "Baber and Humāyūn", ii, 294. The quiver is No. 16 of the *Āīn* list, i, 110, and it appears as figure No. 15 on plate xii. One of a slightly different shape from the usual pattern is given in Egerton's plate i (p 24), copied from that in Langlès' "Monuments." Here the quiver is the same width all the way down, having one side straight and the other shaped in two crescent-like curves.

The Leather Guard (*Godhū*). This is mentioned in Egerton, 114, and it was worn on the left arm. That is, I suppose, if the shooter were not in armour, and thus already provided with a mailed glove and steel arm-piece. Hansard, "Book of Archery", 137, speaks of one as "a quilted half sleeve of common velvet or fine cloth, which protects the arm from being bruised by the chord in its return". The word *godhū* I have not been able to trace. Two Central Asian arm-guards, one of bone and one of iron, are figured

by Weissenberg, l. c. p. 54. They are now in the Ethnographical Museum at St. Petersburg

Paikān-kash. This word is from *paikān*, arrowhead, *kash* root of *kashīdan*, to draw out. The implement was shaped like a pair of pliers, and as its name implies, was used to extract arrow heads from the body. It is N°. 19 of the *Āīn* list, i, 110, and figure N°. 146 on plate xii. The *tīrbardār*, N°. 18, (if the reading be correct) was another instrument for the same purpose

Target. This was the تودہ, literally, heap, Steingass, 334 *todah*, Shakes., 700, *tūdah*. The latter is the present Indian pronunciation of the word. To secure a more perfect use of the bow and arrow it was usual to erect near an officer's tents a mound of earth, into which he or his men shot a certain number of arrows every day. It is referred to *en passant* by W Egerton, 106, as a practice of the Rajputs but its use was general and not by any means confined to them. For instance, we find this target in use by Nādir Shāh, who shot five arrows into one every afternoon. It is thus described by James Fraser, *History of Nādir Shāh* 143, note, "*Khak Towda* is a heap of fine mould well sifted and beat strongly in between two stone walls. 'Tis five foot high, three feet thick, and from three to four feet broad. The front of it is very smooth and even, beat hard with a heavy trowel. One who is well skilled can shoot his arrow into to it quite to the head; whereas one that shoots ill (be he never so strong) can't put a third part in". In a general sense the word for a butt or target, or the object aimed at, was *hadaf* (Steingass, 1492).

Modes of Shooting. We are told in the *Risālah-i-tīr o kamān* that in archery there were twelve maxims to be obeyed. Of these three required firmness, (1) Hold the grip of the bow tight, (2) Keep the forefinger firm, (3) When the arrow is let fly, keep the advanced foot firm Three things required easiness (1) the left side should be kept easy (2) the left foot the same, and (3) the other

fingers. Three things required straightness (1) the body should be erect (2) the forehead held up (3) the elbow straight. Other three things were single: (1) use one side, (2) use one eye, (3) keep both hands in one direction. An arrow could have seven faults: (1) too wide a notch, (2) the shaft to be *karm*?, (3) the head imperfect, (4) the head too heavy, (5) the top end and butt of the shaft hollow, (6) the shaft not straight, (7) the bow too stiff. In shooting at a horseman 200 yards off, you should aim at his cap, if 100 paces off, at his mouth, if 50 paces, at his saddle. By so doing you will hit him in the chest. A good archer needs to practise constantly with the *Lezam*, a bow with an iron chain instead of a string There are three ways of gripping the bow, *Changal-i-bāz* (literally, "Hawk's claw"), *muharraf* (diagonally, on the slant), *marabba*ᶜ (square), according to the length of the shooter's fingers The arrow should be held without moving, and the advanced foot kept flat on the ground. As you let fly at the mark, you ejaculate, "In the name of God". Shekh Allahyār Sānī, *Ḥadiqat-ul-aqālim* (ms additions in my copy), under Bilgrām, speaks of one ᶜAbd-uṣ-Ṣamad, a perfect bowman, who taught the author to shoot in three ways, 1) in the style of the master Tāhirī, 2) *qabzahgar*, 3) *musht*. Until that time Allahyār had shot only in the mode of Bahrām.

Captain Williamson, "Oriental Field Sports", 87, says the bow was strung by placing one end under the thigh, and with both hands bringing the other end into due position, when the string was easily slipped into the groove made for it. Thirty inches of string was a common length, though some were longer. With a new bow it required a strong hand to bring the arrow up to its head.

The left hand was placed opposite the right breast, just far enough from the body to allow clear action: the butt of the arrow was pressed to the string, the fore and middle fingers of the right hand were then drawn steadily, until the head was

near the forefinger of the left hand. The bow was always held perpendicularly. Native archers rarely missed an object the size of a tea cup at sixty or seventy yards, and Captain Williamson at Lucknow repeatedly saw a man lodge an arrow in a common walking stick at that distance The hill people of Bengal were also very expert with the bow. They would lie on their back, steadying the bow with their feet horizontally, and at a distance of two or three hundred yards send the arrow through a common water pot, not more than a foot in diameter. They could shoot kites flying, and indeed rarely missed their object.

II. Matchlock.

This was the *tufang* (Steingass, 314) or *bandūq* (id 202)[1]. Great credit is claimed for Akbar in the *Āīn*, i, 113, for the improvements introduced by him in the manufacture of the matchlock In spite of these, that weapon up to the middle of the 18th century was looked on with less favour than the bow and arrow, which still held their ground. The matchlock was left chiefly to the infantry, who occupied a much inferior position to that of the cavalry in the opinion of Moghul commanders. It was not until the middle of the 18th century, when the way had been shewn by the French and the English, that efforts were made to improve the arms and discipline of the foot soldier.

The barrels of Akbar's matchlocks were of two lengths, 66 inches and 41 inches. They were made of rolled strips of steel with the two edges welded together. Both the barrels, (*nāl*, literally, pipe, tube, Steingass, 1378) and the

[1] The Madras Manual of Ad, III, 915, has a word *tūpak*, a small cannon, a musket, which I have seen only once elsewhere, namely, in verse 60, line 2, of a Hindi poem on Nādir Shāh by one Tilok Dās (Journal As. S. B. (1897) Vol. LXVI, Part I, p. 10) Of course, in the above form the word would represent the diminutive of *top*, a cannon. But may it not rather be the Indian pronunciation of *tufak* (St 314, another form of *tufang*, a matchlock)?

stocks (*qundāq*, T. id. 970) were profusely decorated with the surface ornament for which India, like the rest of the East, is so justly celebrated The longer of the two weapons could only have been used, I should say, by a man on foot Part of the matchlockman's equipment was a prong or tripod, called *shākh-i-tufang*, on which the gun was placed when about to be fired (*Mirāt-ul-Iṣtilāh*, fol. 178*a*). Ashob, fol 182*b*, calls them *sih-pāyah*, i. e. three footed or tripods. Seaton says, i, 207, that the prong was sometimes attached to the weapon. According to Bernier, 217, the prongs were of wood.

I find in W. Egerton, pp 83, 110, 111, 118, 124, 132 133, 139, 145, about sixty specimens of the musket and the matchlock. The latter he calls *toṛedār* (Shakes., 702, H a matchlock, from *torā*, a piece of rope, a gun-match) Thirteen of these guns are figured on plates iv (p 51) and x (p. 114), and among the figures on p. 79. One matchlock is a miniature weapon, one a revolver with four chambers, one has a rifled barrel, five have flint, and four percussion locks, these latter obvious modern imitations of European models. The other forty-eight are types of the ordinary matchlocks Of these the shortest is 4 feet 7 inches and the longest 7 feet in length One, N°. 671, length 6 feet 5 inches is called a wall-piece; if so, Nos 551, 584 585, which are longer, must be the same. Two of the specimens have octagonal barrels, a third has a barrel not only square outside but having also a square bore.

Guns of European make (*tufang-i-farang*) were much prized, but were only found in the possession of the greatest nobles. It was with one of these, as Mhd Qāsim Lāhorī, tells us, *ʿIbratnāmah*, 352, that a slave seated behind his master, Ḥaidar Quli Khān, Mīr Ātash, shot Sayyad Ghairat Khān on the 8th Oct. 1720, in the onset made upon Muḥammad Shāh's tents immediately after the assassination of the Sayyad's uncle, Ḥusain ʿAlī Khān Bārhah.

To the end of the Moghul period the fire arm in ordinary use was the matchlock. The flint lock was little known to them, and, of course, the percussion weapon was never seen, not having been introduced even into European armies until the 19th century (H. Wilkinson, *Engines of War*, 67) The flint lock itself does not seem to have been generally adopted in Europe until the end of the 17th century (id. 67 [1]), and it could hardly have become generally known in the East until a hundred years later. It was not until regular battalions armed and drilled in the European manner, were entertained by the Mahrattas and the Nawab Wazir, that the flint lock could have got into the hands of Indian troops to any appreciable extent. This seems borne out by the fact that of some sixty fire-arms catalogued by W. Egerton, fifty are matchlocks, and only five fitted with the flint lock. A passage in M. Wilks, "South India", i, 278, note, also shows that in 1751 the flint lock was an absolute novelty to the native armies of Southern India. Fitzclarence, 256, writing so late as 1818 confirms this opinion. He says "The flint-lock, an introduction of the Europeans, is far from being general, and I may even say is never employed by the natives: though the Telingas, armed and disciplined after our manner, in the service of Scindiah and Holkar, make use of it. Some good flint locks, are, however, made at Lāhor". It is true that Khair-ud-dīn, *ʿIbratnāmah*, i, 105, writing of 1173 H. (1759), declares that when Rām Narāyan, deputy governor of Patnah, was defeated by Shāh ʿĀlam, he left on the field among other things six thousand flint muskets (*bandūq-i-chaqmāqī*). This can be only partially true, and even then it must be remembered that, by that time, the importation of arms through the ports on the Hugli must have become active; and what might be true of Bengal and Bahār in the above year, did not represent

[1] Voyle and Stevenson, Mil. Dict. (1876), 142, say it was invented about 1635, but not employed in England till 1677.

the condition of things in places farther from the seaboard. In the Dakhin the introduction of the flint-lock weapon, owing to intercourse with the French and English, may have been somewhat earlier. At any rate, it is said that the 12 battalions of *Gārdī*, or infantry drilled and armed in imitation of the French sepoys, and commanded by Ibrāhīm Khān, Gārdī, at the battle of Pānīpat in January 1761, carried flint-lock muskets (*Ḥusain Shāhī*, fol. 34*b*). And, if we may trust Ashob's memory, writing 58 years after the event, the artillery soldiers taking part in the riot of 1141 H. (1729) at the Jāmiᶜ Masjid in Dihlī, were armed with flint-lock (*chaqmāqī*) muskets.

The matchlock barrels were covered with elaborate damascened (*koft-garī*) work, and the stocks adorned with embossed metal work or with various designs either in lacquer, or painting, or inlaying of different materials. The stocks were at times adorned with embossed and engraved mounts in gold, or the butt had an ivory or ebony cap. The barrel was generally attached to the stock by broad bands of metal or by wire of steel, brass, silver or gold. The broad bands were sometimes of perforated design and chased. The stocks were of one or other of two designs, 1) narrow, slightly sloped, of the same width throughout, or 2) strongly curved and very narrow at the grip, expanding to some breadth at the butt. When not in use, matchlocks were kept and carried about in covers made of scarlet or green broad-cloth.

Pārah. Rustam ᶜAlī, Bijnorī, in his "History of the Rohelas" (in Urdu), fol. 22*a*, in speaking of the fight between Donde Khān and Qutb-ud-dīn Khān, grandson of ᶜAzmatullah Khān, near Kīratpur in Rohilkhand, says; *bandūq ke pārah charte the.* Although this meaning is not in the dictionaries, I take *pārah* to be here the hammer of the matchlock. Platts 258, and Steingass 230, 246, among other meanings give those of "bolt of a lock or door" and "iron mace", either of which

could be easily enough extended into "hammer of a gun".

The match. The name of this was in Persian either *jāmagī* (Steingass, 351), or *falītah* (id 938), in Hindī *toṛā* (Shak. 702). According to Ashob, fol. 261*b*, to have the match ready and lighted was *falītah shahsuwār namūdan.*

Powder horn et cetera These accoutrements were called collectively *kamr* (Egerton 83, N°. 143, 133, N°. 683). The set consisted of a powder flask, bullet pouches, priming horn (*singrā*), match-cord, flint and steel, the whole attached to a belt. This belt was often of velvet embroidered in gold. Ashob, fol. 226*b*, gives *shākh* as the word for powder horn. Steingass, 720, does not include this specific signification in the numerous meanings he gives; but Platts, "Hindustani Dictionary", 716, has *shākh-dahana,* a small powder flask for priming. Fitzclarence, 69, speaking in 1817 of some irregular horse in the Company's service, half of whom were armed with matchlocks, says "the receptacles which contained their powder and ball are unwieldy, and as they never make use of cartridges for their pieces, they are a long time in loading. Some of them have at least twenty yards of match about their person, similar in appearance to a large ball of pack-thread". Modern words, adopted from Europeans, were *tozdān* (pouch) and *kārtūs* (cartridge). They are used by Khair-ud-dīn, *ʿIbratnāmah,* i, 422, when recounting René Madec's defeat in 1191 H. (1777) by Mullā Rahm Dād Khān. The book itself was written after 1203 H. (1788).

Blank Cartridge. I find the expression *khālī-golī* used for blank cartridge by Rustam ʿAlī, Bijnorī, "History of the Rohelas" (in Urdū), fol. 17*a*: *Bataur jang-i-zargarī khālī golī se apus men chalen,* "As in a goldsmith's quarrel (a collusive dispute), they fired blank cartridge at each other".

Cailletoque. This strange word is used by Anquetil Duperron, *Zend-Avesta,* I, xliv, when speaking of Sirāj-ud-Daulah's escort at Murshidābād (1757), and this word

he defines in his index "fusil à mèche, très long, qu l'on tire ordinairement en le posant sur un pié fait e espèce de fourche". The etymology of the word baffled m for a long time, it being impossible, from his spelling, t reconstitute its original form. It is not French, as th variations in spelling sufficiently show. For instance, D la Flotte, i, 258, referring to the Coromandel coast, (wher Anquetil also may have picked up the word), speaks of very long and heavy matchlock, which he calls a *kaitok* (evidently another phonetic rendering of "cailletoque") Gentil also, 59, in describing the entry of Ṣalābat Jang' troops into Aurangābād on the 11th June 1753, mention "fusils à mèche, qu'on appelle *kaitok*, couverts de dra rouge". René Madec (c. 1774) spells it *kayetoc* (E. Barbé "Le Nabab René Madec", 54). For a time I thought it migh be due to the use of *qandūq*, gun-stock, as a name for th whole weapon, though I have never found in native writer any such use of that word. Or it might be a vulgar erro for *bandūq*, the ordinary word for a gun. Mr. H Beveridg suggested to me *mīlteq*, a gun, as a probable derivatio of the word (R. B. Shaw "Sketch of the Turki Language' J. A. S. B., 1878, p. 184). P. de Courteille, Dict. 506 fancies that this word *mīlteq* is itself a corruption of *bandūq* In the absence of anything more satisfactory, an explanatio of *cailletoque* might he found in *qūltūq*, the armpit, (Shaw 157, P. de Courteille 435), on the ground that a muske is often carried under the arm!

But long after I had given up the search, I came acros a word for a gun or matchlock, which I am convince must be the original of that used by the European writer quoted above. I found this word *qaidūq* in my copy o the *Ahmad-nāmah* of ʿAbd-ul-latīf, a rhyming chronicle o Ahmad Shah's reign written at Lakhnau in 1184 H. (1770) The two passages are on ff. 15*a* and 15*b*, the first in th rubric and the second in the text; and they read a follows:

Rubric.

Dāstān dar bayān kih roze suwārī-ı-Wazīr dar rāh mī-raft, o yake az muᶜānd dar kamīngāh nishıstah, qaiduq, قبدق, bar ū rāndah, az īn maᶜnī Wazīr khyāl-i-fāsıd badıl az Shāh rasāndah, o derah-i-khūd az Dıhlī berūn burdah, binyān-ı-fasād rā taᶜmīr dād.

Text.

Miyān-ı-rāh kase qābū gırıftah,
Zadah qaıduq [قبدق] barūe ū nhuftah,
Ba qaṣd-ash garchah ū dāᶜīah zad,
Wa-le Ezad khyāl-ash sākhtah radd,
Gırıftand-ash kasān az zormandī,
Kashān burdand ūrā ham chū bandī.

I cannot find the word in any of the dictionaries, of which I have consulted a good many.

Jazāil or *Jazāır*. This was the wall-piece or swivel gun, and it is doubtful whether it should come here, under fire arms carried by the combatant, or under artillery. In some respects it partook of the character of both. Steingass, 362, defines *jazāil* as a large musket, wall-piece, swivel, a rifle used with a prong or rest. Egerton, 124, note to N°. 585 refers to *jazāıls* in the Codrington collection which are 7 feet and 8 feet long; this would appear to be the usual length. Ashob, fol. 182*b*, describing the entrenchments of Muḥammad Shāh outside Karnāl (1151 H., Feb. 1739), twice speaks of something he calls a *pushtah*, which was put up (*andākhtah*) by the *jazāil*-men. This is not the tripod, which is separately mentioned; probably it was a field shelter or slight entrenchment.

In connection with this weapon we come to *gingall*, a word used by European writers. Shakespear, 796, says it is H. a swivel &ca, either a corruption of *jazā,ıl*, or from *janjāl*, trouble, difficulty; and Steingass, 373, has a word *janjāl*,

crowd, multitude. Yule and Burnell, 285, say that *janjāl* is "of uncertain origin". Their examples are Elphinstone (1818) and Shipp (1803—15). Fitzclarence (1818) also uses the word. *Janjāl* is used in a Hindī poem composed in Bundelkhand in the first half of the 18th century (Journal A. S. B., vol. XLVII, 1878, p 369). I think that *jazāil* must be the origin of *jinjal* (gingall). Substitute, as an uneducated Indian would do, a "j" for the "z", and you have "jajā,il"; then insert a nasal, far from an infrequent occurrence, and at once you have "janjā,il", or quickly pronounced, "janjāl". Q E. D But whether gingall is derived from *jazāil* or not, these can be little doubt that both words are used in respect of one and the same kind of weapon, as witness Sir Hope Grant's description of the Chinese gingall (Life, ii, 92) "This weapon is a species of long heavy duck-gun carrying a ball weighing about two pounds, its range is at least 1000 yards. It is placed upon a tripod, from which tolerable aim can be taken". Lake's remarks, *Sieges*, 70, note, show that a ginjal (as he spells it) was in his opinion the same thing as the *jazāir* or *jazāil*. "Long matchlocks, of various calibres, used as wall-pieces by the natives of India, which are commonly fixed like swivels, and carry iron balls not exceeding a pound in weight. In the field, they are sometimes carried on the backs of camels". Fitzclarence, 245, says the ball of the Indian *jazāil* weighed two or more *ounces*. Jinjalls, or heavy matchlocks were, as writes captain Thomas Williamson, "Oriental Field Sports", 45, commonly appropriated to the defence of forts. They carried a ball from one to three ounces in weight; and having very substantial barrels, were too heavy to use without a rest. Many had an iron prong of about a foot in length, fixed on a pivot not far from the nozzle: and this placed on a wall, a bush, or the ground, served as a support. In the defence of mud forts, especially in Bundelkhand, the besieged exhibited extraordinary dexterity, rarely failing to hit their object either

in the head or near the heart, even at great distances All fire arms used by Indians having small cylindrical chambers, and being mostly of a small bore, a wonderful impetus was imparted to the ball. The *juzzail* used by the Afghans in 1842 is described by Colonel Thomas Seaton, "From Cadet to Colonel", i, 207.

Ghor-dāhan was a kind of *jazā'il*, of which one thousand were made at Lāhor for Mu'īn-ul-mulk between 1161 and 1167 H. (1748—1754), see the *Tahmās nāmah* of Miskīn, composed in 1196 H., fol 36*a*. The allusion in the name seems to be to the everted or widened mouth of the barrel.

Qidr. The *Mirāt-i-Ahmadi*, fol. 199*a*, in describing the battle outside Ahmadābād in 1143 H (1730), between Abhai Singh, Rāhtor, and Sarbuland Khān, speaks of the horsemen with *qidr*, قدر, and matchlocks advancing to give battle. I cannot find what weapon this was. The nearest word I have found is قدر, *qidr*, a cauldron, pot, kettle, Steingass, 957; but this does not suggest an explanation. According to Erskine "History", ii, 294 (note), Osmanli troops lay great store by a kettle, which they carry into the field as other troops do their colours. But at Ahmadābād neither side were Osmanlis.

III. Pistols.

This weapon was the *tamanchah* or *tamānchah* (Steingass, 819, a sharp blow, a pistol) It does not appear in the list in the *Ā'īn*, an omission not to be wondered at when we remember that the *Ā'īn* was composed in 1596—7, while the pistol does not seem to have been known even in Europe much before 1544 (H. Wilkinson, Engines of War, 58). The pistol was in use in India, to some extent at any rate, early in the 18th century. For instance, it was with a shot from a pistol that in October 1720 a young Sayyad, related to Husain 'Alī Khān, killed that nobleman's assassin (Mhd Qāsim, Lāhorī, *'Ibratnāmah*).

Dowson (Ell., vii, 573) must here have read *nīmchah* and translates a "short sword", but all the copies of the text that I have seen read *tamanchah*, i. e. a pistol. Probably the pistol was confined to the higher ranks of the nobles. Its rarety is shown by these being so few examples in the Indian Museum. Egerton's "Handbook" has only three entries, and one of these refers to a pair of English pattern, which must be quite modern. But Ashob, fol. 61*a*, writing in 1196 H. about the shoe-sellers' riot at the great mosque in Dihlī in the year 1141 H. (11th March 1729), speaks of the soldiers taking part in it as having European *pistōl* and *tabānchah*.

Sherbachah. This musketoon or blunderbuss (literally "tiger-cub") seems to have been of a still later introduction than the pistol. Egerton catalogues three examples only N°. 410 (p. 110), Nos 761—2 (p. 144). One is twenty inches long. Probably the weapon came into India with Nādir Shāh's army (1738) or that of Aḥmad Shāh, Abdālī, (1748—1761). In the last quarter of the 18th century there was a regiment of Persian horse in the Lakhnau service known as the *Sher-bachah*. Possibly they took their name from this weapon, with which they may have been armed. Or the name may have been due to their supposed ferocity and thirst for their enemies' blood. Dowson in *Elliot*, viii, 398, note 2, quoting from the *Akhbār-ul-Muhabbat*, speaks of ten thousand dismounted men in Ahmad Shāh, Abdālī's army in 1760 "having *sher-bachas* (pistols) of Kābul".

CHAPTER X.

ARTILLERY. — HEAVY GUNS.

The general name for this branch was *Top-khānah* (*top*, cannon, *khānah*, house, division). Every department connected with the artillery was included under the one name; it comprized, 1) a manufacturing department; 2) a magazine or ordnance department, in both of which the imperial Khānsāmān, or Lord Steward, had the superior control over the Daroghah or Mīr Ātash; 3) the field artillery in actual use, and 4) the guns in use in the fortresses In these last two subdivisions the Mīr Ātash seems to have been entirely independent of the Khānsāmān.

The word *top*, the usual name for a cannon, is stated in Persian dictionaries to be of Turkish origin, but apparently Bābar used the word *ẓarb-zan* (literally, blow-striker). For this see Horn, 27, and his references, Pavet de Courteille, "Mémoires", ii, 168, *ʿarābah ustādakī ẓarbzanlār*, "les couleuvres qui étaient sur des chariots", id. ii, 336, *ẓarbzan-lik ʿarābah-lār*, "des couleuvres toutes montées sur leurs affûts", and Budāunī, ii, 194, line 6, *tā ẓarbzanhā o zambūrakhā kih bālāe ʿarābahhāe būd*, "to the cannon and swivel-pieces which were upon carts" [1]. I have not traced when the word *top* first appears in Indian writings, but probably it came into use first in the Dakhin and was introduced there by the officers from Rūm, that is, Turkey, who were employed in the artillery. The word *top*

[1] I have found *ẓarbzan* used by so late a writer as Kām Rāj (c. 1119 H.), see *Āʿzam-ul-ḥarb*, fol. 120*b*, but then he has *top* and *rahkalah* in the same sentence.

is often restricted to the large cannon or siege guns; sometimes we find it used for all classes of cannon, with the distinction into large and small, *top-i-kalān* and *top-i-khūrd*.

Bābar seems to have had in use pieces of considerable size (Horn, 26) In his memoirs (P de C, ii, 253) he describes the founding of a cannon at Āgrah under the direction of his head of the artillery, Ustād Qulī Khān "Around the mould they had erected eight furnaces for melting the metal. From the foot of each started a channel which ended in the mould. As soon as I had arrived, the holes to allow the flow of metal were opened. The fused metal rushed into the mould like boiling water. After a time, before the mould was full, the fused metal from the furnaces began to flow very slowly, either because their size or the amount of material had been wrongly calculated, Ustād Qulī Khān, in a state that cannot be described; wished to fling himself into the very midst of the melted copper. I made much of him, ordered him a robe of honour, and thus succeeded in calming him. A day or two afterwards, when the mould had cooled down, it was opened. Ustād Qulī Khān, overwhelmed with joy, sent me word that the bore (*âme*) of the piece had no fault and that a chamber could easily be made in it The body of the cannon was then uncovered and a certain number of artificers were set to finish it, while he busied himself with the preparation of the chamber". From ii, 269, it seems that this chamber was cast separately, and the gun was then tried, and fired a ball for a distance of sixteen hundred paces. On another occasion, ii, 324, a large cannon was fired, the ball went far, but the piece burst and eight men were killed[1] At a much later period the art of founding could not have greatly advanced, for we find that De la

[1] The passage in ii, 336, does not necessarily refer to large guns, and Muṣṭafā, the other artillery officer, is spoken of as using small field pieces (culverines).

Flotte, i, 258, speaking of the 18th century and the Dakhin, asserts that Indian cannon were not founded, but built up of iron bars bound together, and held in place from distance to distance by thick rings of the same metal. Again Anquetil Duperron, "Zend Avesta", I, xlvi, speaking of the force commanded in 1757 by Rajah Dulab Rām, one of Nawāb Sirāj-ud-daulah's officers, says "l'artillerie consista en gros "canons faits de bandes de fer battu" Writing much later, in 1818, Fitzclarence, 255, says "The artillery in use among the natives is generally an iron cylinder with molten brass cast round it". Elsewhere, 251, he remarks that in their first attempts to make cannon the Indians employed bars of iron hooped together. In one instance he saw an improvement on this. It was at Dihlī that he found a piece made of iron wedges placed as radii, and then hooped together so as to form the gun.

Horn, 28, quoting from Mīrzā Ḥaidar (Elliot v, 131, 132) says that at the battle of Kanauj in 1540 Humāyūn had 700 pieces (*zarbzan*) drawn each by four pairs of bullocks (these guns fired balls of 4 lb , 304 gr. each) In addition to these were twenty-one heavy guns requiring each eight pairs of oxen, and firing leaden balls ten times as heavy as the others Erskine, "History", ii, 186, using the same passage from Mīrzā Ḥaidar, reads "sixty-one (شصت ویک) heavy guns, each drawn by sixty (شصت) pairs of bullocks". Ross, "Tarīkh-i-Rashīdī", 474, has "twenty one (بیست ویک) carriages each drawn by eight (هشت) pairs of bullocks" Looking to the state of things then existing, I think the number of *twenty one* is preferable to Erskine's *sixty-one* heavy guns; but on the other hand the larger number of bullocks (*sixty* and not *eight* pairs) is the more probably correct, the ball thrown being ten times as heavy as that of the smaller pieces, the gun itself must have weighed more, in something like the same proportion, and would have required more than twice as many bullocks to drag it.

Dr. Horn, 29, holds that under Akbar the artillery

reached the highest point of efficiency which it ever attained during the existence of the Moghul empire. But judging from the brief account of cannon in the *Āīn-i-Akbarī*, one would surmise that this arm was little, if at all, developed. A great deal is said about matchlocks, but comparatively little about other *bouches à feu* It would be, I think, a safer opinion to hold that the artillery was much more perfect and numerous in ʿĀlamgīr's reign, than it was under his great-grandfather, Akbar. The long campaign in the Dakhin and the innumerable sieges, some of considerable importance, such as those of Bijāpur and Jinjī, must have brought the uses of artillery into much greater prominence. And during the 18th century something, if not much, was learned from the example of the French and English armies, and from the European adventurers, who found their way in considerable numbers into the armies of the native powers As an instance of the hazardous conclusions that are occasionally arrived at, I may quote the suggestion of Mr. D. Mac Ritchie, "Gypsies of India", p. 207, that the gipsies (whom he identifies with the Jāts) brought the use of artillery into Europe. The history of the arm in India seems to prove on the contrary, that it was introduced there from Europe.

European observers in the 18th century do not, as a rule, speak favourably of the Moghul artillery. For instance, with reference to the Nawab of the Karnātak's army in 1746, Orme, "Mil. Trans." i, 74, says "Having never experienced the effect of field pieces, they had no conception that it was possible to fire with execution the same piece of cannon five or six times in a minute; for in the awkward management of their own clumsy artillery, they think they do well if they fire once in a quarter of an hour". Even seventy years later, in 1815, the Nizām's artillery were still content to fire once every fifteen minutes; and on one occasion they were indebted for final success to the freak of some European soldiers, who came at night

from their own camp, and fired the guns so fast as to frighten the besieged into evacuating the place before the morning (Lake, 15, note). Cambridge, who wrote about 1760, "War", Introduction, ix, is more general in his condemnation "Nothing is so ruinous to their military affairs as the false notion which is generally entertained by them, and chiefly by their commanders, in relation to artillery. They are terrified with that of the enemy, and foolishly put a confidence in their own; and what is the most fatal mistake, they place their chief dependence on the largest pieces, which they know neither how to manage or to more. They give them pompous and sounding names, as the Italians do their guns, and have some pieces which carry a ball of seventy pounds. When we march round them with our light field pieces, and make it necessary to move those enormous weights, their bullocks, which are at best very untractable, are quite ungovernable, and at the same time are so ill-harnessed, that it causes no small delay to free the rest from any one that shall happen to be unruly or slain". Again, take what Mustapha says, *Seir*, i, 443, note 19, "Expressions about a well-served artillery are misleading, for it is certain that all their artillery was as cumbrous, ill-mounted and ill-served as was the artillery of Europe three hundred years ago. It is only since the year 1760 that some Indians have put themselves upon the footing of having an artillery mounted and served *nearly* in the European manner". And writing at Āgrah in 1768 or 1769, an anonymous observer (Orme Mss. p. 4341) remarks on the Jāts taking two 24-pounders a mile or two in ten days, and scornfully adds "Telle est l'adresse de la plupart des Indiens dans le métier de la guerre après qu'ils ont reçu tant de leçons des Européens, dont ils auraient dû profiter. Mais on a beau leur apprendre!"

The following account of Mahratta ways in 1791 may be taken as applicable to the Moghul artillery of the same period. "A gun is loaded, and the whole people in the

battery sit down, talk and smoke for half an hour, when it is fired, and if it knocks up a great dust, it is thought sufficient: it is re-loaded and the parties resume their smoking and conversation. During two hours in the middle of the day, generally from one to three, a gun is seldom fired on either side, that time being, as it would appear, by mutual consent set apart for meals. In the night the fire from guns is slackened but musquetry is increased on both sides" (E. Moor, "Narrative", 30). Colonel Hector Munro, the victor of Baksar, speaking of the period 1763—1772, held that the Indian princes got their artillery from England, Holland and France. "There is hardly a ship that comes to India that does not sell them cannon and small arms; the most of the gunpowder they make themselves. They cast shot in abundance, but there is no black prince that casts cannon but the king of Travelcore (Travancore). The cannon and military stores are smuggled into the country" (Carraccioli, "Life of Clive" III, 276, and "Minutes of Select Committee, H C.", sitting of 14th May 1772.

Heavy Guns

The Moghuls were very fond of large ordnance, but such pieces were really more for show than use, and as Fitzclarence truly says, 243, the oriental idea seems to have been "to render this destructive engine from its size more powerful than those of the Western world". In this direction they proceeded even to extravagant lengths. These huge guns made more noise than they did harm; they could not be fired many times in a day, and were very liable to burst and destroy the men in charge.

Names. The large guns were all dignified with pompous names, just as elephants were, such names as *Ghāzī Khān* "Lord Champion", *Sher Dahān* "Tiger-mouth", *Dhumdhām* "The Noisy", (Shīū Dās, 29*a*) *Kishwar kushā* "World opener", *Garh-bhanjan* "Fort Demolisher", *Fath-i-Lashkar* "Army Conqueror", (Elliot, VII, 100) *Aurangbār* "Strength

of the Throne", *Burj Shikan* "Bastion Breaker", (Catrou, 256) *Jahān kushā* "World Conqueror" (Horn, 37) and so forth. At the battle of Husainpur in 1133 H. (Nov. 1720) there were present *Sher dahān* (Tiger mouth), *Ghāzi Khān* (Lord Champion), *ʿĀlam-sitān* (World-seizer), *Ātash-dahān* (Fire mouth), Khushhāl Chand, Berlin Ms N°. 495, fol 1015*a*. In addition to a name they were also usually provided with an inscription, sometimes in verse, stating the name of the founder, the place and the year of manufacture.

From Bernier, 217, 218, 352, we learn that early in ʿĀlamgīr's reign there were in the field with the emperor seventy pieces of heavy artillery, mostly of brass. These and the camel guns did not always follow the emperor, when he diverged from the high road to hunt, or to keep near a river or other water. Heavy guns could not move along difficult passes or cross the bridges of boats thrown over rivers. Many of these seventy pieces were so ponderous that twenty yoke of oxen were necessary to draw them along: and when the road was steep or rugged, they required the aid of elephants, in addition to the oxen, to push the carriage wheels with their heads and trunks

These heavy pieces had frequently to be left behind, from the impossibility of their keeping up with the army. Thus Aʿzam Shāh, when he marched in 1707 from Ahmadnagar to Dholpur, left all his heavy guns behind at various stages of his march, and had none left when he reached the battle field at Jājau (Kāmrāj, *Aʿzam-ul-harb*, fol. 19). Then in Ṣafar 1125 H. (March 1712), during the contest for the throne between the sons of Bahādur Shāh, three of the very largest guns were removed from the fort of Lāhor, each being dragged by 250 oxen, aided by five or six elephants, and it was ten days before the camp was reached, although it was not more than three or four miles distant (B.M. N°. 1690, fol 157*b*).

In 1128 H. (1715-6) when Rajah Jai Singh was besieging Churāman Jāṭ in his fort of Thūn, one of these

cannon was sent from Dihlī. It was escorted with ceremony from Palwal to Hoḍal and there made over to the deputy-governor of Āgrah for conveyance to its destination. The shot is threw was, we are told, one maund (Shāhjahānī) in weight (Shiū Dās, fol. 13*a*). Again, at the siege of Āgrah in 1131 H (July, August 1719), several of these large cannon were employed. They had there Ghāzī Khān, Sher Dahān, Dhūmdhām, and others. These guns took shot of from 60 to 100 lbs, (30 *sers* to 1¼ *man* Shāhjahānī) Attached to each gun were from one to four elephants and from 600 to 1700 draught oxen (Shiū Dās, fol. 29*a*). Muhammad Muhsin also speaks of Muḥammad Shāh having at Karnāl in 1151 H. (Feb. 1739), guns which required five hundred to one thousand bullocks, aided by five to ten elephants (Horn, 34, quoting Elliot, viii, 74).

When the Jāt rajah of Bhartpur besieged his relation in Wer, about 30 to 40 miles south of Bhartpur, his biggest cannon, a 48 pounder, was sent from his capital. It was a piece that Sūraj Mall had taken from the Mahrattas, and they had carried away from Dihlī Although dragged by 500 pair of oxen, with four elephants to push behind, it occupied them a month to convey the gun about half way, some eighteen or nineteen miles altogether, and there it stuck. It should be noted, however, that this was in the rainy season, which added immensely to the difficulty. The writer from whom I obtain these facts adds "This may look strange, but you do not know the weight of these guns or the kind of gun-carriage used. At the very time I write this (c. 1767), it is ten days since they brought out two 24-pounders from the fortress of Āgrah, each drawn by fifty pair of bullocks and helped by an elephant. Yet at this moment they are not outside the town of Āgrah, though they are moving each day from dawn to night-fall (Orme Mss. p. 4341). In 1826 there were still large guns at Wer. Colonel Seaton in his "From Cadet to Colonel", i, 177, says "we found some enormous iron

guns built up something in the style of our present Armstrongs, with this difference that over the inner core of longitudinal bars forming the bore, iron hoops and not coils, were shrunk on; over which came a layer of longitudinal bars, and outside these another layer of hoops shrunk on The diameter of these guns at the muzzle was enormous, something like three feet, but the bore was small. I should suppose they were about 40-pounders. I don't think any amount of powder would have burst them".

Mode of Mounting Heavy Guns. From the slow progress that was made in the transporting of these heavy guns, it may be inferred that the carriages on which they were mounted, were of a very clumsy and primitive construction. One is almost inclined to believe that they must have been dragged unmounted along the ground, by mere brute force. Otherwise the length of time occupied in going a mile seems hardly credible.

Most probably throughout the 18th century these guns were mounted on low platforms, and were made to turn on a pivot, such carriages as in 1803 Thorn, "War", 190, called "country block carriages, turning on a large pivot". Fitzclarence, 216, says the generality of the artillery in the forts was so badly mounted that they would be dismounted at the first discharge.

The clearest account of the way in which they mounted their heavy artillery in the field is to be found in Orme, "Mil. Trans.", ii, 173, when describing Sirāj-ud-daulah's guns at the battle of Palāsī (Plassey) in 1757. "The cannon were mostly of the largest calibres, 24 and 32 pounders; and these were mounted on the middle of a large stage, raised six feet from the ground, carrying besides the cannon, all the ammunition belonging to it, and the gunners themselves who managed the cannon, on the stage itself. These machines were drawn by 40 or 50 yoke of white oxen, of the largest size, bred in the country of Purnea; and behind each cannon walked an elephant, trained to assist

at difficult tugs, by shoving with his forehead against the hinder part of the carriage" Sir Eyre Coote, "Minutes of Select Committee H. C.", 30th April 1772, says that the Nawāb's cannon were "mounted on bundles of bamboos tied together and each piece drawn by 20 or 30 pairs of oxen". On the other hand, Major Munro, "Minutes", 14th May 1772, deposed that the 133 pieces of different sizes taken from Shujāʿ-ud-daulah at Baksar (23rd Oct. 1764) were all on carriages and most of them on *English* carriages.

The Mahratta artillery in the Dakhin, so late as 1791, was still mounted on the old plan, copied from that of the Moghuls. "His (Paras Rām Bhāo's) largest guns were brass 32 and 42 pounders cast at Poona, in length far exceeding ours: the wheels of the carriage as well as the carriages themselves, were exceedingly clumsy, particularly the limber wheels, which are generally of one piece, very low, and in a heavy road do not perhaps turn once in the distance of a hundred yards The gun is so heaped with baggage of every description that it could not be cleared ready to fire under at least half an hour, nor could any one from its appearance in its travelling state, were it not for the number of bullocks dragging it, conceive it to be a gun: fifty, sixty and sometimes one hundred couple of bullocks drag one of these guns; and in very heavy roads, where the cattle have been hard worked and ill-fed, an elephant is posted to the rear who pushes with his head over difficult passages Although the improvement of having four bullocks abreast was lately adopted by the Mahrattas, there surely can be no utility in having such a string of cattle as they sometimes tack to one of these strange pieces of ordnance" (E. Moor, "Narrative, 78)". In the Dakhin we found it necessary to employ sixty Carnatic bullocks in yoke to an iron 24 pounder, fifty to an iron 18 pounder, and forty to an iron 12 pounder (Blaeker, "War", 283).

One observer, De la Flotte, who was in the south of

India from April 1758 to May 1760, declares that Indian cannon, when used in fortresses, were not mounted on carriages: "they are put on the very embrasure, or they are supported by two great movable timbers (*poutres*) The balls are of stone, they make many ricochets and then roll a great distance". M. de la Flotte saw at Jinjī, the well-known fortress 82 miles s.w. of Madras, one of these pieces, which was twenty feet in length. At Arkāt (Arcot) in 1746 Clive seems to have fired a big native gun from a mound of earth, without having any carriage (Orme, i, 191, referred to by Horn, 34). Colonel M. Wilks also speaks of an occasion in 1768 when the guns of the Indians were numerous "but unmounted" In Northern India, however, some sort of carriage seems to have been used even for heavy guns, when they were employed in the defence of a fortress

Descriptions of individual guns Dr. Horn, 36, quoting Captain Showers (J A S B., XVI, 589) gives as the exact dimensions of one of Shāhjahān's cannon, then (1847) to be found at Murshidābād,

Extreme Length	17	feet.
Deph of Bore	15	,,
Diameter at Muzzle . .	1	,,
Diameter of Bore . .	6	inches.

This cannon, *Jahān Kushā,* the world conqueror, bore a poetical inscription of eight distiches, to which were added the facts that it was made at Dhākah in Jamādī ii of the eleventh year of Shāhjahān (Oct. Nov. 1637), and that it took a charge of 28 sirs of powder. It had been made by the method of welding

When Dārā Shukoh was sent against Qandahār in Shāhjahān's reign, he cast two great guns at Lāhor, which threw a ball of 1 man 5 sirs (about 90 lbs. English). Their names were *Fath Mubārik* (Blessed Victory) and *Kishwar Kushāe* (World Overcomer). He had with him two other

heavy guns, the *Qilaʿh-kushāe* (Fort Overcomer) from Dihlī and *Maryam* (Mary?) from Shāl (Raverty, "Notes on Afghanistan", 22, relying on the *Latāif-ul-Akhbār* of Rashīd Khān).

One of these large guns was to be found at Aḥmadnagar in the Dakhin. Fitzclarence, 243, says it was about 25 feet long, and it was said to have carried shot into Sir Arthur Wellesley's camp in 1803 "though it was pitched out of range of all reasonable weapons". It was, perhaps, the same as the *malik-i-maidān*, (King of the Battle-field), described by Horn, 132, quoting Meadows Taylor and J Fergusson's "Architecture of Beejeepore", which is declared by those writers to be the largest piece of ordnance in the world. The metal is an alloy of 80.427 parts of copper to 19.573 parts of tin. The dimensions are

Diameter at the Breech . .	4	feet,	10	inches.
Diameter at the Muzzle . .	5	,,	5	,,
Diameter of Bore	2	,,	4½	,,
Length	14	,,	3	,,

In the "Life and Correspondence of the Right Honble Sir Bartle Frere", i, 56, these is a drawing by him of two large guns that he saw at Bījāpur in 1848. One was on the Uparī-burj (upper bastion?); the other he calls *Mulūk Juft*. Neither of them was mounted on a carriage.

The gun *Malik-i-maidān* was cast at Aḥmadnagar in 1548, during the reign of Burhān Nizām Shāh i, by a Turk named Muḥammad, son of Ḥasan. It was first described by E. Moor, "Narrative", 322, who believed it to have been cast by ʿĀlamgīr in 1097 H. (1685), but the copy of the inscription as given by him, does not bear this out, for it commemorates the capture of Bījāpur in that year, and not the casting of the gun. Moor was told that there were twelve large guns; of these he saw three, two being not cast, like the *Malik-i-maidān*, but made of welded bars hooped round. One of them was called *Lam-*

chharṛi, which Moor translates "the far flyer" (perhaps from *lamchhar* (Shak. 1795), a long musket, *lamchharā*, adj. tall).

There were also two guns twenty five feet long at Nāgpūr (Fitzclarence, 108, 244), called by the English Gog and Magog, which were "finer pieces and better proportioned than the one at Aḥmadnagar". Fitzclarence also saw, 216, a heavy brass gun mounted on a sort of tower at Daulatābād, and though he did not measure it, he supposed it equal to throwing a ball of sixty pounds. There was also a 24-pounder (id. 218) on a peak at the top, said to have been raised to that position by a European in ʿĀlamgīr's reign. At Dihlī, opposite the Lāhor gate, he also saw in 1817 a gun of a very large bore.

Fitzclarence also describes the "great gun of Agra" as Major Thorn calls it, "War", 188. "At Agra I have seen a gun more like an immense howitzer, above 14 feet long, 22½ inches in the bore, into which persons can get: the following is a table of its dimensions".

TABLE OF DIMENSIONS

Nature	Weight	Diameter of the					Length of the			Weight of the shot of iron	Weight of the shot of marble.
		Calibre	Chamber	Muzzle	Trunnion	Base Ring	Chamber	Chase including the chamber	Piece		
1500 lbs.	cwt. grs lbs	In.	In	In.	In	In	In.	In	In	lbs.	lbs
Brass	1049 1 4	22 5	10 8	46 5	11.3	48 6	51	159	169.5	1497 39	567

Weight in maunds, 1469.

Value of the gun, as old brass, in sonaut (*sanwāt*) rupees 53,400; but if serviceable it may be estimated at one lac and sixty thousand.

"This gun was once supposed to contain much gold; and

even as old brass it is valued at £ 7000; but if serviceable, it may be estimated at about £ 18,000. It at present (1818) lies near the bank of the Jumnah, outside the wall of the fort. An attempt was made to transport it down to Calcutta". Both Fitzclarence and Thorn give drawings of the gun. Thorn, 189, says "General Lake had a great desire to remove this trophy from Agra to Calcutta, with a view to transporting it ultimately to England, but though a raft was prepared for its conveyance upon the Jamnah, the stupendous body of metal proved too heavy for the framework, and the whole sank in the bed of the river, where the gun lay buried in the sand when I (Major Thorn) last saw it".

At Āgrah in 1803 Lord Lake also obtained a fine 72-pounder of the same composition as the "great gun", together with 76 brass guns and 86 iron ones of different kinds, such as mortars, howitzers, carronades, and gallopers, with thirty-three tumbrils. The brass guns were in general of the same manufacture and construction as those taken at Dihlī, and in the camp and town (Āgrah) several of the iron ones were of that description called bar guns, and the whole were mounted either on travelling carriages with elevating screws, or on country block carriages turning on a large pivot (Thorn, 190).

There are some large guns of the Moghul period at Lāhor. There is the *Zamzamah* (The Thunderer), one of two cast by a man named Shāh Nazīr, by order of Shāh Walī Khān, prime minister of Aḥmad Shāh, Abdālī, (1747—1773). It is of brass and was used, so Muhammad Latīf says, at the battle of Panīpaṭ in 1761, though this is inconsistent with the *tārikh* it bears (1179 H. or 1765/6). The fellow gun was lost in the Chināb river; and this one was removed by the Sikh leader, Har Singh, Bhangī, from the village of Khwājah Saʿīd, two miles from Lāhor, where the Abdālī had his arsenal. It bears an inscription of twenty-two lines, of which the last two are:

Baᶜd taslīm ba guftā: "Top Paikar-i-azhdahāe, ātash-bāz". (1179 *i.e.* 1765/6).

"After obeisance he exclaimed 'The dragon shaped, fire-vomiting, cannon'." Its length is 14 feet 4½ inches and the diameter of the bore is 9½ inches. These is also at Lāhor another large gun made in 1182 H. (1768—9) by Shujāᶜat Khān, Ṣafdar Jang, a governor of Multān; it bears the name of *Kohshikan* (The Mountain Destroyer) and weighs 110 maunds (Syad Muhammad Latīf, "Lāhor", p 386).

Moor, "Narrative", 420, refers to descriptions of large guns by Dow, "History of Hindostan", ii, 278 (a reference which I cannot trace in my edition) and by Rennell, "Memoir", 61. The two referred to by Dow were at Arcot and Dacca Rennell measured the second of these, but before the end of the 18th century, it and the bank on which it rested had fallen into the river. The weight of an iron shot for it was 465 pounds, and Moor calculates the weight of one for *Malik-i-maidān* to be 2646$\frac{7}{10}$ pounds

Sixty eight guns were taken by Lord Lake outside Dihlī on the 16th Sept. 1803 (Thorn, 117). They were of different sorts, the whole mounted on field carriages with limbers and traces complete. The iron guns were of European manufacture: but the brass guns, mortars, and howitzers had been cast in India, with the exception of one Portuguese three-pounder Some were made at Mathurā and others at Ujjain, but evidently from the design and execution of a European artist. The dimensions in general were those of the French, and the workmanship highly finished. The guns had belonged to the disciplined troops of Sendhiah, and the above description abundantly shows that they were not strictly *Moghul* weapons at all, but an equipment prepared under the supervision of Europeans in the native service.

A somewhat later account (1809) of Sendhiah's artillery is found in Broughton, 109. Sendhiah then had 66 guns,

twenty-seven in his own park, ten of large calibre, the rest of various sizes and descriptions. Thirty one guns were attached to his regular brigade; these were all of different sizes, but few were so large as an English six-pounder. Besides these he had eight curricle guns, each drawn by a pair of bullocks: they were very small and were called the "orderly" guns from their following in the Maharājah's retinue.

Wooden Guns. Under the stress of necessity these strange substitutes for ordinary cannon were used by the Sikhs on two occasions. For instance, we learn that when the Sikhs in Dec. 1710 evacuated their fort of Lohgarh in the outer hills, they blew up a cannon "which they had made out of the trunk of a tamarind tree" (Kāmwar Khān, entry of 19th Shawwāl 1122 H.). Another writer, Ghulām Muḥī-ud-dīn Khān, fol. 37*b*), tells us that when they were besieged in Gurdāspur in 1715, the Sikhs, though they had the light artillery that they had taken from Wazīr Khān, faujdār of Sihrind, Bāyāzīd Khān, and Shams Khān, were unprovided with heavier pieces. These they replaced by hollowed-out trunks of trees, strengthened by heavy iron bands placed close together. From these they threw balls of stone and iron. The Mahomedans estimated these make-shift cannon to he about half as effective as the usual kind. A. Demmin "Die Kriegswaffen", 108, speaks of wooden mortars used in Europe in the Middle Ages; they were formed of hollowed tree trunks bound with iron straps and furnished with a metal touchhole. And so late as 1525 the rebellious peasants who besieged their Archbishop in Strasburg were in possession of wooden cannon. They also had leather cannon, such as at a later time were used by the Swedes! Demmin, p. 929, N°. 24*bis*, has a figure of a wooden cannon from Cochin China, said to be manufactured there up to the present time. It appears to be a tree trunk strengthened by thirteen strong bands in its whole length.

Ghabārah. According to Steingass, 880, this is a bomb, a mortar for throwing shells. I have only once come across it; Rustam ᶜAlī, Bijnorī, uses it on fol. 30*a* of his "History of the Rohelas" (written about 1780): *Top, rahkalah, ghabāre, dhamākah, gajnāl, shutarnāl, jazāīr, sherbache, qainchī bānon ke, lekar.*

Deg (*Mortars*). We find in the official manuals a class of men among the *Alshām*, styled *Deg-andāz*, literally "pot-throwers". In present usage *deg* denotes a mortar, and it may have meant the same at the end of the 17th and beginning of the 18th century, when the manuals referred to were drawn up. But it seems to me more probable that these men carried some sort of fire-pot or hand-grenade, which they threw when two armies were coming to close quarters

Tīr. This word, literally "arrow", after acquiring the extended meaning of bullet, musket, or cannon ball (Steingass 340), was then converted into a word denoting the calibre of a gun For instance, in the letters of Chhabīlah Rām, Nāgar, ᶜ*Ajāib-ul-āfāq*, fol. 34*b*, we have, *Hamrāh-i-fidwīyat-irtisām sih top-i-kamtir*, "with this loyal servant are three guns of small calibre"; and again a little farther, upon the same folio, *Wa yak zarb-i-top-i-kalān-tīr*, "and one cannon of large calibre". With its meaning of "cannon ball" we find *tīr* in the expression *tīrah-band* for "loaded", used by Rustam ᶜAlī, Bijnorī, in his "History of the Rohelahs", fol. 43*b*.

Miscellaneous We come now to various instruments, mostly of obscure application and use, which are mentioned here and there by the historians These are *Bādalījah, Manjanīq, Sang-raᶜd, Sarkob, Top-i-hawāe, Muqābil-kob, Chādar, Huqqah-i-ātash.* Most of these are named by Horn, 28, 29, 35.

Bādalījah. Steingass, 140, defines it as a sort of cannon. Mhd Kāẓim uses the form *Bādalij* (ᶜ*Alamgīr nāmah* 98, line 3, *ba zarb-i-bādalij az pāe dar āmad*). Once Ghulām

ʿAli Khān, *Muqaddamah-i-Shāh ʿĀlam-nāmah*, fol 79*b*) uses this word *bādalīj* when speaking of the war *matériel* to be found in Lāhor fort in 1165 H. (1752) I have not seen the word elsewhere, nor can I tell what kind of thing it was

Manjanīq. This seems to have been in the nature of a catapult. Steingass 1324, defines it, a warlike engine, catapulta, balista, sling a pulley, machine for raising great weights, a crane. Horn, 35, quotes from Elliot, vi, 139, a reference to the use of a *manjanīq* at the siege of Asīrgarh It is also used in the *Tārīkh-i-Alfi* (Horn 29, Elliot, v, 170) This word was applied to the scaffold raised by some French explorers when examining the upper part of the Naqsh-i-Rustam tombs in Persia, (E G. Browne, "A year in Persia", 250)

Sangraʿd Steingass, 702, calls this a stone ball for a cross-bow, a stone roller for smoothing flat roofs. Is it not more probably another name for a catapult throwing large stones?

Sarkob. Horn, 132, referring to the *Akbarnāmah*, iii, 622, line 11, speaks of it as a wall breaker or battering ram. Steingass, 676, has, "a machine erected to overtop a wall, a battery, a battering machine, any eminence which commanded a fortress or houses, a citadel". Several of these definitions seem to make it the same thing as *sībā*, which we shall speak of a little further on The word *sarkob* for a battering ram is used by Jauhar, Āftābchī, fol 16*b*, when describing the siege of Chunār in 942 H. (1535). Nizām-ud-dīn, *Tabaqāt-i-Akbar Shāhi*, fol. 151*b*, in his account of the same events calls the ram a *muqābil-kob*.

Top-i-hawāe. Horn, 28, calls attention to a passage in Khāfī Khān, ii, 226, where this expression is used. He is writing of Sīdī Yaʿqūt in the Dakhin during ʿĀlamgīr's reign (year 1079 H.—1668-9), and he says *o tophāe hawāe ba-ham rasāndah, bar darakht-hāe bastah, waqt-i-shab taraf-i-Dandā Rājpurī ātash mīdād.* "Having provided some *top-*

i-hawāe (air guns?) and having fixed them on trees, at night time fired them in the direction of Danda Rājpurī". This is all we know of this mysterious weapon.

Chādar. In the *Mā,asir-i-ʿĀlamgīrī* 295, line 13, year 1098 H. (1686), when the army was before Gulkandah, I find this passage, *o yak tassūj pesh qadam na shudan-i-mardum az bārish-i-tufang o bān o chādar o ḥuqqah qhair az kushtah shudan o zakhmī gardīdan maqṣad ṣūrat nagirift.* "From the rain of matchlocks and rockets and *'chādar'* and *'huqqah'*, the men could not advance a single inch, and no purpose was effected but to be slain or wounded". The context shows that *chādar* is here something that was fired off, but I do not know what. Elsewhere, as the context shows, the word denotes some kind of tent. As for instance in Ashob, fol. 265*a*, *ba pāl wa chādar wa tambū*, where *chādar* cannot possibly mean anything but a kind of tent I have also seen the word *chādar* employed in a way that made it mean a sort of mantlet used as a field protection to gunners. I have mislaid my reference to the passage.

Ḥuqqah-i-ātash. Horn, 29, refers to Budāonī, i, 376, line 7 from bottom, but I think it must be, i, 371, 372. (Ranking, 482) It was at the siege of Kālinjar in Bundelkhand in 952 H (1545—1546). Sher Shāh stood near the wall and ordered *ḥuqqah* to be thrown into the fort. By chance one of these struck the wall and coming back with force broke in pieces, and the fragments falling on the other *huqqahs*, set fire to them and blew up Sher Shāh This passage does not show whether they were bombs fired from a mortar or thrown by the hand; but it is clear that they must have been one or the other. It shows that the projectile itself was called *huqqah*, a name derived no doubt from some resemblance in shape to the ordinary *ḥuqqah* used in smoking. Steingass, 426, has *huqqah-i-ātash*, a kind of rocket used in war. Ḥuqqah were used in 1044 H. (1634—5) by the defenders of Dhāmonī in Bundelkhand,

Bādshāhnāmah, i, part 2, p 108. The Central Asian word for the same thing seems to have been *qārorah*, see *Mujmil-ut-tārīkh ba'd Nādirīyah*, p. 78, line 13. We meet with another mention of these *huqqah* in an account of an assault on Dīg by Najaf Khān's troops in 1191 H. (1777), see Khair-ud-dīn Mḥd, *'Ibratnāmah*, i, p. 425. The Rohelahs scaled the wall by digging their knives into it and helping each other up, then *hiṣārīyān, hairān-i-nairangī-i-rozgār, sabūchahā o haqqah-hāe bārūt bar sar-i-shān mī andākhtand.* "The garrison, harrassed by the instability of fortune, threw on their heads small pots (*sabūchah*) and *huqqahs* of gunpowder". This goes to show they were hand-grenades The same author, i, 75, speaks on an earlier occasion of the garrison of Patnah in 1173 H. (1759) resisting an assault by *sabūchah-i-bārūt*. There are some farther remarks on the *huqqah* under the head of Sieges

CHAPTER XI.

LIGHT ARTILLERY.

Bernier, 217, says the artillery in 1658 was of two sorts, the heavy and the light, or "as they call the latter, the artillery of the Stirrup". Another general name sometimes applied to the light field guns is *topkhānah-i-rezah* or "small artillery" (*Ahwāl-ul-khawāqīn*, 190*a*). We also find it styled *topkhānah-i-jambishī*, "moveable artillery", by Khūshhāl Chand, Berlin ms. 495, fol. 1144*a* and elsewhere. But more frequently the reading is *top-khānah-i-jinsī*. We find this in Khāfī Khān, ii, 953, where the meaning seems to be "miscellaneous artillery" and in *Tārīkh-i-Ahmad Shāh*, fol 124*b*, under date the 18th Jamādī ii, 1167 H, 11th April 1754. In the latter passage the sentence reads — "the *jinsī* artillery, large and small, was ordered to be collected under the *Jharokah*" (balconied window of the palace). Here it is made to include cannon of all sizes, and is used probably as equivalent to "the artillery attached to the emperor's person". *Top-khānah-i-jilau*, we are told by Colonel Colombari, 36, is the word used by Mīrzā Mahdī in *Jahān kushāe Nādirī* for "moveable artillery". I have not been able to find the passage intended. But the word is used in *Mujmil-ut-tārīkh ba'd Nādirīyah*, p. 86, line 9.

This division into heavy and light artillery endured up to the end of the Moghul period, but I should describe the Artillery of the Stirrup rather as a subdivision of the Light artillery than as an identical term for it. For instance, distinct from the Artillery of the Stirrup proper, Bernier

tells us that Aurangzīb had two hundred to three hundred light camels, each of which carried a small field-piece, of the size of a double musket, attached on the back of the animal "much in the same way as swivels are fixed in our vessels".

Artillery of the Stirrup. The Stirrup (*rikāb*) was a figurative expression for the emperor's immediate entourage. To be at Court was to be *hāzir-i-rikāb*, "present with the Stirrup". The artillery called by this name consisted in Bernier's time (*Travels*, 218, 363) of "fifty or sixty small field-pieces, all of brass, each piece mounted on a well-made and handsomely painted carriage containing two ammunition chests, one behind and one in front, and ornamented with a variety of small red streamers. The carriage with the driver was drawn by two fine horses, and attended by a third horse, led by an assistant driver as a relay. The light artillery is always intended to be near the king's person, and on that account takes the name of the artillery of the stirrup. When he resumes his journey in the morning and is disposed to shoot or hunt in game preserves, the avenues to which are guarded, it moves straight forward and reaches with all possible speed the next place of encampment, where the royal tents and those of the principal omrahs have been pitched since the preceding day The guns are there ranged in front of the king's quarters, and by way of signal to the army, fire a volley the moment he arrives". Sendhiah in later days imitated this practice, but called such guns his "orderly" artillery (Broughton, 109). But after ʿĀlamgīr's reign and until European ideas were introduced towards the end of the 18th century, I do not find mention anywhere else that cannon were dragged by horses. Either oxen or elephants were used, to the exclusion of horses.

Names for Light Cannon. For the lighter guns we come across many names, several of which are probably different words for practically the same thing. The names that I

have collected are 1) *Gajnāl*, 2) *Hathnāl*, 3) *Shutarnāl*, 4) *Zambūrak*, 5) *Shāhīn*, 6) *Dhamākah*, 7) *Rāmjanakī* and 8) *Rahkalah* There is also a word *rahrau* (literally, "mover, traveller") used on fol. 100*b* of the *Tārīkh-i-ʿĀlamgīr Sānī*. Referring to the dismantling of the Dihlī fort by Aḥmad Shāh Abdālī in 1170 H. (January 1757) it says: "the great and small cannon that were on the bastions and over the gateways were brought down; also the *rahrau* of the moveable (*jinsī*) artillery". In reality there seem to have been only two classes of light artillery, which may be designated respectively, (I) Swivel-guns or Wall-pieces, (II) Field pieces. The distinction lies in the fact that the first class, the smaller pieces, were carried on the backs of animals, while the second were transported on some sort of wheeled carriage. The *Rahkalah* (N° 8) represents the second of these classes, and the other seven belong to the first category.

1) *Gajnāl*, 2) *Hathnāl*. The words mean literally "elephant barrel" from H. *gaj* and H. *hāthī*, elephant, and P. *nāl*, a tube or gun-barrel; for the former Steingass, 1017, has the alternative form *kajnāl*. They are mentioned in the *Āīn*, i, 113, and were thus called because they were carried on elephants backs. From the *Jauhar-i-ṣamṣām* (Fuller's translation, fol. 50) it would seem that each elephant carried two *gajnāl* pieces and two soldiers. We are led to infer that they were fired from the back of the elephant. But perhaps the gun was placed on the elephant for transport only, and dismounted before it was discharged. In any case, the practice of using elephants for such a purpose soon ceased to be common, as we seldom find any trace of it in the later reigns. The word *narnāl*, literally "male-barrel", quoted by Horn, 28, from the *Āīn*, i, 113, I have never met with in any of the later writers. It was Akbar's name for matchlocks which one man could carry.

3) *Shutarnāl*, 4) *Zambūrak*, 5) *Shāhīn*. These words seem

all three to refer to the same weapon, what we should call a swivel-gun or wall-piece *Shutarnāl* is literally "camel-gun barrel", and denotes the fact that they were sometimes carried on and fired from camels' backs. *Zambūrak* is derived from *zambūr*, a bee or wasp, with a diminutive added, and thus means "a little wasp", probably in allusion to its sound when fired, or its power of stinging or wounding. *Shāhīn*, literally "falcon", seems a later name for the same thing; a name which was brought into India by Nādir Shāh (1738—9) or Ahmad Shāh, Abdālī (c. 1760). Horn, 28, refers to it, quoting from Dowson's Elliot, viii, 398, a passage in *Nigārnāmah-i-Hind* of Sayyad Ghulām ʿAlī. See also W. Egerton, 29 An anonymous Indian writer (*Waqāiʿ-i-diyār-i-maghrib*) describing the Durrānī empire in 1212 H. (1797-8), writes of "the *shāhīn-khānah*, which are also called *zambūrak*" The name *shāhīn* may have been a translation of the European "falconet". Colonel F. Colombari "Les Zemboureks", Paris, 1853, p 28, says it was the Afghans of Qandahār who first fixed the *zambūrak* or falconet to the saddle by a moveable pivot. This mode was in use by them when they invaded Persia in 1722. Up to that time the camel had been used for transport only; the weapon when in use being placed on a rough wooden carriage, on the ground.

As to the size of the *zambūrak* or *shutarnāl*, we are told by Bernier, 217, that it was "a small field-piece of the size of a double musket" Horn, 28, quoting from the French edition of Bernier (Paris, 1670, p. 110, ed. A. Constable 47, 218) adds that "a man seated behind it on the camel can load and discharge the gun without dismounting". A later observer gives a different account of their use (*Seir*, i, 250, note 34). "Zamburaks are long swivels with one or two-pound balls. Two of them are carried fastened upon the saddle of a camel; and when they are brought into play, the camel is, as usual, made to kneel on the ground; but to prevent his rising, each leg is fastened, bent

at it is, with cord, and the animal remains immoveable". According to Jonas Hanway, "Revolutions of Persia", 3d ed. 1762, ii, 153, this method was also adopted by the Persians for their "harquebuses". "Each of these pieces, with its stock, was mounted on a camel, which lay down at command; and from the backs of these animals, trained to this exercise, they charged and fired these arms". Mundy, 215, states the way of using the camel-gun differently: "the gun revolves on a swivel fixed on the pummel of the saddle, and the bombardier, sitting astride behind it, loads and fires with wonderful quickness". This refers to Sendiah's army in 1828.

6) *Dhamākah*. In one or two places I find *Dhamāhah* mentioned along with *rahkalah*, as for instance in *Jauhar-i-ṣamṣām*, fol. 155*a* and Kāmwar Khān, 227 (year 1132 H.). The word is used in the *Āīn*, i, 115, N° 39, for some kind of matchlock. But it was probably applied in later times to a small field piece of the same kind as the *rahkalah*, although I am unable to tell in what particulars they differed The word is, of course, the Hindī *dhamākah*, the sound made by any heavy body falling on to the ground I recollect, in a case of murder brought before me, that this word was applied to the thud made by a dead body falling into a well Shakespear does not give the word in this, its more usual, meaning, but defines it as a kind of cannon carried on an elephant. Forbes copies Shakespear. Fallon, 659, has, however, as second meaning "a blow, thump"; and as third meaning the very vague word "firelock", which does not suit the passages where I have found the word; it was rather some kind of light field piece.

7) *Rāmjanakī* Another unusual word for some sort of light field-piece is *rāmjakī* or *rāmjanakī* (*Jauhar-i-ṣamṣām*, fol. 155*a*). I also find the word used during the period 1134—1147 H. in the *Ahwāl-i-khawāqīn*, fol. 216*b*, where I read it *Rāmchangī*. It is given as *Rāmjangī* on fol. 8*a*

of the *Hidāyat-ul-guwāīd* of Hidāyat-ullah, Bahārī, composed in 1128 H. I cannot suggest even a derivation for the name.

Organ (*Arghun*). "A weapon called an *organ*, which is composed of about 36 gun barrels so joined as to fire at once", Letter from De Boigne's camp at Mairtha, dated 13th Sept 1790, in H Compton's "Military adventurers", p. 61. Steingass, 38, has, Greek, ارغن an organ, or ارغون. Mr. Compton suggests the comparison with a *mitrailleuse*.

Chalanī This is a word used by Rustam ʿAlī, Bijnorī, in his "History of the Rohelahs", fol. 17*a*: *hukm taiyārī sāz ʿarāq, rahkalah, chalanī, gajnāl, shutarnāl kā*. Evidently from the collocation of words it is some sort of offensive weapon. But as to what it is the dictionaries give no help; and I have not met the word elsewhere.

Field Pieces. We come now to the second class of light artillery, that of field pieces mounted on wheeled carriages Of the further subdivision of this branch into ordinary field artillery and artillery of the stirrup we have already spoken. I have not come across any description of the pieces in purely Moghul times, but Fitzclarence, 88, writes thus of those taken from the Mahrattas at Jabalpur in 1817 "They were of cast brass with iron cylinders, two of them three and two six-pounders, but they are so thick that till I looked at the bore I thought they were six and nine Six tumbrils with their bullocks fell into our hands, with much ammunition and great stores of balls, grape and chain-shot. They appeared to be very careless with their powder, as large quantities of it lay loose near the guns... The carriages of the guns and tumbrils have hands painted on them in red, and the only explanation I could get of the emblem, used here as well as on the colours, is that it is meant for *pūjah* (worship)" [1].

[1] On the significance of the open hand as an emblem much light is thrown in a learned article by the late Mr O'Neill in the "Pall Mall Magazine" for June 1895, pp. 59—72.

Thirteen of the four-pounders taken from the Mahrattas outside Dihlī in September 1803 were of a similar make, namely, they were iron cylinders or bores over which it would seem the metal was run in casting the piece, "the adherence being so close that no chasm appeared, and nothing but the different colours of the two metals discovered the junction. The iron cylinder or bore was composed of four longitudinal pieces of hammered iron, remarkably close and neatly fitted throughout the bore" (Thorn, "War", 117) Here again we have to remember that these guns were most probably produced in workshops superintended by the Frenchmen in the Mahratta service

Rahkalah. In all histories of the later Moghul period we find a word *rahkalah* used in connection with artillery Literally it means a cart (Shakes 1203, Hindī) The word *rahkalah* may be heard to this day in the Upper Duāb applied to the smallest size of bullock-cart, one having a platform or body and wheels, but no sides. This cart, also called a *larrī*, is used to carry produce from the fields to the threshing floor, and for similar light work. The word seems also to be in ordinary use in the town of Bombay for a country cart [1]. But in historical works it means a field piece or small gun, including of course the vehicle for its transport. These guns were drawn by bullocks No doubt, as a passage in the *Akhbār-i-muhabbat*, p. 277, would show, *rahkalah* was strictly speaking the name of the gun-carriage only: *Har do dast dar zer-i-rahkalah burdah, top rā ba rahkalah tā sīnah bardāsht*, "Bringing both hands beneath the *rahkalah*, he lifted both gun (*top*) and carriage (*rahkalah*) as high as his chest". In ordinary

[1] Parliamentary Paper N° 538, March 1894, p. 30, para 29 of report by Acting Comm^r of Police, Bombay, "natives of Kathiawād, who for the most part find an occupation in driving *reklas* (small bullock carts)" Apparently these *reklas* are the small gaily painted bullock carriages used for conveying people about in Bombay, one of which is depicted in the water colour by H. Van Ruilt (Loan Collection, Empire of India Exhibition, 1895, N°. 398)

circumstances no such distinction was made, and when we read of the number of *top* and *rahkalah* in an army, we understand thereby so many siege-guns and field pieces. The word *arābah* is distinctly used for a field piece in line 1317 of the Hindī poem by Shrīdhar Murlīdhar of Prāg on the battle between Farrukhsīyar and Jahāndār Shāh, composed c 1712;

कउ कउ कउा कउ सो अराबे छुटे तट पकनि टाप की
"kar-kar-karā-kar" son arābe chhuten, taṭ pakani ṭāpkī

But more frequently he uses the word *rahkalā*. Another 18th century poet, Lāl, in his *Chhatar-prakāsh* (p. 267, *dohā* 15, line 2) also uses *arābe* as the name of a swivel-gun:

गोली गोला छुटत अराबे
Golī-golā chhutat arābe.

Calling the whole thing a cart (*rahkalah* or *ʿarābah*) is only equivalent to our saying a "gun", when we mean the gun with its carriage, or the Indians saying *chakrā*, a wheel, when they mean a cart In all three cases the name of a part is used to express the whole of a thing

ʿArādah-top. This is the name used in Khurāṣān for what must have been a field-piece, that is, in other words, a *rahkalah*. It is used by Mahmūd-ul-Munshī in his *Tārīkh-i-Ahmad Shāhī*, fol 19*b* and elsewhere.

Qasārah This weapon, evidently meaning some sort of field piece, is mentioned by the author of the *Ḥusain Shāhī*, fol. 71*b* and elsewhere, as forming part of the equipment of the Durrānī armies

Remarks on use of the words "ʿarābah" and "rahkalah". I have not traced back the first adoption, in the secondary sense of a field piece, of a word originally meaning a cart. Either the usage was of Indian origin and of a date anterior to Bābar's time; or it might have begun with the translation of a Turkish or Arabic word already in use in the Chaghatāe army. The former is, I think, the preferable opinion.

Thus Bābar in his "Memoirs" uses a word which also means originally a cart, the Arabic word *ʿarābah*. But if this were in Turkī the well known and accepted name of the cart on which a gun was placed, why does Bābar's cousin and contemporary use the Persian word *gardūn* (lit. wheel) for the same thing? See *Tārīkh-i-Rashīdī*, ed. Elias and Ross, 474.

ʿArābah Does Bābar by this word mean nothing but a cart, or does he include in it the field piece also? The question is an interesting one. When recounting his preparations for the battle of Pāṇīpat in April 1526, Bābar, "Mémoires", P. de C., ii, 161, tells us that he ordered his men to bring as many *ʿarābah* as they could, and they collected seven-hundred These were bound together with strips of hide, and in the intervals palisades of some sort (*tūrah*) were erected, the whole forming a kind of stockade or field protection. How, then, should we translate here the word *ʿarābah*? Literally it is, of course, cart, and for that literal version Pavet de Courteille, ii, 273, and Dr. Horn, 28, give their vote On the contrary, Leyden and Erskine, "Memoirs of Baber", 304, prefer to render the word by "gun-carriage" and in other places "gun". Sir Henry Elliot follows suit, "Mah Hist.", vi, 468, adding the curious assertion that "Bābar had no light pieces at Pānīpat". Pavet de Courteille admits that a cart (*ʿarābah*), being used to transport a field piece, could also be described as a "gun-carriage". But the main objection to this rendering is, in his opinion and that of Dr. Horn, the improbability that Bābar had 700 cannon of any sort at Pānīpat; or that in another instance, given by Bābar, the Persians could have had 2000 pieces, the word used being in both cases the same, that is, *ʿarābah* (P. de Courteille, "Mémoires", ii, 161, 376). Elphinstone, "History", 363, following W. Erskine in his later work on Bābar and Humāyūn, i, 433, writes, "linked his *guns* together by ropes of twisted leather".

Looking to the small size of these *Rahkalahs*, throwing

probably a ball of only two or three pounds' weight, it would not be very difficult to collect a large number of them. Nor would it be impossible to gather together seven hundred or even two thousand of such light pieces. Taking, then, all the probabilities of the case into account, the view of Pavet de Courteille and of Dr Horn seems wrong, while that of Leyden, Erskine, Elphinstone and H M Elliot is more likely to be correct. We may safely believe, I think, that by *ʿarābah* Bābar meant not only a cart, but a cart with the small gun carried on it. The only difficulty is that in other passages Bābar combines with the word *ʿarabah* (cart) the word *ẓarb-zan* (lit. "blow-striker") to designate the gun itself ("Mémoires", P. de C., ii, 168, 336), and therefore, it may be argued, he would mean by *ʿarābah*, used by itself, a cart and nothing more. But these very passages, where *ẓarb-zan* occurs, may be turned round to strengthen the argument in favour of *ʿarābah* sometimes meaning a gun For they show that Bābar *had* field pieces in his army. If so, then where were these guns at the decisive battle of Pānīpat? Unless we accept with H. M. Elliot the very improbable conclusion that Bābar had then no light artillery at all, the obvious answer is that they were on the *ʿarābah*, with which he formed his first line of field defences in preparation for the battle. This operation of entrenching the artillery and chaining the guns together, was a common device in the battles of later times. And we may infer that what his successors did so often afterwards, was what Bābar did at Pānīpat, that is, he placed his artillery in front of his force in a long line, and there partially entrenched it and chained the guns together

Tūrah or *Tobrah*. As part of this question of Bābar's use of guns in his battle against Ibrāhīm Lodī at Pānīpat, there arises a curious side issue about the meaning of the obscure word *tūrah*, توره, or *tobrah*, توبره. First of all, which is correct, *tūrah* or *tobrah*? The latter form is that used

by Nizām-ud-dīn, *Tabaqāt-i-Akbar Shāhī*, fol. 141*a*, followed by his friend, ʿAbdul-qādir, Budāonī, (Bibl. Ind i, 334, line 4) It does not seem to be a scribe's error, for in that case it would not have been adopted by a contemporary, Budāonī, without any question. It is strange that Nizām-ud-dīn Bakhshī, a soldier, a man highly placed at Akbar's court, and living barely two generations from Bābar's time, should have misread Bābar's "Memoirs", from which, as is quite evident, he derived his information about the battle of Pānīpat Yet all the other sources that I have been enabled to consult agree in giving the word as *tūrah*. I am indebted to Mr. H. Beveridge for many valuable notes on these authorities. An excellent manuscript of the Turkī *Bābarnāmah* owned by Mr Sayyad Alī Bilgramī, fol 264*b*, line 6, has *tūrā* twice in the same line, Ilminsky's Turkish text, p. 341, four lines from foot, has *tūrā* twice, the Bombay lithographed edition of the Persian text, p. 173, has *turah*. In the *Akbarnāmah* (Lucknow edition i, 74, line 2), Abu,l Fazl, who is here evidently using Bābar's "Memoirs", has *tūrah*. Then Erskine and Leyden, in their translation of the *Bābarnāmah*, p 304, found the word to be *turah* in the manuscripts they used; and in a later work, "History of India", i, 433, Erskine practically adheres to this version. To sum up, there can be little doubt, I think, that the word Bābar used was *tūrah* and not *tobrah*.

It is a little difficult to account for Nizām-ud-dīn making such a mistake. Perhaps finding a word *tūrah*, of which he did not know the meaning he altered it into the more obvious term, *tobrah*, a nose-bag. Although he thus obtained a word more definite in meaning than the other, one asks in astonishment how leather nose-bags could be converted into breast-works or palisades or shields? Here the ingenuity of ʿAbd-ul-qādir, Budāonī, comes to the rescue. In his *Muntakhab-ut-tawārīkh*, Bib. Ind , i, 334, line 4, which is almost word for word a copy of Nizām-ud-dīn, and therefore of the *Bābarnāmah*, he writes "between each pair of

carts (*ʿarābah*), six or seven nose-bags (*tobrah*) full of earth (*pur-i-khāk*) were arranged". Being furnished by Nizām-ud-dīn with the word *tobrah*, a nose-bag, he at once invented the earth with which he filled them, in order to make the use of such an unsuitable article somewhat more plausible. Of nose-bags there must have been plenty in an army consisting nearly entirely of cavalry, but even four thousand nine hundred of them (700 × 7) would furnish a very sorry protection to the soldiers, and if filled with earth could not be carried "raised in the air" as the *tūrah* occasionally was. Sir H M Elliot, "Mahomedan Historians", vi, 469, accepts Budāonī's version as quite satisfactory, and as affording a gratifying explanation of the use to which the nose-bags were put: see Dr. Horn, 74, 75, who gives the references just quoted, which I have verified. Colonel Ranking, i, 439, I am glad to see, takes the view that I do, namely, that *tobrah* is a wrong reading for *tūrah*. The difficulty about carrying in the air also throws doubt on D. Price's ("Retrospect", iv, 678) and H. Beveridge's (*Akbar-nāmah* i, 242) rendering of "gabion", although in fairness, one is bound to admit that this word fits better than any other the description of the *tūrah* as used by Bābar at the battle of Pānīpat.

At times the leather nose-bags (*tobrah*) were, however, put to strange uses, as can be seen in the *Tārīkh-i-Ḥusain Shāhī*, fol 39*a*. At the end of 1760, during one of the encounters which preceded the crowning victory of Pānīpat, Shāh Pasand Khān, generalissimo of Aḥmad Shāh, Durrānī, was seated on the edge of a well, cleaning the blood from his sword, when Shujāʿ-ud-daulah's retinue passed by. On the Nawāb congratulating him, the general asked, "How many infidels thinkest thou we have slain?" "At the least five thousand", replied the Nawāb. The Afghān said jokingly, "Give me one rupee each for them, and I will make over to thee twenty thousand heads". Then he shouted to his troopers, and each man as he rode up emptied the heads out of

his nose-bag at the feet of the Nawāb. There were from two to four in each bag.

Tūrah, the meaning of the word. W. Erskine, "Memoirs of Baber", 304, in the passage we have just been discussing, translates "breastworks", and adds in a note that "the meaning assigned to *Turah* is merely conjectural". In addition to its use as a term of military art, *tūrah* has several other meanings, some of which are better known. Steingass, 334, has *torah*, Turkish, "law, regulation, custom, rite, a law institnted by Changīz Khān". The meaning under discussion he gives on the same page under the form of *tūrā*. But he does not seem to have the not unusual one of "scion of a royal house", (especially when set up as a claimant to the throne), see Pavet de Courteille, "Dict." 224. In this last sense Indian writers use the word whenever the occasion arises. For one instance among many, Muhammad Qāsim, Aurangābādī, applies it in his *Aḥwāl-i-khawāqīn*, 172*b*, to the pretender, Prince Nekūsīyar. The above three meanings can easily be derived from the Arabic word ورا, "Anything behind which shelter can be taken" (Kazmirski, ii, 1516). The same word, with quite a different meaning, turns up in the *Bādshāhnāmah*, ii, 208, year 1051 H (1641-2). It is used there for a gift made to the widows of Yamīn-ud-daulah, and is explained as being "nine pieces of unsewn clothing". According to Platts, "Dictionary", 342, this *torah* is an Indian word for dishes or trays of food and so forth, sent out as presents. In this sense it is also used more than once in the *Tārīkh-i-ʿĀlamgīr Sānī*, year 1171 H., folios 173*b*, 175*a* and 176*b*.

As a military term, what then was a *tūrah* or *tūrā*? In the passage having reference to the battle of Pānīpat, Pavet de Courteille, "Mémoires", ii, 161, translates "sorte de palissades". In his "Dictionnaire Turc-Oriental", 225, the same author defines the *tūrah* as pieces of wood and iron bound together with chains and hooks, behind which the soldiers took shelter. The word appears in other places in Bābar's

memoirs. For instance, "the infantry marched in front, their *tūrah* raised in the air" (P. de C., i, 150, Ilminsky, p. 86, six lines from foot, Erskine, 74), and "orders were given to prepare *tūrah* and ladders, and also all that is necessary for the *tūrah*, without which a town cannot be taken by assault" (id. ii, 328). The exact kind of thing intended is thus left extremely vague, as is shown by Pavet de Courteille's alternatives ("Mémoires", ii, 328) "sorte de palissades ou de boucliers". Perhaps Bābar employed the word in a shifting, somewhat elastic sense, applying it to anything coming under the general meaning of "a shelter" or "a protection". I suppose it was usually what European military writers would call a mantlet (see Lake, "Sieges", 216, note). Apparently the same sort of thing was used by the Mahrattahs at the siege of Karnāla in 1670, where "they advanced by throwing up..... boards which they carry before them", Grant Dnff, 110, quoting the Bombay Records. Quatremère, "Histoire des Mongoles de la Perse", i, 337, note, also holds that the *tūrah* was "une sorte de mantelet", relying on three passages in the *Zafarnāmah*, two in the *Ḥabīb-us-sīyar*, and one respectively in the *Matlaᶜ-us-saᶜdain* and the *Akbarnāmah* [1].

Muhrah-i-rahkalah. This is an expression used by Mhd Qāsim, Aurangābādī *Aḥwāl-i-khawāqīn*, 210*a*, for which I can find no meaning in the Persian dictionary. Describing his preparations for resisting an expected night attack of the Mahrattahs, he says, *Ba har jānib kih dar-rasand jamīᶜ-i-mubārizān farāham āmdah, muhrah-i-rahkalah ba muqābilah-i-ān nā-pākān bāyad kard.* From this I infer that it means the nozzle or mouth of the gun. The same

[1] I am indebted to Mr. H Beveridge for calling my attention to the passage in Quatremère. The work referred to is "Collection Orientale, Manuscrits inédits de la Bibliothèque Royale — Histoire des Mongoles de la Perse, écrite en Persan par Raschid eldin, publiée, traduite en français, accompagnée de notes et d'un mémoire sur la vie et les œuvres de l'auteur", par [Etienne Marc] Quatremère, Vol. i, folio, Paris, 1836. The Persian title is *Jāmiᶜ-ut-tawārīkh.*

word is used, id. 126*b*, where it evidently means "chessman". J. Shakespear, 2003, gives *muhrī* (which he derives from *munh*, face) as the bore of a gun. This must be Mhd Qāsim's meaning in the first of the above passages, but is not the word more probably connected with the Persian *morī* or *muhrī*, a drain pipe? Khushhāl Chand, Berlin Ms. 1004*b*, uses the expression *az muhrah-i-bandūq majrūh gashtah*. and again id. 1015*b* (twice) and 1019*a*. In the second of these four cases the word seems to refer to the mouth of the cannon, in the first, third, and fourth, to the ball or bullet itself. Ashob, fol 262*b*, uses *Muhrah* quite plainly for the muzzle of a gun. He tells us that in 1739, during Nādir Shāh's general slaughter in Dihlī, having no weapons to defend their warehouses, some merchants resolved on frightening the Persians into leaving them unmolested They removed the poles and bambus from their thatched roof, laid them on the walls and the top of the gate, with their ends toward the street, so that they looked like the barrels of matchlocks or wallpieces, with their muzzles (*muhrah*) showing

Bān (*Rockets*) Dr. Horn speaks of these on p 39 of his treatise Some form of rocket or fire-arrow was in use among Hindus from very early times The word *bān* is said by Steingass, 152, to be from *vāna*, Sanskrit for an arrow. But *takhsh* used for a rocket in Elliot, "M. Hist.", iii, 439, (*Malfūzāt-i-Taimūrī*), as quoted by Egerton, 17, is not found in any modern work. In the *Āīn*, i, 110, N°. 13, we have *takhsh kamān*, but that is explained as a small bow, while rockets appear as *bān*, N°. 77, p. 112. *Ḥuqqah-i-ātash*, defined by Steingass, 426, as a kind of rocket, has been placed by me under *mortars*, which see, ante p. 129. The stick of a rocket was apparently called *chharī* (H. a stick), see Khāfi Khān, ii, 304, line 15, year 1095 H., *ṣadmah-i-chobchharī-i-bān ba dahān-i-ū rasīdah būd*· "He had received a blow on the mouth from the stick (*chob-chharī*) of a rocket". In *Tārīkh-i-ʿĀlamgīr Sānī*, fol. 152*a*, we have a word

descriptive of some portion of a rocket, which reads پولك, *pūlak*, but must be intended, I think, for پونگا, *pūngā*, "a hollow tube", Platts, "Dictionary", 281. A thing called *qainchi-i-bān* is mentioned twice in the *Ahwāl-i-khawāqīn* (209*b*, 219*b*) and Khūshhāl Chand speaks of Mahābat Jang, governor of Bengal, having with him in 1155 H. (1742) two thousand *qaichī-i-bān* [*Nādir-uz-zamānī*, Berlin Ms. N°. 495, fol. 1128*a*] See also Ashob, fol. 110*a*, and again 122*a*, who uses the word *qaichī* when writing in 1198—1199 H. of the events of 1150 H I am not able to say what this was; but I guess it to have been a tripod or support from which the rocket was fired. Steingass, 997, gives *qainchi*, scissors. Perhaps, however, it is only one of the descriptive words so often used, like *zanjīr* with elephants or *rās* with horses; in that case it adds nothing to the meaning. Another obscure name, in connection with rockets, *kahak-bānhā*, is found in the *Akbarnāmah* (Lucknow edition, iii, 19, line 9). The only suggestion I can offer is, that it refers to the screaming noise made by some special kind of rocket, and that the word is, H., *kuhuk*, the cry of the *koil*, or scream of the peacock.

Rockets were an invariable part of the equipment of a Moghul army. Bernier, 48, speaks of their being used by Dārā Shukoh at the battle of Samūgarh in 1658, and references to them might be multiplied almost indefinitely. Ashob, fol. 241*a*, speaks of the great number of rockets which fell into Nādir Shāh's hands with the rest of Muḥammad Shah's artillery in 1152 (1739). The rocket, according to this writer, was invented and first used in the Dakhin. In his time they were chiefly carried on camels, each of which carried ten rockets besides the rocket man. At times they were conveyed on carts drawn by two or four bullocks, each cart carrying fifteen rockets, besides the necessary attendants. The idea of the Congreve rocket, introduced into the British service in 1806, is said to have been obtained from those used by Tipū Sultān at Seringa-

patam in 1799, where Congreve was present as a subaltern. But rockets were not peculiar to Maisūr, they had been used in all ages and before that time had spread all over India They were used by the Nāgpur Rajah at Jabalpur in 1817 (Fitzclarence, 87).

The *Bān* is N°. 77 of the list of weapons in the *Āīn*, i, 112, and is figure 62 of plate xiv. It was adorned with a small triangular flag of green, white, or red. Rocket men marched on each side of the emperor's moving throne or of his elephant. This practice was imitated by the Dutch envoy Kotelar, in his procession into Lāhor in 1712 (Valentyn, iv, 283)

We possess several descriptions of the rocket. Moor, 509, quoting Major Dirom, says "the rocket consisted of an iron tube of about a foot long and an inch in diameter, fixed to a bambū rod of ten or twelve feet long. The tube being filled with combustible composition, is set fire to, and being directed by the hand flies like an arrow to the distance of upwards of 1000 yards Some of the rockets have a chamber, and burst like a shell, others called ground rockets, have a serpentine motion, and on striking the ground rise again and bound along till their force be spent. They make a great noise and exceedingly annoy the native cavalry in India, who move in great bodies, but are easily avoided or seldom take effect against our troops, who are formed in lines of great extent and no great depth".

They are thus spoken of by an anonymous European, writing in French about 1767, Orme Mss 4307, "Fouquets (*bān*), a species of rocket or pipe of iron filled with fine powder well rammed, and tied to long sticks. They make a great noise in the air. They are used to throw at crowds and to embarrass cavalry, but it is easy to protect oneself against them. Mostly they create more disorder than they do damage. The Rohelahs are reputed more skilful with them than any one else. Every army has some. The foot soldiers in charge might be styled "grenadiers"".

Difficulties arising in the use of rockets are well described

by Captain Thomas Williamson, 62, "*Bāns* are not very safe engines, being apt to turn back on those who use them. They are much employed among the native powers. The contrivance is very simple, being nothing more than a hollow cylinder of iron, about ten inches or a foot long, and from two to three inches in diameter, closed at the fore end, and the other having a small aperture for filling. These cylinders are tied strongly to *lāthies*, or bamboo staves, six or seven feet long, parallel to the thickest end of the bamboo The fuze at the vent is lighted, the direction is given by the operator, a slight cast of the hand commences the motion, and then the dangerous missile proceeds to its destination The panic it occasions among cavalry is wonderful! When it does fall where intended its effect is inconceivable; all fly from the hissing winding visitor, receiving perhaps a smart stroke from the stick, which gives direction to the tube and often causes it to make the most sudden and unexpected traverses. So delicate, indeed, is the management of this tremendons weapon, that without great precaution, those who discharge them are not safe, and it requires much practice, not only to give them due elevation, by which their distance is proportioned, but to ensure that they shall not, in the very act of discharging, receive any improper bias, which would infallibly produce mischief among the party".

M. Wilks, "Hist. Sketches", ii, 27, note, says "The Indian rocket derives its projectile force from the same composition which is used in the rockets of ordinary fire works; the cylinder which contains it is of iron; and sometimes gunpowder at its extremity causes it to explode when it has reached its object: a straight sword blade is also not unfrequently affixed to the rocket, an attached bambu or reed steadies its flight; the rocket men are all trained to give them an elevation proportioned to the varying dimensions of the cylinder and the distance of the object to be struck: as those projected to any distance describe

a parabola of considerable height, a single rocket is easily avoided, but when the flight is numerous, the attempt would be useless and their momentum is always sufficient to destroy a man or a horse. Such was the ancient Indian instrument, so inferior to the Congreve rocket of modern European warfare".

Lastly, Fitzclarence, "Journey", 255, holds that "Rockets were early brought into use and are far from being an ineffectual weapon They have an iron cylinder fastened with untanned leather thongs and transported on horses or animals, and on being lighted an additional impetus is given to them from the foot of the thrower. They will pass through the body of a horse or man". Opposite p 35 of his book he gives a plate showing a private in the Camel Rocket Corps then (1817) forming part of the Bengal Army

Mahtāb On Ḥusain ʿAlī Khān's being despatched in 1714 against Ajīt Singh of Jodhpur, part of his equipment was 100 *Mahtāb* I am not sure what these were, but as they are named along with rockets, I presume they were some kind of missile Steingass, 1352, says *mahtāb* is a kind of firework, and J. Shakespear, 2000, has "a kind of fireworks, blue lights", he refers to *Qanoone Islam*, where *mahtāb* and *naqtī mahtāb* appear in the Appendix, p. lxiv, under fireworks.

Powder Magazines. These were called *Bārūt-khānah*, see Ghulām ʿAlī Khān, *Muqaddamah-i-Shāhʿālam-nāmah*, fol 38*b*.

Pal-i-siyāh. I find this expression twice at least in the *Ahwāl-i-khawāqīn* (fols. 209*b* and 227*a*); "The *rahkalahs* were filled with *pal-i-siyāh*", and it is thus either an explosive or a projectile. In another passage in the same work, 62*b*, the same word is used, where from the context it ought to mean a copper coin: *kharmuhrah, o pal-i-siyāh, o zar-i-sufed o zar-i-surkh*, i. e. a cowrie, a copper, silver coin, and gold coin. Steingass, 254, has *pul*, a small coin.

Badar. I find this word used in the second of the above passages, *badarhāe-pal-i-siyāh.* It was thus something in which the *pal-i-siyāh* was contained. Is it *badrah*, a bag? (Steingass, 162).

CHAPTER XII.

PERSONNEL OF THE ARTILLERY.

Of this arm of the service it is doubtful whether the Moghuls knew much before they descended into the plains of India under Bābar. What they did know was probably borrowed from the Turks and from Constantinople. Nor could the art and science of gunnery have been very advanced in India itself, when the Moghuls arrived in that country in the first half of the 16th century. In the earlier Moghul period, at any rate, the emperors were dependent for their artillery on the help and instruction of Rūmīs, that is, Mahomedans from Constantinople, or of Farangis, principally run-away sailors from Sūrat, or Portuguese half-castes (Horn, 29). Rūmī Khān was a well known officer of the first of these classes. Of either the real Europeans or their half-caste Portuguese substitutes, we find little or no mention. The Indian Mahomedans ignored as much as possible the services of the Christians and Europeans in their employment. Possibly this may have been due to the contempt which they really felt for Christian foreigners and their abhorrent ways. The slight consideration with which Mahomedan nobles treated Europeans, even those of some position, up to the middle of the 18th century, can be learnt from the statements in a letter written about that time by the celebrated Marquis de Bussy-Castelnau (R. O. Cambridge, "War", Introduction, xxix, xxx). Similarly, Hājī Mustapha, a very acute observer, remarks about our early successes in Bengal, "But hear a Moghul, or read any of their relations, it seems that the whole revolution hangs on

the Moghols themselves only, and if any mention at all is made of foreigners, it is only to hint that Jafer Ali Chan gave also his protection to a few hundred *frenghees*, headed by one *Clive*, whom the new Nabob and his party saved from imminent destruction". (Dalrymple, "Or. Repertory", ii, 217). The same feeling was shown by the governor of Orissa in 1633, when he insisted that Cartwright, an English trader, should kiss his foot, C. R Wilson, "Early Annals", i, 8.

In spite of the almost complete silence of native authors, there is still evidence that up to the middle of the 18th century considerable bodies of Portuguese continued to be enlisted. For instance, we learn that Juliana d'Acosta, a Portuguese lady who held the office of matron of the harem, imported from Goa three hundred Portuguese, for most of whom she obtained employment (Gentil, "Mémoires", p. 375). From the *Tārīkh-i-Muhammadī* (year 1147 H.) we learn that "Julyā, a Farangi woman, a doctor and favourite of the deceased Shāh ʿĀlam (i. e. Bahādur Shāh) and of the reigning emperor, Mḥd Shāh, died at Dihlī in Rabīʿ i, 1147 (August 1734)". Again, Father Tieffenthaler, a Jesuit priest from the Tyrol, spent about sixteen years between 1747 and 1764 as priest in charge of a community of Christians in the imperial service, who had settled down in the obscure town of Narwar, 108 miles south of Agrah, (Bernouilli, "Recherches sur l'Inde", i, 175, and pp. 4, 5 of author's preface).

There are other scattered notices about Europeans employed in the artillery. Bernier, 217, (Horn, 32) says "But the artillerymen receive great pay, particularly all the Farangīs or Christians; Portugueze, English, Dutch, German, and French, fugitives from Goa and from the Dutch and English companies. Formerly, when the Mogols were little skilled in the management of artillery, the pay of the Europeans was more liberal, and there are still (1658) some remaining, who receive two hundred rupees a mouth, but now the king (ʿĀlamgīr) admits them with difficulty

into the service and limits their pay to thirty two rupees"[1]. Bernier also mentions, 73, 93, that the garrison of Bakkar in Sind had, in 1658, artillerymen who were Portuguese, English, French and German. They had been entertained by Dārā Shukoh And in describing the battle of Ḥasanpur in 1133 H. (1721) Khūshhāl Chand, Berlin Ms. 495, fol. 1015*a*, speaks of the "skilful Europeans" (*Farangiyān-i-chābuk-dast*) who worked the guns. Later again, in 1750, the principal artillery officer of Nāzir Jang, *ṣūbahdār* of the Dakhin, was an Irishman (Cambridge, "War", 67), We learn also from the *Ḥusain Shāhī*, fol. 34*b*, that in 1760-1 most of Sendhiah's gunners were Europeans (*Naṣārī-i-Farang*); and Gentil, "Mémoires", 285, asserts that at the battle of Katrah in 1774, Ḥāfiz Rahmat Khān's artillery was commanded by a Spaniard. So late as 1815 the Nizām had some Portuguese artillerymen in his service. "They had a Portuguese who levelled each gun himself, and appeared to have the direction of the attack. If by chance a shot struck any part of the wall, so as to raise a dust, the air resounded with acclamations in praise of the old Portuguese, who seemed in no small degree flattered thereby" (Lake, "Sieges", 16, note).

Mīr Âtash. At the head of the artillery was one of the great officers of state, the *Mīr Âtash* (Lord of Fire), or *Daroghah-i-topkhānah* (Superintendent of the Cannon department). Sometimes, as in Jahāndār Shāh's reign (1712), we read of two such officers, one at the head of all the artillery, and the other in special command of the light artillery attached to the emperor's person. These men were *manṣabdars*, graded in the usual way according to their services or the favour in which they stood. But the rest

[1] See further on under *Aḥshām* for much lower rates, Rs. 8, 6¼, down to 5¼ a month. G. Careri, 244, copies the above passage, except that he interpolates a statement that the heavy artillery especially was in the hands of Frank or Christian gunners, and that the Europeans entered through Goa or absconded from warships.

of the men on the establishment of the imperial artillery were paid direct from imperial funds, and in this respect were treated differently from the main body of the army, which consisted almost entirely of cavalry, men dependent upon and paid by the chief under whose banner they enlisted. There were, as we know, some bodies of cavalry in direct pay of the emperor, such as the Ahadīs, the Wālā Shāhī and so forth. But all the rest of the men so paid, matchlockmen, artillery-men and artificers, including such an unmilitary class as cotton-carders and such like, seem to have been lumped together under one head as *Ahshām*. One point that these men had in common appears to have led to this incongruous classification. They were all borne on the imperial treasury pay-rolls, and paid direct therefrom as persons in the immediate employ of the emperor, and not entertained through any chief or *manṣabdār*, to whom their pay could be disbursed.

The Mīr Ātash had grown into a most important officer; this is borne ont by Khushhāl Chand's remark, Berlin Ms., fol. 1133*b*, when Ṣafdar Jang was appointed on the 21st March 1744, that "contrary to former days, the artillery has become the most trusted and favoured corps in the army". Involving as it did the command of the imperial artillery, which was always parked round the fortress or palace or the tents occupied by the emperor, this office carried with it the custody of the emperor's person and the guarding of the palace gates and walls. (*Seir* II, 373, note 170, and *Maʿlūmāt-ul-āfāq*, fol. 79*b*).

The Mīr Ātash seems to have performed for the officers and men under his command most of the duties belonging for the rest of the army to the Bakhshīs He was aided in the execution of these duties by a *Mushrif*, or executive officer. The Mīr Ātash laid before the emperor all demands made on his department; all orders to it passed through him. He checked the pay bills and inspected the diaries of the Arsenal before sending them on to the *Khānsāmān*

or Lord Steward. He saw to the postings of the artillery force, and received reports as to all losses and deficiencies. The agent at the head of the artillery pay-office was nominated by him. The descriptive rolls of artillery recruits passed through his hands, all new appointments and promotions were made on his initiative (*Dastūr-ul-ᶜAml*, B M. 1641, fols. 23*b*—27*b*).

In dealing with artillery, the subject falls naturally under three heads, 1) Manufacture, 2) Artillery in use, 3) Arsenals or Magazines. It is doubtful how far in later times the Mir Ātash was concerned in the casting of guns or the provision of stores. The *Top-khānah* was classed as one of the workshops, or *kārkhānajāt*, belonging to the Imperial Household, which were in charge of the imperial *Khānsāmān*, or Lord Steward; and as Dāroghah of the Topkhānah, used in this sense, the Mīr Ātash must have been a subordinate of the Lord Steward. But in course of time, as the artillery branch developed, the office of Mīr Ātash grew in importance, until he was the equal or more than the equal of his nominal superior, the Khānsāmān, and as commander of the artillery in use he must have been wholly independent of that official.

In earlier days, judging from passages in Bābar's memoirs, a Mīr Ātash was supposed to supervise the casting of cannon. Ustād Qulī Khān, Bābar's Mīr Ātash, is described as taking an active part in the founding of a large cannon at Āgrah. I doubt if this was the practice in later reigns; I fancy that the cannon-foundry and ordnance store department fell more completely into the hands of the *Khānsāmān* and his officers, while the *Mīr Ātash* confined himself more exclusively to his purely military duties. As for arsenals, magazines, or store-houses of cannon and the other requisites pertaining thereto, these were under neither the *Khānsāmān* nor the *Mīr Ātash*. All reserve artillery and stores were kept in certain great fortresses, such as Āgrah, Dihlī and Lāhor, in the charge of the special commandant

(*qilaᶜhdār*), who was an officer appointed direct from court and in no way connected with or subordinate to the provincial governor (*nāzım* or *ṣūbahdār*).

Hazārī. The word *hazārī* often appears in histories, and from the context I have found that it means an officer of artillery, generally of garrison artillery. The equivalent may be taken to be our rank of captain. *Hazārī* is, of course, the same word as that used for one of the ranks (*manṣabs*), which we have detailed earlıer in this work. But the two *things* intended by the one word could not have been the same. A *manṣabdār* of 1000 was a officer of high, or at any rate of considerable, rank; whıle *Hazārīs* are spoken of ın the plural in a way to show that they were numerous and of no great consideration.

Some writers, Mırzā Muḥammad, for instance, in his *Tārikh-ı-Muhammadī*, invarıably use for an artıllery officer the word *mink-bāshī* where others use *Hazārī*. Ghulām ᶜAlī Khān, *Muqaddamah-ı-Shāh ᶜĀlam-nāmah*, fol. 64*a*, also uses that word. Kām Rāj, *Aᶜzam-ul-harb*, fol. 120*b*, uses both *Mınk-bāshī* and *Hazārī* ın the same sentence. The two are equivalent in meaning, for *mink-bāshī* is the Turkish for "Commander of 1000" (*mink*, 1000, *bāsh*, head), See Horn, 14, 136, (Taimūr's Ordinances, Davy and Whıte, 231). Of course, this and the other Turkish terms for commanders of varıous ranks must have been known to and used by the Moghuls up to the tıme that Bābar conquered Indıa. But it does not seem as if the Turkish words passed into the official nomenclature of Hindūstān. In that country all the ranks (*manṣab*) were known by their Persian aud not by their Chaghatāe Turkish names. Apparently the *Āīn-ı-Akbarī* (at least, judging from Blochmann's translation) makes no use of the word *Mink-bāshī*. From this I infer that the word came into India with the Turks from Constantinople, who were the chiefs and leaders in the Indian artillery during the earlier Moghul period. As the services of these and of Europeans, who were also employed, were

much prized, they may have been accorded at first the rank of commander of 1000 (i. e. *mink-bāshī* or *hazārī*), and although, as the Indians themselves grew more familiar with the working of artillery, the estimation and market value of an artillery officer diminished, the original name of *Hazārī* or *Mink-bāshī* may have stuck to the office, after the rank denoted thereby had ceased to belong to it This designation of *Hazārī* explains the epithet in Blacker, "War", 340, applied to the Mahratta *qila'hdār* or commandant of Mandlak (Central India), viz. Ṣāhib Rāe Hazārī, or as Blacker spells it, Hazeree. Possibly also Pogson's "Lulloo Hoozooree", commandant of Ajaigarh in Bundelkhand, ought to be *Hazārī* ("Hist. of the Boondelas", 135).

Ṣadiwāl, Mirdahah, Sāir. These names follow those of the *Hazārī* in all the official manuals, and may be taken as equivalent to lieutenant, sergeant, and privates The etymologies are P. *ṣadī*, group of 100, *wāl* H. affix for man, person, possessor; *mir* contraction of P. *mīr*, lord, master, *dahah*, a group of 10; *sā,ir* P. the rest, remainder, the others, i. e. the common gunners, (Davy and White, "Institutes", 232). Kām Rāj, *A'zam-ul-ḥarb*, fol. 120*b*, has the form *ṣadīdār*.

Golandāz. When gunners are specifically named this is the designation they receive, and in the Manuals they appear among the *Aḥshām Golandāz* literally "ball-thrower", is derived from P. *gol*, ball, and *andāz*, the root of P. *andākhtan*, to throw. We do not know how many men were attached to each gun and it must have varied a good deal, but Horn, 27, suggests sixteen as the average number, by inference from a passage in the *Tuzuk-i-Jahāngīrī* (Lowe, 18, line 9). Aḥmad Abdālī had two men to each *shāhīn* or falconet (Horn, 28, Elliot viii, 398). From Mirzā Ḥaidar's account of Humāyūn's artillery in 1540, it is inferred by Horn, 29, that there was then an average of seven men to a gun (Elias and Ross, 375?).

Deg-andāz. These were the men who had charge of and

used the *deg*, which I have mentioned under the head of Heavy Artillery. The name is literally "Pot-thrower", P. *deg*, a pot, and *andāz*, throwing. I am not certain whether this means that they had charge of mortars, called *deg*, or whether they used hand-grenades. The latter would be more near the literal meaning, and I do not think that mortars were at all common in India until introduced by Europeans after the middle of the 18th century. A passage in Fitzclarence, 246, seems to bear out my interpretation of *Deg* and *Degandāz*. He says "at times they have recourse to thick earthen-ware pots with fuses and full of powder, the pieces of which wounded dreadfully".

Bān-andāz, *Bān-dār* As these "Rocket-throwers" or "Rocket-holders" are rated separately in the official books, it must be inferred that they existed as a separate body.

CHAPTER XIII.

AHSHĀM.

The *Ahshām* is the heading under which the later native writers place all connected with the army, who were neither *manṣabdārs*, *tābīnān*, nor *aḥadis*. I retain the heading, with one change only; I place the artillery by themselves, as of sufficient importance for separate treatment.

In the *Āīn*, i, 251—254, there is a chapter headed *Piyādagān* which corresponds generally to the *Aḥshām* of the later books Under the same head as Akbar's 12,000 matchlockmen, who are the only men in the group at all entitled to be reckoned as soldiers, come the doorkeepers, the palace guards, the letter carriers and spies, the swordsmen, wrestlers, slaves, litter-bearers, carpenters, water-carriers and so forth. In the *Āīn*, i, 254, there is a class of troops called *Dākhilī* (extra, additional) which seems no longer to have existed in ʿĀlamgīr's reign, at least the name has dropped out of the official manuals.

The vague word *Aḥshām* (Steingass, 21, A, pl. of *Ḥasham*) is defined in the dictionary as servants, domestics, followers, attendants, retainers, a kind of militia or armed police. In the official manuals (*Dastūr-ul-ʿAml*) it comprehends the infantry, the *personnel* of the artillery, the artificers, and the attendants on the court. The incident of service which was common to all these men, and caused their inclusion under one head, was the fact that they were all borne direct on the imperial books, and received their pay from the imperial treasury, without the intervention of a *manṣabdar*. This fact also accounts for Abul Faẓl's apparently

anomalous classification of the artillery as part of the Household in Book i of the *Āīn*, instead of with the rest of the army in Book ii, *Āīn* 1 to 10. I have also found *Ahshām* used with three more restricted meanings: 1) The light artillery which attended the emperor's person wherever he went were called the *Ahshām* (*Mirāt-ul-Istilāh*, fol 5*b*). This artillery is described by Gemelli Carreri, French ed., iii, 244, and by Bernier, 217, 363, who calls it "artillery of the stirrup" (i e *rikāb*); 2) the word *Ahshām* is used constantly in the 18th century for the gunners of the garrison artillery, and 3) we find *Ahshām* used as a general term for petty zamindārs serving in any campaign, and the half-armed militia or levies which they brought in their train. Khāfī Khān, ii, 953, names the *dāroghah-i-ahshām* separately, between the *mir ātash* and the *dāroghah-i-top-khānah-i-jinsī*, which would make the *Ahshām* something distinct from both the artillery generally and the light artillery.

Infantry As already stated, this arm of the service held a very inferior position and was of little or no consideration (Bernier, 219). Writing about 1760, and referring more particularly to the south, De la Flotte, 258, says that the less numerous body gave way at the first meeting, especially infantry before cavalry, "nay, seldom would 50,000 infantry stand before 20,000 cavalry". Another observer, Orme, "Hist. Frag.", 417, says the infantry consisted in a multitude of people assembled together without regard to rank or file: some with swords and targets, who could never stand the shock of a body of horse; some bearing matchlocks, which in the best of order can produce but a very uncertain fire: some armed with lances, too long or too weak to be of any service, even if ranged with the utmost regularity of discipline. Little reliance was placed on them. To keep night watches and to plunder defenceless people was their greatest service, except their being a perquisite to their commanders, who received a fixed sum

for every man, and hired every man at a different and less price. In short, the infantry were more a rabble of half-armed men than anything else, being chiefly levies brought into the field by petty zamindars, or men belonging to the jungle tribes. Any Mahomedan or Rajput, who respected himself, managed somehow or other to provide himself with a mount and obtained enrolment as a cavalry soldier, who was in popular estimation a gentleman. The high figures for Infantry in each district and province, shown in volume ii of the *Āīn-i-Akbarī*, can only be accepted under considerable reservation. These numbers can only represent the men called on to render strictly local duty, and they must have consisted almost entirely of villagers armed with long pikes, or swords and shields, perhaps even with only an iron-bound bambu staff (*lāthī*).

Bernier tells us, 217, that the foot soldiers received the smallest pay: "and to be sure, the musketeers cut a sorry figure at the best of times, which may be said to be when squatting on the ground and resting their muskets on a kind of wooden fork which hangs to them. Even then they are terribly afraid of burning their eyes or their long heards, and above all least some *jinn*, or evil spirit, should cause the bursting of their musket. Some have twenty rupees a month, some fifteen, some ten". And again, 219, (a passage copied almost word for word by Gemelli Careri, iii, 244); "I have said that the infantry was inconsiderable. I do not think that in the army immediately about the king the infantry can exceed 15,000, including musketeers, foot-artillery, and generally every person connected with that artillery. From this an estimate may be formed of the number of infantry in the provinces. I cannot account for the prodigious amount of infantry with which some people swell the armies of the Great Mogol, otherwise than by supposing that with the fighting men they confound servants, sutlers, tradesmen, and all those individuals belonging to bazars or markets, who accompany

the troops. Including these followers, I can well conceive that the army immediately about the king's person, particularly when it is known that he intends to absent himself some time from his capital, may amount to two or even three hundred thousand infantry This will not be an extravagant computation, if we bear in mind the immense quantity of tents, kitchens, baggage, furniture, and even women, usually attendant on the army".

Nāgas. These bodies of so-called Hindu devotees were common in the armies of the 18th century, and I believe that to this day the Rājah of Jaipur entertains a large number of them There was a corps of them in the Audh service from about 1752 to the end of the century. The last leader of these was Rajah Himmat Bahādur, whose name appears so frequently in our own early connection with Bundelkhand (Pogson, "Boondelahs", 119—122, Francklin, "George Thomas", 364, 365). With this exception the Mahomedans do not seem to have retained any of these *fakīrs* in their employ. Anquetil Duperron "Zend Avesta", I, lxxv, describes a body of these armed vagabonds, numbering some 6000 men, that he met in 1757 on their way to Jagannāth The three leaders marched first, a long pike in one hand and a buckler in the other The main body was armed with swords, bows and matchlocks. Hāji Mustapha, during his adventurous attempt in 1758 to reach Masulipatam viâ Western Bengal and Pachet, came across five thousand of these devotees on their way to the Ganges at Sāgar; "they are all of them tall, stout, well-limbed men, in general stark naked, but very well armed" (Dalrymple's "Oriental Repertory", ii, 239). A description of a corps of these Nāgās commanded by a disciple (*chela*) of Himmat Bahādur, and then in the employ of Daulat Rāo, Sendhiah, well be found in Broughton, "Letters", 96, 104, 106, 123. Blacker, "War", 22, says the "Gossyes" i. e. Gusāins or Nāgas, "have always been considered good troops".

ʿAlighol In the later years we find a class of troops known as *ʿAlighol*, who from one passage (Fraser, "Skinner", ii, 75, 76) would seem to have been the equivalent of the *ghāzis*, as we now style them, so frequently heard of on our Afghān frontier. Fraser defines them as "a sort of chosen light infantry of the Rohilla Patans: sometimes the term appears to be applied to other troops supposed to be used generally for desperate service". They are also mentioned in V Blacker, "War", 23. W. H Tone, 50, makes out the *ʿAlighol* to be one of the divisions of the Nezib (*Najīb*).

Silaḥ-posh. In 1799 the Jaipur Rājah had a body-guard of sixteen hundred men, armed with matchlocks and sabres, who were called the *silahposh*, no doubt from their being clad in armour (Francklin, "George Thomas", 165).

Najīb. The word means literally "noble", and Blacker, "War", 22, tells us they were irregular infantry, who disdained uniform and carrying a musket, their arms being a matchlock, or blunderbuss, and a sword. They disdained to stand sentry or do any fatiguing duty, considering it their only business to fight and to protect the person of their prince. W. H. Tone, 50, says that long practice had enabled them to load with sufficient readiness, while their matchlock carried farther and infinitely truer than the firelock of those days The Najībs was also excellent swordsmen.

With regard to the Najībs in the Nawāb of Oudh's service in 1780, Captain Thomas Williamson, 124, tells us that they were clothed in blue vests and drawers, furnishing their own arms and ammunition (matchlock, sword, shield, bow and arrows). Their discipline was very contemptible; they answered very well for garrison duty, but could not stand the charge of cavalry, having no bayonets, while their arms were totally unfit for prompt execution. As for the Nawāb's troops organized in imitation of the E. I. Company's battalions, they were, even on actual service,

nothing but "food for powder". Such as had bayonets had no locks: those that had hammers to their locks, had no cock, or at any rate the flints were wanting. Such ammunition and cartridges as there were had, through damp and time, become so incorporated with the wooden pouch-blocks, that when touched the tops came off, leaving the powder and ball a fixture A battalion of Najībs could with ease cut to atoms half a dozen of those mock regiments.

Paṭhabāz. The author of the *Ḥusain Shāhī* (written in 1212 H., 1797-8) mentions, fol. 34*b*, that in 1760-1 Sendhiah had several thousand *Paṭhānbāz*, "a word which in the idiom of the Dakhin is applied to courageous men and expert swordsmen" They received their name, no doubt, from their weapon, the *patta* or straight rapier (see ante p. 77)

Ḍhalait. This Hindī word (Platts, 572), meaning literally "shield bearer", I have met with in three writers. Ashob applies it to one of the three foot soldiers who followed Sa'd-ud-dīn Khān, the Mīr Ātash, when forced in 1151 H. (1738), much against his will, to accompany Nādir Shāh's general of artillery into the streets of Dihli, to put the inhabitants to the sword. This *Ḍhalait* was sent as a messenger to carry a note to the Wazir, Qamr-ud-dīn Khān, (Ashob, fol. 256*b*). The word is also found in *Tārīkh-i-'Ālamgīr Sānī*, fol. 136*a*, referring to the year 1170 H. (1756-7); and in the *Tahmās-nāmah* of Miskīn, fol. 49*a*.

Amazons At the end of the 18th century the Nizām at Ḥaidarābād had two battalions of female sepoys, of one thousand each, which mounted guard in the interior of the palace, and accompanied the ladies of his family whenever they moved They were with the Nizām during the war against the Mahrattas in 1795, and at the battle of Kurdlah did not behave worse than the rest of his army. They were dressed as our sepoys used to be, and performed the French drill with tolerable precision The corps was called the *Zafar-paltan* or victorious battalion, and the

women *gārdanī*, a corruption of the word "guard" [1]. The pay was five rupees a month (Blacker, 213, note). This Nizām seems to have had a penchant for female warriors. Moor, "Narrative", 117, tells us of an Italian lady, a dancer, who so entranced him, that he conferred on her a title and placed a battalion under her command. She now learnt the manual exercise and evidently took her military position *au grand sérieux*. Soon afterwards a foreign male dancer arrived, and the lady was directed to appear in a *pas de deux*. Full of her new dignity, she objected, and as the Nizām insisted, she resigned her command and retired to Poona.

Sihbandī. This was the name for the armed men entertained by local officers when engaged in collecting the land revenue (*Dastūr-ul-ʿAml*, B M. 6598, fol. 48*b*). Colonel Sir R. C. Temple ("Calcutta Review", Oct. 1896, p. 406) in an article on the Andaman Sibandi Corps, suggests that this word found its way into Anglo-Indian use from Madras, and that originally it was unknown in Northern India. This opinion seems untenable in the face of the authority above quoted, which belongs to Northern India and is not later than ʿĀlamgīr (1658—1707). The word is also used for local levies by Dānishmand Khān, *Bahādur Shāh-nāmah* (entry of the 12th Shabān 1120 H. = 26th October 1708). Or we may go still farther back, to the year 932 H. (1526), when we find it applied by Bābar to the Indian levies of Ibrāhīm Lodi. See the *Bābarnāmah*, lithographed text, 174; the *bedhindī* of Pavet de Courteille, ii, 163, is an obvious misreading.

Barqandāz. This name (literally *barq*, lightening, *andāz*, thrower), which came to be the commonest name for a foot soldier using a musket, appears rarely, if at all, in earlier writings, unless as a mere metaphor. An early use of it as a name for a matchlock man is found in *Aḥwāl-i-khawāqīn*, 209*b*, (c. 1147 H.).

[1] Or perhaps better, "guard" plus the feminine termination *anī*.

Matchlockmen, Rates of pay. The following table shows the rates of pay for the various classes of the matchlockmen; it may be presumed, perhaps, that the mounted men were in the position of officers, or were perhaps what we should call mounted infantry. First we have the pay of the regular matchlockmen (*Bandūqchī-i-jangī* or *Tufang-chi*) who were either Baksariyahs or Bundelahs. Of these some drew rates of pay specially fixed, and entered in the official diary at the time when they were entertained (*hukmī*) The usual rates, which every one else got, were as follows:

Class.	Rank	*Qadīmī* (old)	*Jadīdī* (new)	
Suwār, (mounted)	*Hazārī Duaspah* (two horsed)	Rs 45, 40, 32	Rs 40, 35	
	Id *Yakaspah* (one horsed)	Rs 22, 20, 17½	Rs 20, 17½	
Piyādah, (foot)	*Sadī-wāl*	Rs. 9	Rs 8	
	Mu dahah	Rs 8	Rs 7	
	Sā,ir (the rest)	Rs. 6, 5½, 5	Rs 6¼	Cash Rs 6, and conditional *jāgīr*, 8 annas.

Akbar's rates for these men, *Ā'īn*, i, 116, work out as follows:

Class	1st Grade			2nd Grade			3rd Grade			4th Grade.			5th Grade		
Mirdahahs	Rs 7½			Rs 7			Rs 6¼			Rs 6½					
	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd
Others Rs.	6¼	6	5¾	5½	5¼	5	4¾	4½	4¼	4	3¾	3½	3¼	3	2¾

The later rates for the *Mirdahahs* would thus appear to have been a little higher than those first fixed; those for the common soldiers, on the whole, much higher.

There are some words which occur in the above which call for some explanation:

Baksariyah is a curious word, and suggests to us at its origin the town of Baksar on the Ganges in the Bhojpūr country. The region is one which still supplies from its Rājput and Bhūinhār clans the stalwart clubmen of the zamīndārs in Bengal proper, the door-keepers of private houses in Calcutta, and many of the finest sepoys in our Hindūstānī regiments. Bhojpur shared with Audh the supply of men to our native army in Bengal from its earliest to its latest days, that is, from the middle of the 18th to the middle of the 19th century. That these men crowded to our standards, as soon as the Company began to raise an army, was due, no doubt, to their having already been accustomed, for generations, to serve as matchlockmen and gunners in the army of our predecessors, the Moghuls. When in 1756 Calcutta was threatened by Sirāj-ud-Daulah and preparations for defence were made, we find that "the number of Buxeries" (i. e. Baksariyahs), "or Indian matchlockmen, was therefore augmented to 1500". (Orme, Mil. Trans, ii, 59) See also the Glossary prefixed to an Address to the Proprietors of East India Stock (J Z Holwell's *India Tracts*, 3d ed. 1774), — "*Buckserrias* — foot soldiers whose common arms are sword and target only".

The connection between the Baksariyahs of the army and the town of Baksar in Bahār was evidently a matter of common belief and acceptance. In the *Chahār Gulshan* of Rāe Chatarman (my copy, fol. 127*b*), written in 1173 H. (1759), in the itinerary from Rāe Barelī to Patnah, when the author comes to Baksar, he adds "original home-country of the Baksariyahs" (*aṣl watn-i-Baksariyah-hā*). It is strange that they should have been known by the name of the town rather than by that of the subdivision of the country, that is, parganah Bhojpur, sirkār Ruhtās, Ṣūbah Bahār (*Āīn*, ii, 157). We call them nowadays Bhojpurīs and not Baksariyah. In the historians belonging to the 18th

century, I find that the men of the garrison artillery are usually designated Baksariyah

Bundelahs Bundelahs are, of course, the Rajput clan whose home is in the country south of the Jamnah and east of the Betwah river (J. Rennell, "Memoir of a Map...", p. 234, but for the northern limit read *Jamnah* instead of *Ganges*). Their appearance in this list shows that originally they were held to be an inferior class of troops, and employed principally as matchlockmen. They were always renowned, however, for their bravery. In the end, through the rise of the Orchhah rajah, the head of their clan, and that of the so-called Dhangyā State, formed by Champat Rāe and extended by his more famous son, Chattarsāl, their position was much enhanced, and during the 18th century they played an extremely prominent part, fighting first on the side of the Moghuls and subsequently against them.

Arabs. In later times, in the Dakhin at any rate, the best infantry were held to be the Arabs, who received higher pay than others. They received Rs. 12 a mouth, while the lowest pay was only Rs 5 a mouth. The Arabs were in general fully to be depended on. but particularly so in the defence of walls (Blacker, "War", 21).

Other classes under this general head of *Ahshām* were Bhīlah, Mewātī, Karnātakī, Mughal (B.M. 1641, fol. 59*b*, 60*a*). For a mention of Bhīlah and Karnātakī in 1133 H. (1721), *see* Khūshhāl Chand, Berlin Ms. 495, fol 1013*b*

The *golandāz* (*golah*, ball, *andāz*, thrower) or artillery-man, the *Degandāz* (*deg*, pot, *andāz*, thrower) and the *Bāndār* (*bān*, rocket, *dār*, holder) are included in this section, but I have classed them under the head of Artillery. In one battle, that against ʿAbdullah Khān, Khūshhāl Chand, Berlin Ms. 495, fol. 1013*b*, speaks of certain men immediately around the emperor's elephant as *qurqchis*, there being two kinds, those in yellow and those in red. The word, an unusual one in Indian works, is defined by

Steingass as "a gamekeeper, a sentinel over the women's apartments".

Bhīlah. These were men of the wild tribe whose home is in the rugged country between Ajmer and Gujarāt. They are described by an 18th century writer, (Anand Rām, Mukhliṣ, *Mirāt-ul-Iṣṭilāh*, fol 184*b*) as being in their own country nothing but highway robbers and skilful hunters, wearing clothes mostly of leaves Their principal weapon, which no doubt they brought with them when in the emperor's service, was the long bow of bambu called *kamanth*, which has been already described (p. 95).

Mewātī These men are further designated *Tīr-andāz* (archers, lit. "arrow throwers"). Mewāt is the hilly country south and west of the Jamnah, between Agrah and Dihlī (J. Rennell, "Memoir", cxx). It derives its name from the tribe inhabiting it, the Meos. In the *Āīn*, i, 252, the men from Mewāt are called Mewrahs, and they are described as post-runners and spies. Neither the name nor these duties seem to have belonged to the Mewātīs in the 18th century; though *mewrah* had survived as a name for a post-runner of any kind. From Mewāt, the name of the country, comes the word Mewātī, an inhabitant of Mewāt. They are now Mahomedans and were famed, until our time, for their turbulence. Their depredations made the imperial highway from Āgrah to Dihlī, viâ Mathurā, at all times unsafe; and it was necessary to travel in large parties, or to hire armed men, who were probably themselves Mewātīs, on the principle of setting a thief to catch a thief. A good description of the state of things about 1710 will be seen in Yār Muhammad's *Dastūr-ul-Inshā*, p. 130, 131 The E I. Company's envoy, Mr. John Surman, who travelled this way to Court in June 1715, mentions in his diary that at Āgrah they were forced to hire an armed guard for their protection (Orme Collections, p. 1694, under date of June 8th).

Karnātakī. These must have been men from the south

of India, the word Karnātak by the Moghul usage applying to the whole of peninsular India south of the Tungabhadra, except Adonī (J. Rennell, "Memoir" (Peninsula), 20). I suppose these men in the Moghul army were of the same class as those who formed our first sepoy battalions in the south of India. In Northern India, which they reached in 1757 as part of Clive's force sent for the relief of Calcutta, they were known as Talingahs, that is, men of the Talagū country; and *Talingah* is still the common village word in Hindūstān for a sepoy in one of our regiments. De la Flotte, 258, who served in South India from 1758 to 1760, says the infantry (no doubt the same men as these Karnātakīs) carried on their heads a bundle of rice and their cooking utensils, their women carrying the husband's sword and other arms. Those were a very long and heavy matchlock called *kaitoke* (*ante*, p. 107). The whole family followed.

Kālā Piyādah Kāmwar Khān (Ms. of the Royal Asiatic Society, Morley's Catalogue N°. 97) when speaking of the army led against Nizām-ul-Mulk by Mubāriz Khān, *ṣūbahdār* of Ḥaidarābād, says there were in it 30,000 matchlockmen of the Dakhin known as *Kālā piyādah*, (lit. "black foot-soldiers"). These if not identical with, must have been very similar to the Karnātakī

Rāwat. This is a name which in Northern India indicates generally any respectable Hindu landholder who is not of very high caste. Mahomedan writers not infrequently apply it to the general body of Mahrattah soldiery, most of whom were of the *kūmbi* caste, for which such an epithet would be appropriate. It is applied in this sense by the author of the *Ḥusain-shāhī* to 12,000 men, who served in Sendhiah (Scindiah) Patel's army during the campaign ending in the battle of Pānīpat (1760—1761).

Bargi. Another general name used by some writers, when speaking of the Mahrattah soldiery, is *Bargī*. See *Maāsiru-l-umarā*, iii, 740, line 17, and J. Shakespear "Dict." 319,

its use is also referred to in Grant Duff, 37. I do not know the etymology of this word.

Mughal. As to these men I can suggest no reason for their appearance in this list of men serving in the infantry, but it is curious to find that there were any Mughals, who would deign to serve in this inferior branch of the service.

Farangi. These must have been Europeans serving in the capacity of common soldiers. They were probably for the most part native Christians, or so-called Portuguese, either from Goa, or from the colonies of that nation settled about the mouth of the Ganges and Brahmputra. There may have been among them some fugitive sailors from ships lying at Surat or Cambay More usually, however, such men entered the artillery. Ashob, fol. 266*a*, informs us that in 1739 there were still Franks in the Mughal service. They were all Frenchmen, either attached to the artillery or practising as surgeons, bone-setters (*shikastah-band*), or physicians. The chief of them, Farangī Khān and Farāshīsh Khān, were accounted nobles and drew nobles' pay. These Europeans lived in a special quarter called Farangīpurah just outside the Kābul gate, close under the hill Kālī Pahār. They killed some of Nādir Shāh's provosts (*nasaqchī*) and in retaliation the colony was wiped out.

Pay. The pay of the classes above enumerated is given as follows (B.M. 1641, fol. 59*b*, 60*a*). The word *sā,ir*, which I would render "private soldier", will be found used in that sense in the Institutes of Taimur, Davy and White, 232, سائرسپاه, "common soldiers".

Name.	Mounted (*Suwār*)		Foot (*Piyādah*)				Remarks
	Hazārī Duaspah	Sadīwal Yakaspah.	Sadīwal	Mirdahah.		Sā'ir	
	Rs	Rs	Rs	R a p		R a p	
Shīlah	52	26	10	8 12 0		6 4 0	Formerly the received ration but no pay in cash
Mewātī	50	25	—	4 8 0		4 0 0	Receiving ration
"	—	—	8	6 0 0		5 0 0	Without ration
Karnātākī	50	25	8	7 0 0		5 0 0	
				6 0 0		4 8 0	
Mughul	—	—	—	8 0 0		7 0 0	
						6 8 0	
Farangī	—	according to order	8	6 4 0		6 0 0	
						5 12 0	
						5 8 0	
						5 4 0	

Bernier, 217, gives the pay of foot soldiers at Rs 20, 15, and 10 a month, and the pay of Farangīs as Rs 22 a month. Rations, when issued to the above men, were as follows: Flour (*ārad*), $1\frac{1}{4}$ sir, Split peas (*dāl*) $\frac{3}{4}$ sir, Salt (*namāk*) $\frac{3}{4}$ of a *dām*, ghi (*roghan-i-zard*), 2 *dāms*

Artificers, or other men classed under Infantry. Of these there were a number, artisans and labourers, who can scarcely be designated soldiers at all, they were really camp-followers, though they may possibly have carried some sort of weapons for their own protection, just as we furnish litter-bearers with swords when on active service The *Beldārs* were used to make difficult roads passable (Horn, 24, *'Alamgīr-nāmah*, 653); they also threw up the field-works usually made to protect the guns. One duty of the carpenters and axemen was to cut a road through the thorny jungle with which most petty strongholds were surrounded. The use of some of the others, as bearing on the service of the army, are obvious enough; others, less so. Dr Horn, 24, seems to translate *beldār* by "beiltrager", a word meaning, I believe, an axeman. But *bel* is a spade,

hoe, or mattock, and a *beldār* is a digger up of earth, an excavator, not an axeman.

The following table gives the names and pay of some of these artificers (B.M., 1641, fol. 60*b*). Many of the words I am unable to make out.

Name		Class		Remarks
Persian	English	Suwār. Yakaspah	Piyādah	
		Rs		
Kahardah Turānī	—	40	Rs 14, 11, 7	
" Hindūstanī	—	(as ordered)	Rs 8, 7, 6, 5½	
دوب رغنب	—	(as ordered)	Rs 15	
Najjār	Carpenters	(as ordered)	Rs. 8, 7, 5	
Basalı	—	—	Rs 10	An armourer? Steing. 187, *Basal*, an iron helmet
Āhangar	Blacksmiths	—	Rs 6½, 6½, 6	*Musuf* (double?) Rs 9½
Dhūnah	Cotton-carders	—	Rs 6	
Badaha	—	—	Rs 6, 5	
Sahalkı	—	—	Rs 8, 7	
Khor bahlıyah	—	—	Qadim, Rs 9 Usual, Rs 8, 7	*Bahelıyah*, a bird snarer?
Sang-tarāsh	Stone masons	—	Rs 8, 7, 6	
Mochī	Leather workers	—	Rs 8	
Atāshbāz	Firework makers	—	Rs 7, 6, 5	
Kharāti	Turners	—	Rs 7	
Ārah-kash	Sawyers	—	Rs. 6	
Beldār	Diggers	—	(blank)	
Naqb-kun	Miners	Rs 20, 17	Rs 4½, 4½, 4	
Tabrdār	Axemen	—	Mırdahah, Rs 5½ Private, Rs. 4½	
Sālotrī	Farriers	Rs. 15	—	

CHAPTER XIV.

ELEPHANTS.

Horn, 51—56, includes elephants in his account of the fighting force. But long before the Moghul empire fell into decay, they had become principally beasts of burden or means of display, and their rôle in the day of battle was comparatively insignificant.

Akbar seems to have made much use of elephants, bringing them into the field in great numbers (Horn, 51, 52, 53). In his time they carried on their backs musketeers or archers This practise seems to have soon ceased. But as late as 1131 H. (Nov -Dec. 1718) and Muharram 1133 (November 1720) we hear of their being used to carry small cannon. Thus Sayyad Ḥusain ʿAlī Khān, when he re-entered Dihlī on his return from the Dakhin, had forty *gajnāl* elephants, which each carried two soldiers and two pieces, *Jauhar-i-Ṣamṣām*, Fuller's translation, fol 50. Again, when ʿAbdullah Khān, Qutb-ul-Mulk, was made prisoner at the battle of Ḥasanpur, a *gajnāl* elephant was ordered up, and seated on it the prisoner was carried before Muḥammad Shāh (*Jauhar-i-Ṣamṣām*, fol. 158*a*, and Fuller's trans., fol. 76).

To the last some elephants protected by armour were brought into the battle-field. But their use was confined almost entirely to carrying the generals or great nobles, and displaying their standards. The baggage elephants were assembled in the rear with those bearing the harem, the women remaining mounted on the latter during the battle, and protected by a strong force posted round them.

In the day of battle elephants were provided with armour, called *pākhar*, *Āīn*, i, 129, N⁰. 21. This was made of steel and consisted of separate pieces for the head and trunk. In one place, *Aḥwāl-i-khawāqīn*, 2186, I find the epithet *bargustuwān-posh* applied to armour-clad elephants Again Ghulām ʿAlī Khān, *Muqaddamah*, 34*b*, applies the word *kājim* to elephant armour in general, and defines *bargustuwān*, as a protective covering adjusted on the trunk of an elephant when going into battle The rest of the complicated gear used in connection with elephants is set out in detail in the *Āīn*, i, 125—130. Besides their own armour, the riding elephants carried on the day of battle an armour-plated, canopied seat, called an *ʿimārī*, of which the sides were some three feet high The prince or noble took his seat in this, and was thus protected with the exception of his head and shoulders from all distant attack (*Mirāt-ul-Iṣtilāh*, 207*b*) We are told by Haji Mustapha, *Seir*, ii, 301, note 140, that the *ʿimārī* and the *haudah* (or *Haudaj*) "are different, the former has a canopy and is used for travelling or for purposes of state, the latter has no cover and is employed in war" Or again, in other places, i, 33, note 41, and i, 337, note 283, he says the *haudah* is made of boards strengthened with iron, having the shape of an octagonal platform, with sides eighteen inches high In war time the sides were raised to two feet, and were then covered with iron or brass plates It was divided into two unequal parts, in the forepart, about three fourths of it, a man may easily sit with his pillows and cushions, or upon a stretch, two men. The hind part held one man, and that with difficulty. He adds that when "covered with a canopy it is called an *amhari* and is not used in the field". This last statement cannot be accepted, as all the historians speak of the seat used in war as an *ʿimārī*, عماری. Moor, "Narrative", in his glossary under Amhara says that a seat with a canopy was so called, and without a canopy it was a *haudah*. "It (the

canopy) is generally made of Europe scarlet cloth and embroidered, and sometimes has a golden or silver urn or some such ornament on the top. Mahomedans prefer a crescent".

The object of mounting the general or commander on an elephant was that he might be seen from a distance by all the troops. For in those days battles were nearly always decided by the fate of the leader If he was killed or disappeared, the army gave up the contest and in a very short space of time melted away altogether Nādir Shāh wondered at this Indian habit of mounting the general on an elephant· "What strange practice is this that the rulers of Hind have adopted? In the day of battle they ride on an elephant, and make themselves into a target for everybody' (*Malāhat-i-maqāl* of Rāo Dalpat Singh, fol 54*b*). The criticism seems to have been taken to heart. For Miskīn, fol 43*a*, tells us that Muʿīn-ul-mulk, governor of Lāhor (1748—1754), declared that a general on an elephant was like a prisoner in the midst of his guards, and a mere target for the enemy The next time that he fought Ahmad, Durrānī, he meant to ride a horse. In other ways, too, the elephants were sometimes of more harm than benefit. If wounded, they were liable to get beyond control and escape at the top of their speed. In one instance, in a battle near Lāhor in 1124 H. (March 1712), a wounded elephant rushed off with ʿAzīm-ush-shān, son of Bahādur Shāh, and jumping off the high bank into the river Rāvī drowned himself, and the wounded prince along with him.

Elephants were also used to batter in the gates of fortified places. It is for this reason that such gates are generally found protected by metal plates and spikes. To counteract these, the elephant was again, in its turn, provided with a frontlet of steel. We find an instance at Arcot (Arkāt) in 1751, when "the parties who attacked the gates drove before them several elephants who, with large plates of iron fixed to their foreheads, were intended to break them

down: but the elephants, wounded by the musquetry, soon turned and trampled on those who escorted them" (Orme, Mil Trans, i, 194).

Under Akbar the elephants ridden by the emperor were called *khāṣah* (special), and all others were arranged in groups of ten, twenty or thirty, called *halqah* (ring, circle) In later reigns, (B M. 1690, fol 176*a*) the same classification was employed, with a rather more extended meaning, *khāṣah* then including all riding, and *halqah* all baggage elephants. Manṣabdārs from 7000 down to 500 were required to maintain each one riding elephant, and in addition, five baggage elephants for every 100,000 *dām* of pay As I understand the rule, these elephants belonged to the emperor, and were not even made over to the *manṣabdār* for use. The origin of this practice can, I fancy, be detected in a passage in the *Āīn*, i, 126 (see also i, 130), where Abu,l Faẓl says that Akbar "put several *halqahs*" (groups of ten, twenty, or thirty elephants) "in charge of every grandee, and required him to look after them". In Akbar's time apparently the fodder was supplied by the State I have already referred to this matter of *Khurāk-i-dawābb* under the heading of Pay (p. 20)

Armandi's work on the military history of the elephant is almost entirely taken up with its use by the Greeks and Romans. The Moghul period occupies only fifteen pages, and there is nothing in those pages of any novelty. There is another work which covers in part the same ground, "Historical Researches on the Wars and Sports of the Mongols and Romans", by John Ranking, "resident upwards of twenty years in Hindoostan and Russia". The main object of this very discursive treatise, which ranges over India, Siberia, and Great Britain, seems to be to prove that the fossil bones of elephants found in Europe are the remains of those used in war and sport by the Romans and Moghuls. Sixty quarto pages are taken up by a life of Taimur. The most valuable part of the book is

perhaps the description of the elephant (pp 440—450) In spite of his "upwards of twenty years in Hindustān", Ranking seems to have found some difficulty with the word *zanjīr*, a chain, as applied to an elephant. On p 12 of his Introduction, he says "very frequent mention is made in Asiatic histories of *chain elephants*; which always means elephants trained for war; but it is not very clear why they are so denominated". The explanation is fairly easy The word *zanjīr* (chain) is here one of the fanciful catchwords attached to every being or thing in the Oriental art of *Siyāq*, that is, of accounting and official recording. Some fancied appropriateness was discerned in the epithet so used. Pearls were counted by *dānah*, seed, horses by *rās*, head, shields by *dast*, hand, bricks by *qālib*, mould, and so forth. For elephants the word is *zanjīr*, chain, which is no doubt a reference to the iron chain by which an elephant is hobbled when not in use. Having to speak of 100 elephants, a Persian or Indian scribe writes 100 *zanjīr-i-fīl*, or in an account he would enter them thus;

Fīl,
zanjīr,
100.

All elephants had names, as they have still Horn, 79, gives several names from the *Akbarnāmah*, and again, p. 124, (Von Noer, Fr trans, i, 171), he refers to Akbar's own elephant *Āsmān Shukoh* (Heaven Dignity) Catrou, 255, has *Dalsingār* (Ornament of the Army) and *Aurang-gaj* (Throne-elephant) Danishmand Khan; entry of 26th Ramazān 1120 H, refers to *Fatḥ-gaj* (Victory Elephant), and we find in Elliot, viii, 95, *Mahāsundar* (Queen of Beauty) ridden by Nādir Shāh.

After the introduction of fire-arms and the gradual extension of their use, elephants ceased, even in the East, to be of much value in the fighting line of battle. As I have said above, the chief men still rode them and displayed their standards on them. But this was more for the

purpose of being seen and of acting as a centre and rallying point, than for any advantage derived from the elephants themselves, either through their strength or their courage. (To the same effect, see De la Flotte i, 258, and Cambridge, "War", Introd. ix).

Nizām-ul-Mulk seems to have maintained a large number of elephants even so late as about 1143 H. (1730-1). When on a campaign to the north of his dominions, in the direction of the Tapti, he had with him 1026 elephants, of which 225 were provided with armour, and presumably were used in battle (*Aḥwāl-i-khawāqīn*, 218*b*). On this occasion he made a curious trial of their staunchness or otherwise. In an open space near the river he ranged his guns in a line, (there were 44 *top* and 1225 *rahkalah*), and drew up his elephants opposite them. As the elephants advanced, the cannon were fired, supported by musketry. A few of the elephants stood fast, but the greater number fled for miles, the only result being that 306 foot-soldiers were trodden under foot.

Towards the end of the period they were more largely employed as beasts of burden or as aids in the transport of heavy guns. Captain T. Williamson, "Oriental Field Sports", 43, says that when used for the latter purpose they were furnished with a thick leather pad, covering the forehead, to prevent their being injured. The same work has also one of the best early accounts of the Indian elephant, wild and domesticated. In time of peace, as a means of display, for riding on, for shooting from, they have continued to be largely used. Ranking, 13, tells us that Āṣaf-ud-Daulah, Nawāb of Audh (1775—1797), kept considerably above 1000 elephants merely for pleasure. Still the gradual decline of the elephant, even for purposes of state and show, is proved unmistakeably by a recent paragraph in the Indian papers ("Pioneer Mail", Sept. 27th 1894, p. 2). The Government "howdah-khānah" has been broken up, there being only two to three hundred elephants on the rolls all over

India, nearly all of which are maintained for heavy batteries; the equipment at Agrah has been sold off, only the vice-regal howdah of silver being kept We have thus travelled far from the days when one of our early commanders-in-chief, Colonel Richard Smith, "reviewed his troops from the houdar (*sic*) of his elephant" (Carraccioli, "Clive", i, 133).

CHAPTER XV

DISCIPLINE, DRILL, AND EXERCISES

According to our European notions discipline was extremely lax, if not entirely absent. Bernier, 55, tells us that when once thrown into confusion, it was impossible to restore a Moghul army's discipline, while during the march they moved without order, with the irregularity of a herd of animals, and Europeans generally held the true cause of their dread of fire-arms, and particularly of artillery, to lie in the inexperience of their leading men, who never understood the advantage of discipline or the use of infantry (Cambridge, "War", Introduction, viii).

Nobles while at headquarters were bound to appear twice a day, morning and evening, at the emperor's audience, and on this point they were strictly supervised But there seems to have been no regular drill and no manœuvres. From time to time they paraded their troops in the outer court during the time of public audience, and the state of the horses and elephants was then observed Occasionally, but very rarely, there were special parades in the open [1]; these generally took place on the line of march, the emperor passing in review the troops of some particular commander, as he was making his march to his next camping ground. For instance, Dāūd Khān, Pannī, thus paraded his troops before Bahādur Shāh on the 26th Ramaẓān 1120 H. (8th Dec. 1708), *Danishmand Khān*, entry of that date.

[1] These were the *Maḥallah* already referred to, see ante, p. 46 The phrase in Khurāsān was *Sān dīdan*, see *Mujmil ut-tārīkh baʿd Nādirīyah*, p. 84, line 5.

Organization. There was no regimental organization; the only divisions known were those created by reason of each chief or noble having his own following of troops. Such words as *tūmān* or *tūmāndār* have no strict or definite meaning The first meant any body of soldiers, and the second the leader or head of such a body *Jamaᶜhdār* is a word of the same signification and equally vague, though it may be taken as denoting a smaller man than a *tūmāndār*. *Qashūn* is a word employed in the second half of the 18th century, having been borrowed from the Durrānī system, but I do not think it had a much more definite sense than the above words. In the dictionary, Steingass 971, قشون is defined as T., body, company, troop, army, soldier, military station.

As for uniform, the only sign of it originally was a red turban worn by all in the imperial employ For the great mass of the army there was usually no uniformity of dress, but in a general way each class of troops dressed in a similar style, Persians in one way, Mughals in another, Hindustānī Mahomedans could be distinguished from Rājputs, and so forth (Horn, 25) But such distinctions, though obvious at once to a practised eye, would take long to record, even if we knew sufficiently what they were One Sābit Khān, at one time faujdār of ᶜAligarh, was famed as the introducer of a kind of attire for soldiers, which was called after him the *sābit-khānī* dress. There were, however, some few regiments clothed in uniform For example, as early as Farrukhsīyar's reign the "*Surkh-poshān*" (the Red Regiment) is spoken of (Ijād's *Farrukh-shāh nāmah*, fol 27, line 3) And it would seem from a passage in the *Sharāif-i-ᶜusmānī*, p 207, line 4, that in Muḥammad Shāh's time there were some regiments of body-guards clad alike, and known as the *surkhposh*, *zardposh* and *siyāhposh*, from the colour of their coats, red, yellow or black. These men carried gold or silver clubs (*gathak*).

The Chaghatāe origin of the ruling house and many of its officers was shown in the frequent occurrence of military terms from the language used in Central Asia The emperor and many about the court spoke and understood the Chaghatāe language so late as 1173 H. (1759-60), *Seir*, iii, 142; and Mustapha, id., iii, 400, note 63, tells us that up to the time he wrote (c. 1785), the word *atlān* (Be mounted) was "carried round to the horse guards when the emperor is going to mount his elephant". (P. de C., 5, from اتلانمق, *atlānmaq*, to ride on horseback). Another instance of familiarity with Eastern Turkish is found in 1739, when Āghar Khān of the Āghar tribe, whose family had been settled in India over a hundred years, talked to Nādir Shāh in that language, and even composed some verses in it, Ashob, fol. 258*a*.

Punishments. For desertion to the enemy we read occasionally of men being blown from the mouth of a gun. In 1714 two Mīnā robbers were blown from guns by Ḥusain ʿAlī Khān, when on the march from Dihlī to Ajmer. Again Ḥaidar Qulī Khān, when commanding at the siege of Āgrah in 1131 H. (1719), had recourse to this punishment with good effect, *Siwānih-i-khizrī* (my copy) In the year 1174 H. (1760) the Mahrattahs blew away from guns two Mahomedan leaders taken prisoners by them at Kunjpūrah, "History of the Rohelas" by Rustam ʿAlī, Bijnorī, fol. 51*a*. And in 1175 H. (30th May 1762) the Mahrattah commander, Narū Pandit, blew two men from guns at Burhānpūr, *Mirāt-uṣ-Ṣafā*, 116*a* In the "Abrégé Historique" prepared by Colonel Gentil in 1772, (E. Blochet, "Inventaire et description des miniatures des Mss. orientaux conservés à la Bibliothèque Nationale", p. 202, N°. 219) there is a picture of a man tied to the mouth of a cannon. Horn deals with the subject of desertion on pp 49 and 51, but both of his references to Bābar's memoirs, viz., P. de C. ii, (should be i) 325, and ii, 352, 353, seem to be cases of surrender. That to the *Bādshāhaāmah* i, 334,

is not a case of desertion at all. The garrison of Manṣūr-garh in Orissa (1049 H.) asked for quarter by holding blades of grass between their teeth. This is the well-known Indian custom of indicating submissiveness, see Elliot, "Supp. Gloss", 252, s v. *Dānt-tinkā* (teeth-straw), which is practised by villagers to this day. It is also said to have been resorted to by the Mahrattah horsemen at Dihlī (Feb. 1719), when they were overpowered in a street riot, Mḥd Qāsim, Lāhori, *'Ibratnāmah* 244, my copy. Another instance is found in a book written c. 1147 H., *gāh dar dandān girıftah* (*Ahwāl-i-khawāqīn*, fol 217*a*).

Drill. There seems to have been no drill for soldiers, as such, and no training in combined movements of any sort. The individual, on the other hand, paid the minutest attention to the training of his body, and exercising himself with all his weapons For this there were the series of movements practised daily, known as *kasarāt*. In 1791 an English visitor to the Nizam's camp near Kadapah (Cuddapah) writes to the following effect, Ouseley, "Or. Coll", 1795, i, 21—32, "the traces of order, discipline, and science are so faint as to be scarcely discernible, except in the outward appearance of the men, the management of their horses, and their dexterity in the use of the spear and sabre, which individually gives a martial air" He adds that the men exercise at home with dumb bells or heavy pieces of wood; and he also describes the *kasarāt* movements. There were in addition the clubs called *mugdar*, the chain bow or *lezam*, Egerton 147, 150-1, N°. 808, and single-stick play. In this last, a stick covered with a loose sheath of leather was held in one hand and a small round buckler in the other, Egerton, 148, quoting from Mundy (3rd ed. 1858, p. 165, 191, 310, 322). The stick is called *gudkā*, *gadkā* or *gadgā*, a little club, from *gadā*, a club (Shakes. 1689). An account will be found in Briggs, "Ferishta", iii, 207, of *yak-ang-bāzī*, play with one single-stick or sword, and *do-ang-bāzī*, with sword and shield,

or two swords, one held in each hand. There were also wrestling bouts, which usually took place in the rainy season For mounted men there were tent pegging and shooting at bottles: and the archers had their daily shooting at an earthen mound or target.

Swordplay The swordsmen were exceedingly skilful and active; their attack and defence being accompanied by the wildest gestures, the most extraordinary leaps, and elaborate feints of every sort Something of this may still be seen at any Muharram festival, where the most complicated evolutions and sweeping circular cuts are made with the straight gauntlet sword or *pattā*.

Burton, writing of Sindh in 1844, gives us a good picture of Indian single-stick and sword-play The usual style of sword exercise in India is, he says, "Life", i, 119, with a kind of single-stick, ribbonded with list cloth up to the top, and a small shield in the left hand. The swordsman begins by "renowning it", vapouring, waving his blade, and showing all the curious *fantasie* that distinguish a Spanish *espada*. Then, with the fiercest countenance, he begins to spring in the air, to jump from side to side, to crouch, and to rush forwards and backwards, with all the action of an excited baboon They never thought of giving "point": throughout India the thrust is confined to the dagger. The cuts as a rule were only two, one on the shoulder and the other, in the vernacular called *qalam* [1], at the lower legs. Nothing was easier than to guard these cuts and to administer a thrust that would have been fatal with steel Colonel Blacker on the other hand, "War", 302, thought more highly of the native cutting stroke, it being the only one capable of penetrating the quilted jackets, or the many folds of cloth worn as turbans by Indians The colonel held the opinion that the then Dragoon sword would not penetrate these, even by giving "point" He adds "the native practice not only requires a

[1] Probably from *qalam kardan*, to lop or prune.

stiff wrist, but a stiff though not a straight elbow, for a cut that shall disable".

Fitzclarence, 102, thus describes the charge made on the Sitabaldi hill by the Nāgpur Rajah's Arabs on the 26th Nov. 1817. "Their manner of advancing was exceedingly imposing. Being perfectly undisciplined, they advanced in a crowd; the bravest being in advance and taking high bounds and turning two or three times round in the air, they rushed forward to the sound of small drums, accompanied by the perpetual vociferation of the war-cry "Dīn! Dīn! Muhammad!" This sounds at a distance like 'ding, ding', which is often used instead of the correct expression". As this represents what was, no doubt, the long-established mode of fighting on foot, I give it, in spite of its referring to a period after the fall of Moghul rule

Horsemanship The cavalry had their horses trained to a sort of *manège*, where the horse was made to stand on its hind legs and then advance by bounds for a considerable distance. This manœuvre was resorted to in Bundelkhand whenever a man on horse-back attacked any one on an elephant Once, when Muhammad Khān, Bangash, invaded Bundelkhand in 1727, he was thus attacked As he writes in his report to the emperor. "I drove my elephant straight into the thick of the enemy, where my men seemed to be struggling hopelessly against them At this moment two of the enemy's horsemen, one after the other, rode their horses with the greatest boldness at my elephant, so that their forefeet were on the elephant. By God's aid they were, one after the other, dispatched by our arrows" (see the official report in Shākir Khān's *Gulshan-i-ṣādiq*, my copy) This caracolling is still adhered to by the cavalry in the Bundelkhand native states, as could be seen by those who witnessed the review of their troops at Āgrah in 1876, in the presence of the then Prince of Wales.

The Persians in the Moghul service did not think much of Indian horsemanship, judging from the following passage

of an anonymous memoir written about the middle of the 18th century. "As a rule the people of India do not know how to ride, and horsemanship is unknown in Hindūstān. In addition, they use their utmost efforts to efface from horses all the qualities of the horse, and make it epileptic and mad. Their movements are not regulated by an intelligible principle, and it is impossible for them to be under the rider's control I am a good rider and relying on my skill, I have often mounted Indian horses barebacked, in the belief that they would not be too much for me, and yet, when I have wanted to go east, they have carried me north, south, or west, and *vice versa*. If one wants to control the speed of the horse and make him travel at the speed one wishes, the beast either stands up on his hind legs or jibs, or hugs a wall till he crushes his rider or kills him in some other way. His paces are accompanied by jumps wholly unnatural". (*Tārīkh-i-Farah Bakhsh*, trans. W. Hoey, i, App. p. 7).

In this connection the following passage, although written in 1844, is quite as applicable to the Indian Moghuls as if it had been written a century or two earlier. "All nations seem to despise one another's riding, and none seem to know how much they have to learn. The Indian style has the merit of holding the horse well in hand, making him bound off at a touch of the heel, stopping him dead at a hand gallop, and wheeling him round on a pivot. The Hindu (Indian?) will canter over a figure-of-eight, gradually diminishing the dimensions tell the animal leans over at an angle of 45°, and throwing himself over the off side and hanging down to the earth by the heel, will pick up sword or pistol from the ground". (Burton, "Life", i, 135). This is as favorable as the preceding extract was unfavorable. When doctors disagree, who shall decide?

Mounting Guard. In time of peace the nobles took it in turn to mount guard with their troops at the palace gate. This was called *chaukī* and the guard-house was the

chaukī-khānah [1]. The rules will be found in the *Āīn*, i, 257. The duty lasted for twenty-four hours and recurred once a week. The relief took place every evening. There was also another division of the army into twelve parts, each of which mounted guard for one month. But I do not see how the two divisions, that into seven and that into twelve parts, are to be reconciled with each other.

Hunting. The nearest approach to army manœuvres was when the army or a division was ordered out to take part in a royal hunt This subject is touched on by Horn, 69. One branch of the army combined two functions; in peace they were huntsmen, in war, skirmishers. These were the *Qarāwal*, with the *Qarāwal Begī*, or Chief Huntsman, at their head [2] Horn, 69, refers to two descriptions of a royal hunt, namely, Budāunī, iii, 92, and Erskine, "History", ii, 286. I add another from Anand Rām, *Mirāt-ul-Istilāh*, fol. 184*a*. *Shikār-i-qamrghāh* (or *qamrgāh*), also *shikār-i-jargāh*, is called in Hindī *hatā-jorī* [3]. For this hunt a king gives orders, through his huntsmen (*qarāwal*), to his governors and the zamīndars and cultivators (ryots) to surround a wide space full of game. This was closed in on daily till the area was very small. Then the ruler and his friends arrived, entered the enclosed space, and hunted the game. As this was a privilege (*qūruq*) of kings, no one else, not even a great noble, was allowed to practise it. This method was also followed in Irān; in India it was given up after the middle of ʿĀlamgīr's reign.

[1] Steingass, 402, *chaukī*, H. a raised seat, chair; a guard, a place for collecting customs; a watchhouse. J. Shakes 507, *chauk*, a market, a city square, a court yard.

[2] Steingass, 962, a sentinel, watchman, spy, guard, the vanguard, a gamekeeper, a hunter

[3] *Kamrghah*, Steingass, 988, the hunting ring formed to enclose the game in the grand royal chase Id, 360, *jargāh*, a circle or ring of men or beasts. *Haṭnā*, H to drive back, *joṛnā*, to collect, therefore *haṭā-joṛī*, a drive of game.

CHAPTER XVI.

ARMY IN THE FIELD.

Having sprung from a Central Asian nomad horde, the early chiefs of Taimur's race were perpetually on the move, accompanied by their army. This traditional habit was maintained in India by the earlier and more active emperors of that house [1]. From Bābar to Bahādur Shāh, they were seldom long in one place, and the greater part of their life was passed under canvas. For example, during the five years of his reign Bahādur Shāh never slept in any building, and did not enter one in the day time on more than one or two occasions From this habit it resulted that the empire had never had a fixed capital, the only capital was the place at which the sovereign might happen to be [2], and as a consequence, the whole apparatus of government was carried wherever the emperor went. All the great officers of state followed him, and all the imperial records moved with them. Thus a Moghul army, where the emperor was present, was weighted with the three-fold impedimenta of an army, a court, and a civil executive. It is thus easy to account for the immense size to which their camps gradually extended

Mīr Manzil. To preserve order in the audience-hall and its approaches, and to regulate the access of the public thereto, there were a number of guards (*yasāwal*), at whose

[1] The original nomadic habits of the royal house are betokened by the singular habit, that the wives of the emperors were delivered lying upon a saddle-cloth. The authority for this is found in a letter said to have been written in 1137 H. by Nizām-ul-Mulk to Muḥammad Shāh ("Asiatic Misc." 1, 490).

[2] Or as the Romans said, "Ubi Imperator, ibi Roma".

head were several officers styled *Mīr Tūzak* (literally, Lords of Arrangement). The first of these officials was one of the great officers of State, and it was his duty when the court was on the march, to fix the route, to decide on the marches, and to proceed ahead, select a place for encampment, and lay out the site of the various camps and the lines of shops (*bāzār*) When carrying out these duties, the first Mīr Tūzak was more commonly known as *Mīr Manzil*, Lord of the Stages.

Transport. The means of transport, consisting of elephants, camels, pack-ponies, bullocks, bullock-carts and porters, were only provided officially for the imperial tents and establishments, every one else was left to make his own arrangements. Each soldier did his best for himself The baggage was known as *bahīr o bangāh* or *partāl*. In Ashob, fol 265*a*, we find *Partāl* used for the means of transporting, instead of for the baggage itself: *Partāl-i-aksare-i-eshān shutarān-i-Bakhtī-i-aṣīl wa khāturhāe, ya'nī ushturhāe kataī'-i-khūshjins-i-Wilāyatī Bakhtī* is the large, two-humped or Bactrian camel.

Commissariat. In an Indian army the commissariat was left very much to take care of itself. The imperial kitchen fed a certain number of palace servants and some armed guards, matchlockmen, and artificers There was also a charitable kitchen kept up, at the emperor's expense, and called the *Langarkhānah*. In the same way, a chief distributed cooked food to the men more especially attached to his person Outside these limited circles, every man was left to provide for himself, buying from day to day enough for his daily wants from the numerous dealers, or *banyas*, who followed the army. These men's huts or shops were erected in long double lines, so as to form temporary streets. These were the so-called *bāzārs* or markets (Bernier, 381). Each great leader had his own bazars, and in these were to be found not only dealers in grain, but merchants and artificers of every sort and kind.

Banjāra or *Birinjārā* The supplies of grain were brought in on the backs of bullocks by the wandering dealers known as Banjārahs or Brinjārahs. There are two derivations alleged for this word, 1) H. *banij*, trade, plus the affix *ārah*, denoting a doer or agent (Steingass, 201), and 2) P. *birinj*, rice, *ār*, *ārā*, the root of *āwardan*, to bring (Steingass, 179). Fitzclarence, 93, says "It is by these people that the Indian armies in the field are fed, and they are never injured by either army. The grain is taken from them, but invariably paid for. They encamp for safety every evening in a regular square formed of the bags of grain, of which they construct a breastwork. They and their families are in the centre and the oxen are made fast outside Guards with matchlocks and spears are placed at the corners, and their dogs do duty as advanced posts. I have seen them with droves of 50,000 bullocks. They do not move above two miles an hour, as the cattle are allowed to graze as they proceed on the march". On these men, see also Thorn, 85, E. Moor, 131, and M Wilks, iii, 209.

Fodder. The grass for the horses was provided, as it still is, by sending men out to gather it. If they had a pony, the grass was loaded on it and brought in; if not, it was carried in on the man's head (Cambridge, "War", Introd vi). These men were either engaged as servants by the troopers or worked on their own account, (Bernier, 381) With an active enemy about, these followers were often cut off, or even frightened into not going out at all. Camels were, of course, sent out to pick up what they could in the country round the camp (idem). These, too, were often raided by the enemy.

Foraging. In addition to those brought in by traders, supplies were also added to by raiding and plundering in the country through which the army marched. Even in the best time of the monarchy and under the strictest commanders, the course of an army was marked by desolation. These was great destruction of growing coops when the

army passed through a fairly cultivated country. Compensation under the name of *pāemālī*, "foot-treading", was certainly allowed, according to the rules, in the shape of a remission of revenue on the land injured, but this must have been a very incomplete indemnification for the loss of the crop

Scarcity and other sufferings. An army supplied in the way indicated above was peculiarly liable to have its supplies cut off; then followed at once scarcity, high prices, and if the stoppage continued, death from starvation. Mention of these difficulties is seldom absent long from the pages of native historians Great heat and want of water were also frequent grounds of complaint, and from one who went through the march of Āʿzam Shāh from Gwāliyār to Dholpur in June 1707, escapes the bitter cry, "May God Omnipotent never subject even my enemy to such a day as we then passed through" (*Ahwāl-i-khawāqīn*, fol. 11*a*) Again in Bahādur Shāh's operations against the Sikh leader, Bandah, in December 1710, he was much hampered by the heavy rain and the intense cold, many of the transport animals being lost. A graphic picture of campaigning difficulties, even in the case of a force which was finally victorious, is given by Khāfī Khān, ii, 888. Nizām-ul-mulk on his way in July 1720 to attack ʿĀlim ʿAlī Khān, governor of Aurangābād, passed several days in extreme discomfort, exposed to incessant rain and in the middle of deep black mud. The constant rain and the swollen streams stopped all supplies, the Mahrattas plundered close round the camp, not an animal could be sent out or brought in. For many days the only food of the cattle was the pounded leaves and young shoots of trees; "the smell even of grass or corn did not reach the four-footed animals", and many of them, standing up to their shoulders in mud, starved to death One rupee would only buy 2 to 4 lbs. of flour. Referring to a century earlier, Sir Thomas Roe, as quoted by Cambridge, "War", Introd.

vii, gives a very lifelike description of the sufferings of a march through woods and over mountains.

Flight of Inhabitants. Colonel Wilks, i, 308, note, speaking of the south of India, says the inhabitants of a country deserted their homes for the hills and woods upon the approach of an invader, taking with them whatever food they could carry, and often perishing of want. Such an exodus was not unknown in Northern India, as for instance, when the Sikhs first rose in 1710, and invaded the Upper Jamnah-Ganges *duābah* and the country north and east of Lāhor, the inhabitants, especially the Mahomedans, fled at their approach. More usually, however, the peasants continued with tranquil unconcern to plough, sow, or reap within a stone's throw of a raging battle. Like true sons of the East, they "bowed low before the blast" and "let the legions thunder past". What had they to hope or fear from defeat or victory?

CHAPTER XVII.

CAMPS AND CAMP EQUIPAGE.

Each soldier seems to have had the shelter of a tent, even if it consisted only of a cotton cloth raised on two sticks. The kinds of tents were numerous, from the *rāutī*, a mere low awning, up to the huge imperial tents The *Āīn*, i, 54, names twelve different kinds of tents I have just spoken of one of these, the *Rāutī*, and of another, the *Gulālbār*, not a tent but an enclosure, I shall speak further on. The *sarāpardah* N°. 11 also is a screen and not a tent. From a perusal of the passage referred to, coupled with plates x and xi, it is fairly easy to understand what each of these tents was like. The *Shamiyānah*, N°. 9, is still known and in common use; the name may be from *shām*, evening, that is an awning for use in the evening, or from *shāmah* (Steingass, 725), a veil The *khargāh*, N°. 8, (Steingass, 456) are spoken of by Bernier, 359, note 4, and 362, where he says they are folding tents with one or two doors, and made in various ways; he calls them "cabinets", and leads us to infer that they were set up inside the large tents. The emperor and the great nobles were provided with tents in duplicate, one set being sent on to the next camping ground while the other set was in use (Bernier, 359). The tents thus sent on were known as the *peshkhānah* (literally "advance-house").

Camp, description of. The laying out of the emperor's camp, a plan continued to the last, is described in the *Āīn*, i, 47, and is shown with more detail in plate iv. In the centre was the imperial enclosure of canvas screens

1530 yards long, and about one fifth of that distance in breadth. It was divided across in its length into four courts. Over the entrance, which faced in the direction of the next march, was the drum-house (*naqār-khānah*), in the second court was the audience tent, in the third a more private hall, and in the fourth the sleeping tents. Behind was a place for Akbar's mother, while outside and still more to the rear were the women's apartments, surrounded on all four sides by guards. Along the outside of the enclosure were ranged on each side the *kārkhānahs*, or departments of the household and arsenal, about ten tents on each side. Still further away and towards each corner, the tents of the guards were erected Outside the gate of the enclosure were the elephants and horses with their establishments on one side; and the records, the carts and litters, the general of artillery, and the hunting leopards on the other A description of Jahāngīr's camp will be found in Cambridge, "War", Introd v, who quotes it from Sir Thomas Roe's journal, the chief impression produced on the ambassador's mind being that of immense size

A good account of the mode of pitching an imperial camp is to be found in Bernier, 360, 361 First of all the Mīr Manzil selected a fit spot for the emperor's tents. This was a square enclosure 300 paces each way. The whole of this was surrounded by screens (*qanāt*), seven or eight feet high, secured by cords to pegs and stayed by poles fixed at an angle, one inside and one outside, at every ten paces. The entrance was in the centre of one of the sides. On each side of the gate (Bernier, 363) were two handsome tents, where were kept a number of horses ready saddled and caparisoned [1]. In front of the entrance was a clear space, at the end of which stood the *naqār khānah*, or station for the drums, trumpets and cymbals. Close to it was the *chaukī-khānah*, or tent of the officer on guard for the day.

[1] This is, no doubt, what we read of so often under the name of the *pilau*.

Round the enclosure were the imperial bazars, through which a street led from the gate in the direction of the next day's march, marked out by long poles, which were surmounted by yak tails and placed at 300 paces from each other The princes and great nobles pitched their camps at various distances, sometimes of several miles, from the emperor's tents. Each was surrounded by the tents of his men and his own bazar, the only order observed being that the chief's tents must face towards the imperial Public Audience-hall (Bernier, 366). Bernier estimates, 367, that where there was ample space for spreading, ʿĀlamgīr's whole camp would have measured about six miles in circumference The bazars were marked out (Bernier, 365) by long poles surmounted, as already said, by the tails of the great Tibet cow "which have the appearance of so many periwigs".

The camp is thus described by Catrou, French ed., 4to, p. 128, 12mo, iv, 40, 57, possibly borrowing from Bernier, although he professes to have the Venetian, Manucci, as his authority: "The camp where this numerous army rested was laid out daily in the same manner, so far as the nature of the ground permitted. A great enclosure was roped off of square shape, and this was surrounded by a deep ditch. The heavy artillery was ranged from distance to distance and defended the approaches. The emperor's palace was placed in the centre of the camp. This also was square in shape and the light artillery was disposed all round it. The tents of the generals, of a much less height than those of the emperor, were pitched in the different quarters of the camp. The sutlers and traders of all sorts had streets assigned to them. To sum up it may be said that Aurangzeb dragged in his train a travelling city as large and as peopled as his capital".

Some of the tents were of an enormous size. These was one made by order of Shāhjahān which bore the name of *Dil-bādil* (Generous Heart). When Bahādur Shāh ordered

this tent to be erected at Lāhor in the year 1711, five hundred tent-pitchers and carpenters were employed for one month in putting it up, and in so doing several persons were killed (*Mirāt-ul-Iṣtilāḥ*, 218*b*). Kāmwar Khān, entry of 4th Shaʿbān 1123 H. (16th Sept. 1711), says this tent cost 50,000 rupees. A later writer, *Seir*, i, 25, note 32, says the emperor's camp was about one and a quarter miles in circuit, it contained one hundred and twenty tents, some of them big enough for several hundreds of men, and the largest might admit two thousand or three thousand. All this was surrounded by a *qanāt*, or wall of cloth six feet high, outside which is a paling which surrounds the whole: and it is betwixt these two enclosures that live the guards. Further off, there is another paling, and here, too, in the intermediate space reside guards and people attached to the imperial household, such as chairmen, watermen, or taper-bearers. See also Cambridge, "War", Introd. v, for an account of Nāṣir Jang's camp in 1750, over twenty miles in circumference. There is also a good description of a native camp in Wilks, i, 292, referring to the year 1752, where he tells us of the motley collection of cover, from superb tents down to ragged blankets; tents and animals all intermixed; the only mark of order being the flags set up by each chief, the only regularly laid out lines being those of the traders' booths or shops.

Colour of tents. The tents of the emperor, his sons, and grandsons were of a red cloth, called *khārwah*, a stout canvas-like cotton cloth, dyed red with the root of the *āl* plant. Round the emperor's tents was the enclosure called the *gulālbār*. Some of the great nobles such as the vice-gerent (*wakīl-i-mutlaq*) or the chief minister, (*Jamdat-ul-mulk*) were allowed *patāpatī* or striped tents, one red stripe and one white stripe alternately. *Paṭī* is H. for a strip of anything, (*Mirāt-ul-Iṣtilāḥ*, fol. 27*b* and Bernier, 366). The latter writer on p. 362 seems to imply that the imperial tents also were striped outside, but as his phrase is "or-

namented with stripes", perhaps the two statements are not absolutely conflicting.

Gulālbār. The name of the screen which Bernier speaks of as being put up round the emperor's tents was the *Gulālbār*. It is mentioned in the *Āīn*, i, 45, 54, but a fuller description will not be out of place, since the word frequently appears in histories, and it is well to have a definite idea of what is meant. *Gulāl* in Hindī means "red" and *bār*, "anything in the nature of a wall which prevents entrance or passage through it". Thus the whole word is equivalent to "Red Wall". Before Akbar's time the tents of the Gurgānī kings were surrounded by a rope called the *tanāb-i-qūruq* (lit. "the rope of hindrance"). In Akbar's reign the *gulālbār* was devised. It was formed out of bambus coloured red and held together by leather straps like a net-work (*jālī*), and so made that it might be extended or gathered up at will. Its height was three *gaz*, or about eight feet, and it had two gateways to the front and one on the side where the harem tents stood. This screen was erected round the imperial tents, which were styled collectively the *Daulat-khānah* (literally, Abode of Prosperity). Outside it a ditch was dug, and red flags, an attribute of sovereignty, were displayed on poles (*Mirāt-ul-Iṣtilāh*, fol. 203*a*).

Jālī. The word *jālī* is similarly met with in reference to the precincts of the emperor's tent. The derivation is from H. *jāl*, a net, and it means lattice, grating, network. From the passage quoted in the last paragraph and another in the same book, we see that this network (*jālī*) was the *gulalbār* under another name. But a European observer, who probably had seen an emperor's camp, says the *gulālbār* was the outer paling fifty yards from the *qanāts*, or cloth screens seven feet high, which enclosed the emperor's tents (*Seir*, i, 159, note 120). For *gulālbār* Khūshḥāl Chand in one place, Berlin Ms. 495, fol. 1010*a*, uses *ṣalābat-bār* "majestic-enclosure": and Ashob, fol. 196*b*, claims it as

the invention of Ṣalābat Khān [1], Mīr Ātash to ᶜĀlamgīr, *gulāl-bārah* being nothing more than a popular name. Ashob gives a minute description of its construction; this differs in details from that of Anand Rām given above. The tents of princes continued to be protected by the old device of a rope, which still bore the name of *tanāb-i-qūruq*, or rope of prohibition (*Mirāt-ul-I.*).

Rahkalah-bār. This word is literally *rahkalah*, field-piece, plus *bār*, enclosure. It was the park of artillery arranged at the entrance of the imperial quarters, or round them, as a protection against attack. The quarters of the Mīr Ātash were at the imperial gateway (Dānishmand Khān, entry of 4th Zu,l Hijjah 1119 H., and Bernier, 363).

Harem women with armies (Horn, 57) On all campaigns a harem of women with their attendants seems to have accompanied the emperor and the chief men. On the day of battle these women were put on elephants and carefully guarded by the force forming the rear guard, which was posted at some distance behind the centre, where stood the emperor or other chief commander. Many references might be quoted in illustration of this statement. The habit of being followed by a harem might be justified in cases where the camp was the only home, for perhaps years at a time. But the practice was the same even on short campaigns. For instance, the redoutable Ghāzī-ud-dīn Khān, ᶜImād-ul-mulk, who became wazīr at sixteen years of age and had deposed two emperors before he was five and twenty, was born in his maternal grandfather, Qamr-ud-dīn Khān's, camp. This noble, who was Muḥammad Shāh's wazīr, was then on his way to Mālwah on an expedition against the

[1] According to the *Ma,āsir-ul-umarā*, II, 742, Khwājah Mīr, Khwāfī, (Ṣalābat Khān) was made Mīr Ātash in the 23rd year of ᶜĀlamgīr, then removed, but reappointed in the 25th year, he died in 1103 H. (the 36th year). The *Tārīkh-i-Muḥammadī* says he died in 1104 H. Neither the *Ma,āsir-ul-umarā* nor the *Ma,āsir-i-ᶜĀlamgīrī* makes any mention of his having invented the *qulālbār*

Mahrattas. Wilks, ii, 38, writes as if it were a peculiar weakness of the particular noble, that the Nizām of Ḥaidarābād was in 1768 "accompanied in the field by his favourite wives". But in so doing Nizām ʿAlī was only following the usual practice of Moghul commanders.

CHAPTER XVIII

ON THE MARCH.

When an army or the emperor first took the field, there were generally great difficulties and delays in making a start. Nothing was ever ready when wanted, and if a great noble was put in command, he had always some further petition to urge or objection to make before he could be persuaded to start. Then there were the astrologers to be consulted. No march began until the lucky moment (*sa*ᶜ*at-i-sa*ᶜ*īd*) had been fixed by reading the stars. If it were not possible to make a real departure on the proper day or at the proper time, the advance tents would be sent out and a pretended start would be made in the hope of cheating the Fates (*Seir*, i, 309, note 248). In all cases, however, the first march out was a very short one, in order that stragglers might have time to join and anything left behind might be sent for. This regard for lucky and unlucky days was a great obstacle to the Moguls' success in war, as it often prevented them from taking the most obvious advantages of an enemy (Cambridge, "War", Introd xi).

Emperor's taking the field in person. The emperor was not supposed to take the personal command unless the army was large and the campaign important (Horn, 46 relying on the *Tuzuk-i-Taimūrī*). Thus, when Bahādur Shāh in 1710 headed the army sent against the Sikh, Bandah, he was blamed for meeting an antagonist unworthy of him. On the way it was usual to pay visits to holy men of repute in order to obtain their blessing; and the shrines of any noted saints situated near the line of march were

perambulated and the saint's help implored. Thus Shāh ʿĀlam Bahādur Shāh when on his way to fight his brother, offered up prayers at the tombs of Qutb-ud-din and Nizām-ud-dīn Auliyā at Dihlī. In the same way Farrukhsīyar, marching up from Patnah to Āgrah, prayed at the tombs of Takī-ud-dīn ut Jhūsī, of Badīʿud-dīn at Korah, and of Shāh Madār at Makhanpūr Another curious practice is described by Yaḥyā Khān, 129*b*. He says that when in 1721, Prince Muḥammad Ibrahīm was raised to the throne and was about to start against Muḥammad Shāh, he was taken, in accordance with an old custom, to Qutb-ud-din's shrine, to have his turban wound round his head there, and a sword attached to his waist. Then a bow with its string loosened ought to have been placed near the tomb If the string of itself resumed its place, this would be held a sign of victory On this occasion, such was the uproar and confusion, the order to bring the bow was not carried out.

Description of an army on the march. Catrou, 12mo ed 1715, iv, 49—57, or 4to edition p. 126, gives us the following picture of a march of the emperor Aurangzeb. The heavy artillery went first and formed as it were the advance guard. The baggage followed in good order. First came the camels bearing the imperial treasure, one hundred loaded with gold and two hundred with silver coin. The load of each did not exceed 500 lbs. The treasure was succeeded by the hunting establishment. There were a great many dogs used for coursing deer and numerous "taureaux" [1] for hunting tigers. Next came the official records. It is the practice of the Moghul empire for these never to be separated from the emperor. The accounts and other archives of the empire were carried on eighty camels, thirty elephants

[1] This must surely be a mistake, perhaps leopards (*chītah*) are meant or buffaloes for fighting with tigers. But the original Portuguese text of Manucci, Berlin Ms., Phillipps 1945, p 47, says nothing about bulls. The sentence reads: "One hundred and fifty camels loaded with nets (*redes*) for hunting tigers, of which sport I have already spoken". For the use of these nets, see Constable's Bernier, p. 378.

and twenty carts. Immediately behind these came fifty camels carrying water for the court and the princes. This is a necessary precaution in Indian travelling, you are often in a waterless country or the water, speaking generally, is stagnant and unwholesome. Behind these camels came the imperial kitchen and fifty camels with the provisions for the day. There were fifty cows to give milk, as Aurangzeb chiefly lived on milk. One hundred kitchen servants riding on horses followed. Each man prepared one particular sort of stew . . . . Next was the wardrobe of the emperor and the harem, and for this fifty camels and one hundred carts sufficed. Thirty elephants bore the harem jewels and the store of swords and daggers, from which the emperor makes presents to his generals In front of the baggage train and the artillery two thousand pioneers marched with spades ready to smooth the ground. There were other thousand who followed to repair any holes made by the camels or elephants.

The army came after the baggage. It was composed almost entirely of cavalry. As for the infantry it is made up in case of need from the numerous sutlers, traders, and servants that follow the army These are armed only with the sword, spear and shield. After the cavalry came the emperor, followed by his seraglio Ordinarily he rode an elephant. On the back of this great animal, they had built a room with glass windows, in which was a couch and a bed. By the side of the elephant were palankins all ready for use should the emperor wish to change his mode of conveyance His elephant was followed by led horses. Aurangzeb was fond of riding and at a considerably advanced age he was still the best rider in his empire. Some camels preceded the emperor bearing some large cooking-pots always steaming, perfuming the air as they went by. Forming the two wings on the two sides of the emperor's elephants, marched in good order the whole of the imperial guard. The queens, princesses, and ladies of

the harem followed the emperor. They were carried, as he was, on elephants, but the room which contained them was surrounded with wooden blinds (*jalousies*) covered over with loose, thin muslin. They saw all and could breathe the air without being seen. The other women who worked in the harem were on horseback, wrapped in long mantles covering their faces and reaching to their feet. The line of march was brought up by the light artillery, each field piece on its carriage being drawn by horses.

The rear guard was swollen by the prodigious number of people always at the Court, and the innumerable multitude of servants leading elephants, camels, horses, and those carrying the tents and baggage of the lords of the court and the generals of the army. All moved in order and without confusion. This rear guard had its place allotted as exactly as the disciplined troops

Standards The flag of the noble or sovereign was carried on an elephant during the march (De la Flotte, i, 258 Fitzclarence, 138). These was a special officer entrusted with the insignia and standards. Of these some account has been given under the head of *Manṣabdārs*. Collectively they were called the *qūr*, an Indian usage of the Turkish word which is not given among the definitions in P. de Courteille, "Dict." 425 The officer's title was *Qūrbegī*, lord of the *Qūr*, and the men under him carried a supply of weapons for the emperor's use. The details, as they stood under Akbar, will be seen in the *Āīn*, i, 109, 110. Bernier, 371, speaks of the *qūr* (or as he spells it, *cours*) preceding the emperor on the march: these standards and emblems were surrounded by a large number of players on cymbals and trumpets.

The following graphic description of an emperor on the march with music playing and standards displayed is found in a Hindi poem by Shrīdhar Murlīdhar of Allahabad, lines 355—376:

Phajir Shāhanshāh sājeu,
Sakal brind gayand gājeu,
Bajī naubate gahgahi tab,
Bhaī naubat rāwarī ab,
Ghor dhaunsā dhuni dhakārat,
"Phateh, phateh", manu pukārat,
"Ho-hu-ho" karanāi bājat,
Shāhanshāh-hi sagun sājat,
Sagun son suranāi bājī,
Siddhi rām karīju sājī,
"Jhāru-jhārun" jhānjh jhankat,
Khanan lāgi-hi ghanṭ "khanakh-kat",
Phīl wār nishān jhaharat,
Man-hu agā phatuh phaharat,
Āt patr anūp rājat,
Indr syoṇ prabhu tābi rājat,
Jhālarī muku tāsu lachhak,
Man-hu tārā chhatr rachhak,
Āphtāb bīhās ken kar,
Man-hu rakhshak sang dini ar,
Tog sundar māha māhī,
Sagun kī manu det gwāhī.

Next morning the King of Kings started,
The throng of elephants roared,
The royal march was beaten loudly,
Then played the music of His Majesty,
The big drums shook with mutterings and growlings,
Men shouted 'Victory! Victory!',
The trumpets brayed 'ho-hu-ho',
The King of Kings' good omens appeared,
The hautboys sounded happy augury,
Rāma and the sages joined the throng.
'Clash, clash' clanged the cymbals,
Jingling bells began their 'tinkle, tinkle',
The elephant riders displayed their standards,
In front ran men shouting 'Victory!'

Everywhere incomparable brightness reigns,
The splendour is that of Indra's heaven,
Fringes hang over their faces,
Guardians of stars and umbrellas,
Sun screens waving in their hands,
Hearts full of joy, they shout for the Faith,
Yaktails, *sundar*, the fish dignity,
Give evidence of happy augury.

Military Music and the Naubat The beating of drums, accompanied by the playing of cymbals and the blowing of trumpets, at certain fixed intervals (*naubat*), was one of the attributes of sovereignty. The place where the instruments were stationed, generally at or over a gateway, was the *naubat* or *naqqār khānah*, the latter name coming from *naqqārah*, one kind of drum used. Details will be seen in the *Āīn*, i, 51. As I read that passage, there would seem to have been nine *naubat* in the twenty four hours, but generally they are spoken of as recurring at the end of each of the eight watches (*pahr*) into which that period was divided The number is differently stated by different writers. Haji Mustapha, *Seir*, i, 3 note 31, after saying that in its origin this music was a mark of sovereignty, though later usurped by all provincial governors, goes on, "It played four times by day and once by night, and also to announce good news". Others speak of only three *naubat*. Fitzclarence, 192, writes "the continual beating of the *naubat*, or great drums, is one of the highest signs of rank and power; over the gate of every palace is a gallery or balcony where this noisy instrument is beaten at certain hours in the day and night. One of them (i. e. a drum) is always carried on an elephant before the commander of a native army. At Murshidābād, when I was there, the Nawāb had them continually beaten. Four gates to his palace had each a *naubat*, and each of them sounded a quarter of each hour and made the most horrid din ima-

ginable". As to the beating of kettle drums on the march there is a passage to the same effect in Captain J. Williamson "Oriental Field Sports", p. 79.

In addition to the fixed periods at which the imperial drums were beaten and the music played, it would seem that music and drum beating accompanied the march of the emperor (Fitzclarence, 138). The intention to make a march was announced by the beating of kettle drums, as was done for instance by Prince ᶜAlā Gohar in 1171 H., *Tārīkh-i-ᶜĀlamgīr Sānī*, fol. 155*b*. Or as Manucci asserts, ii, 68, a trumpet was sounded for the same purpose. If the emperor were not present, the commander, if entitled to this high honour, caused his own drums to be beaten, and as Horn, 17, remarks, the sound of these drums was a sign that some great noble was in command and that probably the army under him was a large one. The drums were also beaten at the opening of a battle. We are told by one writer of the year 1169 H. (1756), *Tārīkh-i-ᶜĀlamgīr Sānī*, fol. 49*a*, that a horn was blown at night in the emperor's camp to indicate a halt for the next day We read of one noble who kept in his service one hundred horn-blowers (*karranāī*), so that when a fight was trembling in the balance, they should all blow together and inspire the other side with dread. (*Maᵃāsir-ul-umarā*, i, 514). After a battle the drums and trumpets were also employed by the victors to announce their victory; and even on ordinary occasions a noble was preceded by music. In 1757 Anquetil Duperron, *Zend Avestā*, i, xliv, after being presented to Sirāj-ud-daulah, speaks of the Nawāb coming out to visit the mint, and "nous entendîmes un bruit affreux de tymbales, de trompettes, entremêlé de coups de fusils et de cailletoques". This picture taken on the spot must represent, as I take it, the usual practice.

The kettle drums (*naqqārah*) were made of iron hoops, and they were twice as big as those used by cavalry in Europe (*Seir*, i, 24, note 31). One of the drums used was

called *Ḍankah*, a small wooden drum, no doubt identical with ढंका, Shak. 1129, a bass kettledrum, in size between the *naqqārah* and the *lakora*, or as *Qanoone Islām*, App. p. lv, has it, the bass end of the small kettle-drum De la Flotte, 211, compares the sound of their trumpets (*trompettes*), ten or twelve feet long, to that of a French cowherd's goathorn, only louder, and G. Careri iii, 182, speaks of seeing a man walking in front of the camp Provost Marshal (*kotwāl*), blowing a copper horn 8 "palmes" in length, the sound of which made him laugh, "il ressemble tout à fait à celui que les porchers font en Italie lorsqu'ils veulent rassembler leurs cochons égarés".

Patrolling and Watching. At night time some troops were sent out to march round the camp and protect it. The name of these detachments was *tilāyah* (*Mirāt-ul-Iṣtilāh*, fol. 202*b*, Steingass, 817) In 1151 H. (1738) when Muhammad Shāh marched out to Karnāl to oppose the advance of Nādir Shāh, these night rounds or patrols were apparently still carried out, Ashob, fol. 182*b* calls them *shab-gard*, which seems the correct technical name, Steingass 732. He uses *taliʿah*, fol. 182*a*, for advanced posts or pickets, which seems the more exact meaning of that word, Steingass 819. The same form, *taliʿah*, is used c. 1169 H. (1755-6) by Muhammad ʿAlī, Burhānpurī, in his *Mirāt-uṣ-ṣafā*, fol. 99*a*. As for the care of the interior of the camp, Bernier, 369, describes the system of watch and ward then prevailing. His watchmen with their cries of *khabardār* (Take care), the guards at their watch fires every five hundred paces round the camp, and the *koṭwāl* with his armed men and their trumpet, were better fitted to prevent thieves and robbers entering the camp than to act as military precautions against surprize. In later times even these imperfect precautions seem to have been abandoned. In the 18th century it was found that, often as native troops had been surprized in the night by Europeans, they could never be brought to establish order and vigilance in their camp.

When they acted as allies of the English, the most earnest entreaty could never prevail upon them to be upon their guard, or quit their ground in the morning to take part in a surprize. The men ate a heavy meal just after night fall, many indulged also in drugs, and about midnight a whole army would be in a dead sleep (Cambridge, "War", Introd. xiii). In the police of the camp the provost-marshal, or *kotwāl*, was aided by a censor, or *muhtasib*, whose special duty (usually very imperfectly performed) was to suppress gambling, drinking, and other breaches of the Mahomedan law.

Escort. The name used for this duty was *badraqah* (Steingass, 163).

Emperor's conveyance and usages on his passing by. Shāh ʿĀlam Bahādur Shāh (1707—1712) generally travelled his stages on a moving throne (*takht-i-rawān*). It is described by Bernier, 370. Another account, *Seir*, ii, 171, note 95, tells us it was a chair resting on two straight bambus or poles and carried on the shoulders of eight men. Two or three persons could find place in it, and it had not only a canopy over it, but an awning in front to intercept the glare of the sun. Preceding the moving throne were the *yasāwals* (Steingass, 1531), whose business it was to preserve order (*Maʿlūmāt-ul-āfāq*, fol. 79*b*). Sometimes Bahādur Shāh mounted a horse, but he does not seem to have ridden on an elephant except in the battle field.

Whenever the emperor passed, it was the etiquette for princes, nobles, and chiefs to come out to the edge of their camp and present a gold coin or other offering. There are numerous instances of the practice in the historians such as Dānishmand Khān and Kāmwar Khān; and Bernier, 382, also speaks of it. The custom was observed by Herr Kotelar, the Dutch envoy, when he was in Bahādur Shāh's camp at Lāhor in 1712. The practice spoken of by Bernier of entering the camp sometimes on one side, sometimes on another, was the *taghaiyur-i-rāh dādan* (*Mirāt-ul-Iṣtilāḥ*,

fol. 80), a custom either founded on superstition or devised as a precaution against assassination.

Crossing Rivers. On this subject Horn, 25, quotes P. de Courteille, "Mémoires", ii, 336, the occasion being Bābar's boat bridge across the Ganges near Kanauj. The practice was exceedingly common. Any river, if unfordable, was crossed by a temporary bridge of boats, such as are still to be seen in the present day. Horn, referring to Elliot, vi, 363, somewhat emphasizes the fact that elephants could cross such bridges, but this is a matter of every day experience. A special officer, dignified with the name of Mīr Baḥr, Lord of the Sea, was charged with the construction of these bridges and the provision of boats. The description of one of these bridges in Bernier, 380, can hardly be improved upon. "The army crossed by means of two bridges of boats constructed with tolerable skill, and placed between two and three hundred paces apart. Earth and straw mingled are thrown upon the planking forming the foot way, to prevent the cattle from slipping. The greatest confusion and danger occur at the extremities; for not only does the crowd and pressure occur most there, but when the approaches to the bridge are composed of soft moving earth, they become so broken up and full of pits, that horses and laden oxen tumble upon one another into them, and the people pass over the struggling animals in the utmost disorder. The evil would be much increased if the army were under the necessity of crossing in one day; but the king generally fixes his camp about half a league from the bridges of boats and suffers a day or two to elapse ere he passes to the opposite side of the river; when, pitching his tents within half a league from the bank, he again delays his departure so as to allow the army three days and nights at least to effect the passage". The practice referred to in the last sentence could be illustrated by more than one instance of river-crossing in the reign of Bahādur Shāh (1707—1712).

It seems that there was one defect in the purely native system of making a boat-bridge. They did not make use of grapnels. Instead of these, they followed the tedious mode of driving stakes into the river bed. The result was a bridge less secure, and what might have been ready in one day took eight or ten days to complete (Remarks by Major R. E Roberts, "Asiatic Miscell." i, 419)

In Ashob's *Shahādat-i-Farrukhsiyar*, fol 112*b*, I have come across a curious device by the Mahrattas to mark the fordable part of a river. In 1148 H (1735) Pīlājī Jādon crossed the Jamnā to attack Sa'ādat Khān, Burhān-ul-mulk. At the place of crossing he caused bamboo poles to be planted in the water, to show the line of shallow water in case they had to retire. His forethought was, however, of no avail; they were badly beaten, fled in haste, and missed the ford, those that were not drowned being taken prisoners.

Marching through Passes The passage through a hilly country of such a huge assemblage as a Moghul army, consisting as it mainly did of undisciplined men, was, it need hardly be said, a matter of extreme difficulty, and in the presence of an active enemy likely to end disastrously Of this difficulty Bahādur Shāh had ample experience while governor of Kābul during the last ten years of his father's life. It was with the greatest difficulty, and more by guile than force, that he was able to pass yearly from his winter quarters at Peshāwar to his summer residence at Kābul, and back again (Raverty, "Notes", 84, foot note, 86, 90, foot note, 372) Warned by what had happened to him in Kābul, we find Bahādur Shāh adopting special precautions whenever he came to any narrow defile. On his return from the Dakhin, when he arrived at the Fardāpur pass between Aurangābād and Burhānpur on the 23rd Shawwāl 1121 H. (25th Dec. 1709), he sent ahead his eldest son, Jahāndār Shāh, with orders on reaching the other end to occupy in force a position in the open plain beyond (Kāmwar Khān, entry of above date). Shortly

afterwards he came with his army to the Mukand *darrah*, or pass, and the three great Rājput chieftains of Udīpur, Jodhpur, and Jaipur being in open revolt, there was every reason to take precaution against a sudden onfall. This narrow valley in the Kotah state has a melancholy interest in Anglo-Indian history as the scene of Colonel Monson's disastrous retreat before Jaswant Rāo, Hūlkar, in July 1804 (Thornton, "Gaz." 624, Thorn, "War", 358—363, Wellesley "Despatches", IV, 178 [1]). Bahādur Shāh took very great precautions. A plan of the pass was prepared a week before they came to it: the road was reported to be only 4½ *dira'h* wide (about 12½ feet). Accordingly on the 25th Muharram 1122 H (25th March 1710), the eldest prince, Jahāndār Shāh, was again deputed to march through in advance of the main army, and occupy the exit from the narrow valley It seems to have taken the main body eight days to get clear, as it was not until the 6th Ṣafar (5th April) that the emperor quitted his camp on the hill side, at the top of the pass, a position which had been occupied by him since the 29th March (Kāmwar Khān, entry of above date).

Scouts and Spies. The intelligence department was always in active operation, both in peace and war. Reports of all sorts, descending even to idle gossip and scandal, were always welcome. Dānishmand Khān, entry of 11th Ramaẓān 1120 H., tells us that there were in all four thousand spies (*harkārah*) in the imperial service scattered throughout the kingdom There was a head spy (*daroghah-i-harkārah*, who was a man of influence and much feared; his establishment formed a branch of the postal department, managed by a high court official called the *Daroghah-i-dāk*, or superintendent of the Post. When in the field, these spies were sent out in all directions. Their name, *harkārah* (literally "for every work"), arose in the Dakhin but was adopted

[1] The best account of this retreat is perhaps that in Frazer's "Skinner", II, 7—15, 31—35.

by the Moghuls (Dānishmand Khān, l. c.). In modern usage it has been transferred to the runners carrying the mail bags. Despatches and orders were either sent through the ordinary post, manned by foot runners, or by special messengers on camels. If the recipient was to be specially honoured or the matter was very important, one of the imperial mace-bearers carried the message or letter to its destination.

Negociations. These were carried on as a rule through holy men (*darvesh*) or through eunuchs, the sacred character of the one and the peculiar position of the other class making their persons more likely to be respected. Connected with this subject is the case in Erskine "History", ii, 248, quoted by Horn, 51, where during Humāyūn's flight through Sind in 1542, Māl Deo, the son of Rāe Lankaran of Jaisalmīr, when he came to remonstrate about plundering, bore a white flag. Another instance is found in Ashob, fol 256*b*. He tells us that during the general slaughter of 1739 in Dihli, the Shāh's men were opposed in superior force by the Wazīr's troops stationed round the latter's mansion. It became necessary to communicate with the Wazīr and send him a letter. The messenger displayed a white sheet "that is to say, the signal of peace and negociation", and then advanced to state his purpose The only other instance that I have met with of a flag of truce being used, was at the siege of Malligām in 1818, where Lake, 127, says "the garrison hung out a flag of truce, that we might carry away our dead and wounded".

CHAPTER XIX.

LENGTH OF MARCHES.

Rennell, 317, speaking from his experience, says the length of a day's journey in Hindūstān was 11 to 12 *kos* or about 22 miles, for an ordinary traveller; but that of a courier may be reckoned at 30 or 33 miles; and on occasions of emergeney they could travel even more, and that for a continuance of fifteen or twenty days But these figures must not be taken as any standard for army marching These was an official rate of progress laid down for single officers or small parties travelling to or from Court. At times there were, however, forced marches which much exceeded the ordinary length, on the other hand, the rate of advance of a large army was very much less than the official rate of marching, for "slowness of motion and the smallness of the stages are in the idea of the Indians a part of the state that must attend a great man" (*Seir*, i, 187, note 131). Bernier, 358, alludes to this when he writes, "this is indeed slow and solemn marching, what we here call *à la mogole*".

In detailed histories where events are recorded day by day, such as Dānishmand Khān's *Bahādur Shāh nāmah* and Kāmwar Khān's *Tazkirah-i-salātīn-i-chaghataiyah*, the length of each day's march is stated with great precision in *jarībī* or measured *kos*. This precision is accounted for, no doubt, by a statement found in Firishṭah, *Maqālah* ii, p. 212, line 1. He tells us that a *tanāb-i-paimāish* followed the army, and by it the distance traversed was measured. The introduction of the practice into India was

attributed to Bābar. One hundred *tanāb* made one *tanāb* (the word is *kos*, in the quotation of the passage to be found on fol. 38*a* of B.M. Or. 2005, *Tārīkh-i-Ahmad Shāhī* c 1167 H.). Each *tanāb* was of 40 yards (*gaz*) and each *gaz* was of nine average fists (*musht*). This would make a *kos* of 4000, instead of 5000 *gaz*, as the later reckoning was. It was apparently Akbar who lengthened the *tanāb* from 40 to 50 *gaz* (*Āīn* (Jarrett) ii, 414).

Niccalào Manucci saw these measurements actually being made when ᶜĀlamgīr left Dihli in 1663, Berlin Ms Phillipps 1945, fol. 48, and he gives a detailed account of the process. "Other men on foot march with a rope to measure the road, as follows. They begin at the royal tent when the king starts. The first man, who holds tho rope in his hand, makes a mark in the ground, and when the man behind comes up to it, he calls out "One" Then the other man makes another mark and counts two: and thus they continue for the whole march, counting "Three", "Four" and so on, the other peon also keeping count Should the king ask how far he has gone, they calculate the number of ropes making up a league, and answer accordingly".

Dr. Horn, 115, states that his researches have not yielded him material for an exhaustive treatment of this section. Without any pretence to be exhaustive, I hope to he able to throw some further light upon the subject.

The official day's march. If a man was summoned to court, the time for his arrival was calculated in the following way (B M 1641, fol. 40*b*):

1) For the order to reach him by the postrunners, 30 measured (*jarībī*) *kos* (78 miles) a day.
2) For preparation to march, one week.
3) For the march, 7 measured *kos* (18 2 miles) a day

The imperial measured *kos* was 200 *jarībs* of 25 *dira*ᶜ*h* each, that is, 5000 *dira*ᶜ*h* (B.M. 1641, fol. 51*a*). The following doggrel lines afford a *memoria technica* of this fact:

Panj alaf āmad zi gaz miqdār-i-mīl,
In manābazat bar īn bāshad dalīl.

"Five thousand will yield in yards the mile's length,
This specification affords the proof thereof".

(Khushhāl Chand, *Nādir-uz-Zamānī*, B M. Or. 1844, fol 159*b*)

The *dira*^{c}*h* may be safely assumed to be the same as the *gaz-i-ilāhī*, which has been found to be, as nearly as could be ascertained, 33 inches in length (Elliot, "Supp Gloss" 480, under "Ilahi Guz", and 229, under "Coss", see also Prinsep, "Useful Tables", Calcutta, 1834, p. 88, 89) Thus the length of one *jarībī* kos would be 4583⅓ yards or 2 6 miles, and 7 kos equals 18 2 miles. The reputed (*rasamī*) kos was shorter, one *jarībī* equalled 1.71 *rasami* kos, and the *rasamī* kos was thus 1.52 miles in length But this latter kos varies greatly in different parts of the country.

We can prove the ordinary rate of a day's journey from other sources. For instance, Khushhāl Chand *Nādir-uz-Zamānī*, B M. 24,027, fol. 247*b*, tells us that from Dihlī to within twelve kos of Kābul the distance was 306 *jarībī* kos, or 535½ *rasamī* kos, and that it was one and a half month's journey Taking thirty days to a month, or forty five days in all, we find that this brings out a rate of 6⅘ *jarībī* and 11⅘ *rasamī* kos travelled each day, or almost exactly the same as the distance fixed in the official manual

Then Mirzā Muhammad, Ḥārisī, gives in his Memoirs details of several journeys that he made. After Bahādur Shāh's death he came from Lāhor to Dihlī in twenty three marches, viâ Nakodar, Phalūr, Ambālah, and Karnāl. The reputed distance was 107 kos, measured on the map it comes to about 288 miles, or at the rate of 2.6 miles to the kos to 278 miles. This gives only 4.65 kos or 12.09 miles a day. But then we must recollect that for most of the time he travelled in the company of Bahādur Shāh's

widows, who were bringing that emperor's body for burial at Dihlī. Under these circumstances they may be supposed to have travelled less quickly than was usual. Again in 1130 H. (1718) the same Mirzā Muhammad went from Dihlī to Jalālābād in the Muzaffarnagar district in five marches, the distances he gives, when added up, come to 53 kos, an average of over 10 kos (27 miles) a day. He also returned to Dihlī in five marches. The next year, 1131 H. (1719) the same man went as an ʿĀmil to parganah Rāhūn in the Jālandhar *dūābah*. He reached the place in twelve marches. Measured on the map the distance is roughly about 200 miles, which gives an average of 16⅔ miles as his daily march. Again in 1126 H. it took ʿAbd-ul-jalīl, Bilgrāmī, four months to march from Bhakkar to Dihli, a distance of about 850 miles (Oriental Miscellany, pp. 133—295, Letter N° 6) by the usual route viâ Lāhor. This yields an average of a little over seven miles a day; but then we do not know what halts he made.

Forced marches. The *īlghār*, or forced march, is mentioned by Horn, 21. Some remarkable feats of this nature were performed by Akbar; notably his advance on Gujarāt in 1573 (Elphinstone, 443). Such activity was not displayed in later times, and the Moghuls were habitually outmarched and out-manœuvered by the Mahrattas. It is true that late instances of forced marches by Maisūr troops are on record, but these can hardly be taken as applicable to the Moghul organization. Ḥaidar and Tipū Sultān kept their troops in exceptional order, and what they did could not be done by other native armies. In 1781 Ḥaidar marched one hundred miles in two days and a half, and in November 1790 Tipū's entire army marched sixty three miles in two days. In our early days in India our own troops performed feats quite as wonderful. In 1805 General Smith's cavalry followed Amīr Khān 700 miles in 43 days (Blacker, 281). Lord Lake also made some wonderful marches in 1803 and 1804.

Army marching. We possess several detailed accounts of long marches undertaken by the later emperors at the head of large armies. When ʿĀlamgīr died two of his sons fought together for the crown. But at the time of their father's death, one was at Jamrūd, a little west of Peshāwar, and the other was in the imperial camp at Aḥmadnagar in the Dakhin. There were thus about 1200 miles between them; they at once commenced to march towards each other, and finally met in battle in June 1707 between Āgrah and Dholpur.

The eldest son, Prince Muʿazzam, Shāh ʿĀlam, reached Āgrah in sixty-two days. The route was covered thus: Jamrūd to the Indus, 8 days, the Indus to Lāhor, 19 days, Lāhor to Dihlī, 25 days, Dihlī to Āgrah, 10 days. The distance measured on the map, with an addition of one eighth for the windings of the road [1], is about 690 miles. The average distance covered is thus about 11.1 miles (including halts)

Starting from the other direction, Prince Aʿzam Shāh, the second son, was ninety two days on the march. From Ahmadnagar to Aurangābād took him 15 days, Aurangābād to Burhānpur, 22 days, Burhānpur to Sironj, 20 days, Sironj to Gwāliyār, 29 days, Gwāliyār to Dholpur, 6 days. The total number of days being ninety two and the distance on the map about 505 miles, the average rate of progress was about 5.48 miles (including halts). Some farther details may be noted. Aurangābād to Burhānpur was, we are told, 56½ kos done in 18 marches and 4 halts; the actual marching thus averaged here 3¼ kos (8.16 miles) a day. Burhānpur to Sironj, given as over 114 kos (296.8 miles), was done in 17 actual marches, or a daily average of 6.7 kos (17.42 miles). By the map I make it 242 miles, which yields an average of 14.2 miles.

The two marches above described were made under the

[1] Rennell's rule, "Memoir", 7, is "Break the horizontal distance into portions of 100 or 150 miles, and add one eighth to get the road distance".

strongest possible pressure of haste, and must represent the utmost that a Moghul army was able to do in the way of continuous marching. In ordinary times the usual march of an army never exceeded 4½ kos (11.7 miles) and was sometimes as little as 1¼ kos (3 25 miles). When Bahādur Shāh marched from Āgrah to the Dakhin, and then back viâ Ajmer to Lāhor, the historians record the length of 340 separate marches. Most of them were of 3 to 3½ kos each (7 8 to 9 1 miles) This monarch always halted on Friday, and there was generally a long halt in the month of Ramaẓān on account of the fast. Some of the facts may be tabulated as follows:

Name of Place		Number of Marches	Number of Halts	Total number of days	Total distance marched (approximate)	Average daily march (excluding days halted)
From	To				miles	miles
Āgrah	Jaipur	20	50	70	155	7 75
Jaipur	Mairtha	16	12	28	140	8 75
Mairtha	Ajmer	14	17	31	45	3 21
Ajmer	Burhānpur	40	39	79	427	10 67
Burhānpur	Haidarābād	61	144	205	360	5 9
Haidarābād	Aurangābād	44	87	131	315	7 15
Aurangābād	Burhānpur	15	38	53	135	9 0
Burhānpur	Narbada bank	11	17	28	72	6 54
Narbada bank	Ajmer	50	130	180	355	7 1
Ajmer	Sonpat	21	97	118	318	15 14
Sonpat	Thānesar	8	11	19	68	8 5
Thānesar	Beyond Sādhaurah	7	8	15	48	6 85
Sādhaurah	Lāhor	33	200	233	220	6 66
Total		340	850	1190	2658	7 81

The whole period occupied, namely from the 12th Nov. 1707 to the 11th Aug 1711, comprises 1369 days, of which 1190 days are shown above The remaining 179 days were spent at some of the principal places named in the first column.

Another instance is when Dārā Shukoh was sent to recover Qandahār. He reached that place in thirty three marches from Multān (Raverty, "Notes", 22). Assuming that his

route was by the Bolān pass, the distance may be e mated as 608 miles. This gives an average daily marcl 18.4 miles.

We have also some other accounts, which are sufficier specific to afford us information of the usual rate at wh an army marched. For example, we have the advance Farrukhsīyar from Paṭnah to encounter his uncle, Jahān Shāh, in the neighbourhood of Āgrah The prince Patnah on the 22rd Sept. 1712 and reached Sarāe Beg opposite Samūgarh, east of Āgrah, on the 4th January 17 The distance from Patnah to Āgrah was commonly recko as 300 *kos* (780 miles), Khūshhāl Chand, B M. Addl. 24,0 fol. 220*a* I make it no more, however, than 585 miles the map (allowing $\frac{1}{8}$th for the windings of the road); as Farrukhsīyar did not keep to the usual route, deviated a good deal to the right, in order to visit shrine of Shāh Madār at Makhanpur, I should estim the distance actually travelled at about 610 miles. stages (including the final advance to Dihlī) were:

Stages		Number of marches	Number of halts	Total number of days	Approximate total distance marched	A daii (ex days
From	To				miles	
Patnah	Banāras	19	23	42	180	
Banāras	Allahābād	5	6	11	90	1
Allahābād	Makhanpur	17	11	28	180	1
Makhanpur	Āgrah	17	8	25	157	
Āgrah	Khizrābād (outside Dihlī)	12	8	20	130	1
Total		70	56	126	737	1

We have the record of two long marches of Jahān Shāh, first from Lāhor to Dihlī shortly after his access secondly, from Dihlī to Āgrah to oppose Farrukhsīyar.

Stages		Number of marches	Number of halts	Total number of days.	Approximate total distance marched.	Average daily march.
From	To					
					miles	miles
Lāhor	Dihlī	(not known)		44	288	6 54 (with halts)
Dihlī	Āgrah	16	5	22	135	8 43 (without halts)

Again the march of Sayyad Ḥusain ʿAli Khān from the Dakhin, a march undertaken under circumstances of extreme urgency, should afford an excellent test of the rate at which a Moghul army could march. He left Aurangābād about the 11th Nov. 1718, and reached a suburb of Dihlī on the 16th Feb. 1719. His march thus occupied 98 days, and his route by way of Burhānpur, Ujjain, and Āgrah, measures about 695 miles on the map, allowing $\frac{1}{8}$th for the windings of the road. His average daily rate of marching (including any days on which he halted) was thus 7.1 miles.

The last instance I shall refer to is the march of Muhammad Shāh in 1719 from Āgrah past Fatḥpur Sikrī to Todah Bhīm in the direction of Jaipur. I make out the distance to be about 90 miles; it took the army twenty seven days to reach Todah Bhīm; but they marched on twelve days only and halted on fifteen days. The average daily march made was thus about $7\frac{1}{2}$ miles.

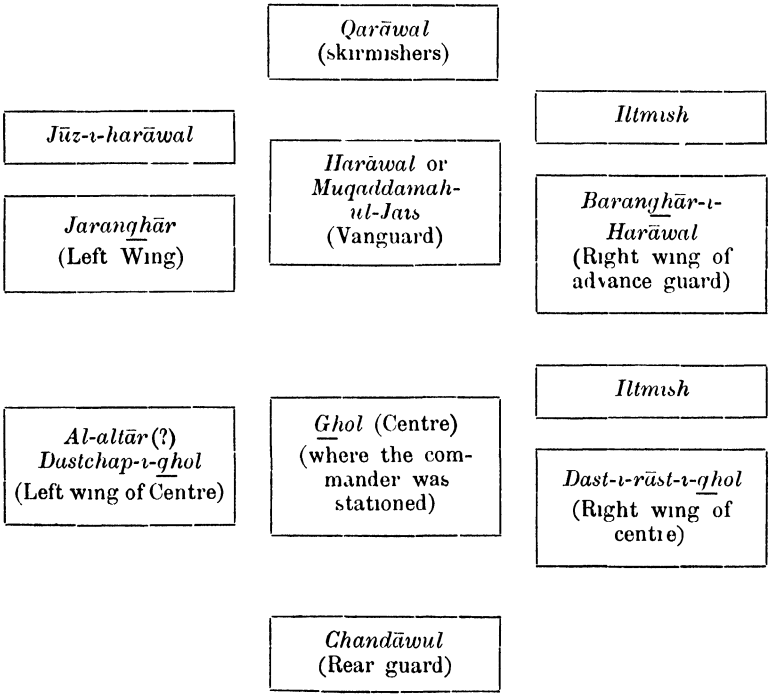
CHAPTER XX.

ORDER OF BATTLE.

The ranging of an army in order of battle was known as *ṣaff ārāstan*, from *ṣaff*, a row, rank, or file; another phrase for the same thing is *parrah bastan* (Ashob, fol. 134*b*). Dr. Horn, 59—70. has worked out this section so fully, that what I have to say must be in a great measure a reproduction of his remarks. He shows that the Moghul tactics were founded on the rules laid down in Taimūr's ordinances (Davy and White, 228 and foll., Horn, 136—151). When a great battle was imminent, it was the duty of the first Bakhshī, the *Bakhshī-ul-mamālik*, to draw up a scheme of attack, dividing the force into divisions, assigning to each its position and naming the leaders of each. The proposed distribution was laid before the Emperor and his approval obtained. The day before the battle the Bakhshī also caused musters to be made, and an abstract of this present-state was laid before the emperor. For instance, we read in Dānishmand Khān, entry of the 28th Shawwāl 1120 H., that Zu,lfiqār Khān, the first Bakhshī, drew up a plan for the battle against prince Kām Bakhsh, and presented it to the emperor for approval.

The order of battle was then, roughly speaking, as follows. First came the skirmishers. Next was placed the artillery in a line, protected by rocket-men and sheltered by a rough field-work, possibly the guns being also chained together. Behind the guns stood the advanced guard; a little behind it were the right and left wings. Then, at some distance, was the centre, where stood the emperor on

his elephant, having a little way in front of him an advanced guard (*iltmish*) and on each side of it two bodies, thrown a little way ahead, called the *tarah*. Behind the centre was the rear-guard (*chandāwul*), having in its charge the baggage and the women. I would beg a reference to the diagrams in Horn, 60, 63, 65, 66, 73. One book, B.M. 6599, fol. 164*a*, has the following disposition:



As the names for these different parts of an army in battle array differ a good deal, it will be as well to set them out somewhat at length. The words *sol-yan* and *sol-qul* for the left, and *ong-qul* for the right wing of the centre, as introduced by Bābar (P. de Courteille, "Mémoires", ii, 17, Horn, 60), seem to have dropped out of use. We hear nothing of them in the later histories.

Qalāwurī. This word is employed in the *Mirāt-i-Aḥmadī*,

fol. 186*a*, in the sense of men guiding or showing the way to an army. Steingass, 983, defines it as "road-guides, horsemen who guard the flank, spies, scouts".

Iftālī. From a passage in John Surman's Diary, C. R. Wilson, "Early Annals", ii, 2nd part, 26, this word seems to have been used for an advanced force or vanguard: "Meer Jumlah has arrived att Attayah (Iṭāwah) and his Aftally consisting of 12,000 horse att Shasadpore (Shahzādpur)". Steingass, 80, has, *Iftāl*: "dispersed, scattered, rent, torn".

Skirmishers. *Qarāwal* is defined by Steingass, 962, as T. a sentinel, watchman, spy, guard, the vanguard, a game-keeper, a hunter. In peace these men were the imperial huntsmen; in war, they were sent ahead as scouts and skirmishers.

Vanguard. This was called either *Harāwal* or *muqaddamah-ul-jais* The former word *harāwal, harol,* or *arāwal* is defined by P. de Courteille, 10, 515, as "troupe qui marche en avant de l'armée pour l'éclairer, troupe envoyée en avant pour soutenir l'avant garde". Steingass, 1494, has "vanguard, running footmen". *Muqaddamah-ul-jais* is the Arabic phrase, meaning "front-part of the army (*jais*)", and is often used instead of *harāwal*. Horn, 60, speaks of certain families among the Moghuls having hereditary claims to certain positions. In India the right to fight in the vanguard was conceded, from the time of Akbar, to the Bārhah sayyads, and the fact is often referred to in later times as one of their best titles to honour. In the *Bādshāh-nāmah*, i, 214, line 8, I find ʿAbd-ul-ḥamīd speaks of troops sent ahead of an army by the name of *manqalah*. The expression is not very common; I have met with it once spelt *manqalā* in Khūshḥāl Chand, Berlin Ms. 495, fol. 1127*b*, and several times in the *Maʾāsir-ul-umarā* (written c. 1155 H., 1742), as for instance on p. 543 of vol. i. It is used in *Tārīkh-i-ʿAlamgīr Sānī*, on fol. 105*b*. It is said to have also the form *manghalāe*, the latter a Moghul word meaning "forehead, front" (Steingass, 1331, 1333).

Advanced post of the Vanguard. This body was named *jūzah-i-harāwal*, literally "chicken of the vanguard", Horn, 61, who refers to Budāonī, ii, 231, line 4.

Right Wing. There are five names for this part of the army, two Arabic, one Chaghatāe, and two Persian. They are (1) *maimanah*, (2) *anṣār-i-maimanah*, (Dastūr-ul-Inshā, 233), (3) *baranghār*, (4) *dast-i-rāst*, (5) *taraf-i-yamīn* (Khāfī Khān, ii, 876).

Left Wing. In the same way the left wing is referred to by five different names, the *maisarah*, A. *anṣār-i-maisarah* (Dastūr-ul-Inshā, 233) *jaranghār*, Ch., *dast-i-chap*, P., and *jānib-i-yasār* (Khāfī Khān, ii, 876). *Jaranghār*, the form used in India, should be more correctly *juwānghār* (Horn, 39, P. de C., 157, 289), but *jaranghār* does not seem to be merely a mistake of the press, as Dr. Horn suggests, for we have it in the dictionaries (Steingass, 359).

Advance guard of the Centre. This bore the Chaghatāe name for the number sixty, that is, *iltmish*, (P. de C. 31). Possibly it may have originally consisted of this number of men, and the name having been once adopted, it was retained regardless of the actual number of men employed. Khāfī Khān, ii, 876 spells, *yaltmish*.

The Centre. This division was known either by the Chaghatāe word *qūl* (P. de C. 433) or the Arabic words *qalb*, literally "heart", and *ghol*, "troop", "assemblage". For example, Khāfī Khān, ii, 876 uses *qūl* and the *Risālah-i-Mḥd. Shāh*, fol. 113*b*, uses *ghol*. *Qūl* also means slave in Chaghatāe. Perhaps the centre was called by this name, because it was formed out of the personal retainers or slaves of the leader or sovereign. Another name for the centre is *qamargah*, *Mirāt-i-Aḥmadi* (circa 1170 H.) fol. 177*b*. This word is more usually applied to the circle within which game was driven by troops used as beaters. It was also a term of fortification (see farther on under "Sieges"). It was in the centre that the leader took up his station with his standards displayed.

Wings of the Centre. These were called *tarah.* P. de Courteille, "Dict." 382, translates this word as used in Bābar's "Memoirs", ii, 167, Text, 344, by the word "reserve". Horn assigns to the *tarah,* which he also calls the reserve, a position on each side, but somewhat in advance, of the centre itself. In this position these troops would seem rather to be the advanced guard than the reserve of the centre. Khāfī Khān, ii, 876, distinguishes into *tarah-i-dast-i-chap* and *tarah-i-dast-i-rāst.*

Rear guard. The name of this was *chandāwul* (P. de C. 288) literally, water-carriers, people belonging to the rear guard (Steingass, 400). In its charge was the baggage of the army (*bahīr-o-bangāh*). Horn, 61, says the correct form is *chaghdaul,* referring to Babar 131, line 1, and 184, line 10. This form is not used by Indian writers of later date, nor is it in P. de Courteille, "Dictionnaire". It is found on p. 395 of Steingass.

Sāqah. The rear of any division of the army or of any camp was called its *sāqah,* Ashob, fol. 182*a*, Steingass, 642.

Nasaqchī. From the time of Nādir Shāh's invasion, we hear a good deal of the *nasaqchī* This word, which seems to have passed then into Indian usage, is from *nasaq,* order, arrangement. The *nasaqchī* was an armed man employed to enforce orders; and there were several thousand of them in Nādir Shāh's camp. Military punishments were inflicted through them, and one of their duties was to stand in the rear of the army and to cut down every one who dared to flee. Their arms were a battle-axe, a sabre, and a dagger (*khanjar*), *Seir,* i, 340, note 286. Their signs of office, Ashob says, fol. 263*a*, were a staff or baton carried in the hand, and on the head a *tabal,* تبل, of moulded brass, three sided, in shape like the deeply ribbed or winged fruit of the *kamrakh* (Averrhoa carambola).

Taulqamah (تولقمه) or *Taulghamah* (تولغمه). This is a Chaghatāe word used to denote the troops posted in ambush to turn the enemy, or the action of turning the flank of

the enemy (P. de C. "Dict.", 243). Horn refers to it in several places (22, 23, 60, 73, 75). It was a manœuvre executed by Bābar (P. de C. "Mémoires", i, 194) and is described by him as a sudden onslaught accompanied by a discharge of arrows, and followed by as sudden a retreat. From this passage Horn holds *taulqamah* to be the name of a manœuvre rather than of a particular part of the army. But in his diagram on p. 73, showing the position taken by Bābar before the battle of Pānīpat, he places a *taulqamah* on both the right and the left of the two wings. Thus the word must be accepted in both senses, namely as a manœuvre and as a section of the battle array. Khāfī Khan, ii, 876, when setting forth the divisions of Nizām-ul-mulk's army before the fight with Sayyad Dilāwar ᶜAlī Khān, 19th June 1720, says "Fathullah Khān, Khostī, and Rāo Raghubā, Binālkar, with a force of 500 horse were appointed the *taulqamah*". This bears out the use of the word as one of the divisions of an army when in battle array. The manœuvre was one employed by Ahmad Shāh, Abdālī, without giving it this name, see p. 233. *Qazāqī* (p. 240) was also a movement of much the same sort.

CHAPTER XXI.

CONDUCT OF A BATTLE.

An open country was one of the first necessities for a successful action by a Moghul army, for without this their cavalry could not deploy freely (Horn, 21). Even ground covered with thick scrub was unfavourable, while hills and ravines still more hampered their movements. In a mountainous region they were at a terrible disadvantage; and their mail-clad horsemen were quite unequal to guerilla warfare. In their palmiest days they found themselves unable to reach the Pathāns amidst their rocks; and in their decadence they were helpless as children against the nimble Mahratta.

Usually one, if not both, the armies made ready for battle by drawing out the guns in a long line and protecting them by earth works, the guns being also connected together by chains or hide-straps, to prevent the horsemen of the other side from riding through the line and cutting down the gunners. For instance, Dārā Shukoh used chains at Samūgaṛh in 1658 (Bernier, 47); and before the battle of the 22nd Rabīᶜ i, 1161 H. (21st March 1748) with Aḥmad Shāh, Abdālī, between Māchhīwārah and Sihrind, the imperialists "joined their cannon together by chains after the fashion of Rūm" (Anand Rām, India Office Ms. 1612, fol. 58*a*). Again, outside Lāhor, on Aḥmad Shāh's second invasion in 1165 H. (1751-2), the *ṣūbahdār*, Muᶜīn-ul-mulk, resorted to *zanjīr-bandī* of his cannon (Ghulām ᶜAlī Khān, *Muqaddamah-i-S. A. nāmah*, fol. 79*a*). Nay, the practice survived to the very last, for we find it put in force by

the Mahrattas at Laswārī in November 1803 (Thorn, "War", 214). A good description of the *zanjīrah-band* (as he calls it) is given by Ashob, fol. 182*b*, with reference to Muḥammad Shāh's camp at Karnāl in the year 1151 H. (1739). "The *zanjīrah band* began at the last bastion of the town wall, a narrow path one or two yards wide being left on the bank of the canal for the passage of the guards (*chauki*) on their rounds (*shab-gard*). The swivel-guns (*rahkalah*) were planted four yards apart, with iron chains strongly attached to the wheels (*halqah*) of their carriages (*ārābah*). Between every two swivel-pieces were stationed five men with wall-pieces (*jazāīr*), having *pushtahs* (breastworks) thrown up (*andākhtah*), and their pieces ready, side by side, on their tripods".

If the guns were not too numerous, it was often the practice to post them behind the clay walls of the houses in some village; or to take up a commanding position on the top of an old brick-kiln; or a temporary entrenchment might be formed out of the earthen bank and ditch which usually surround a grove of mango trees [1]. A discharge of rockets from the artillery position generally began the action. Then the guns were brought into play. The fire never became, I expect, very rapid. Orme, for example, "Mil. Trans.", i, 74, referring to as late as the middle of the 18th century, speaks of their firing once in a quarter of an hour. Khūshḥāl Chand's remarks, Berlin Ms. 495, fol. 1016*b*, show that in 1721 the usual rate of fire of the heavy guns was one shot every three hours (one *pās*). He praises Ḥaidar Qulī Khān's men for the energy with which they cooled their guns, loaded them, and fired them at intervals of three-quarters of an hour (*do-gharī* = 44 minutes). In Bābar's time the rate of firing must have been very slow. In his battle near Kanauj, he says (P. de C., ii, 337) "Ustād Qulī Khān" (his *mīr ātash*) "made very good use

[1] Clive found one of these last very useful at the battle of Palāsi (Plassey), Orme, "Mil. Trans.", ii, 172.

of his artillery. The first day he discharged eight projectiles, the second he shot sixteen, and so continued for three or four days". He used for this the piece called "the Cannon of the Conqueror", the same that he had used in the battle against Sankā (i. e. the Rānā of Chitor), and to this it owed its name of *Ghāzī*. He had also mounted in a battery a still larger piece; but it burst at the first discharge.

Owing to the slowness of the draught oxen, who were unable to keep up with an advancing line, the artillery seldom took any further part in the battle, once the cavalry advance had passed beyond the entrenched position which had been taken up at the outset. From the same cause, it seldom happened that in case of a retreat or defeat the guns could be saved; they had to be spiked and left behind (Fitzclarence, 255); or as Blacker puts it ("War", 128) "In an action the guns of an Indian army are generally immovable and their cavalry all motion. The object of the batteries is to fire as long as possible previously to being taken; and of the horse, to secure their retreat if discomfited, unfettered by any incumbrance".

While the artillery duel went on, the rest of the army was drawn up at some distance behind the guns in the order of battle already detailed, with standards displayed, drums beating, and horns blowing. "As the army took up its position for battle, the long brass horns (*karranai*) sounded and heralds [1] made proclamation" (*Sair-ul-Mutākharīn* text, 59, *Seir*, i, 208). Since, as Isaiah says, "every battle of the warrior is with confused noise", some mention must be made here of battle cries. Horn, 23, tells us that in Bābar's time there was a pass word to distinguish friend from foe; we hear nothing of such a prac-

[1] Heralds, that is *naqīb*, Steingass 1421, a servant whose business it is to proclaim the titles of his master, and to introduce those who pay their respects to him. In 1870, on the day of the Duke of Edinburgh's arrival at Benares, such a herald preceded the late Rajah Deo Narāyan Singh as he walked from the railway station to the river bank, and I heard the man shouting out the Rajah's titles.

tice in later times. But shouts and battle cries, coupled with abusive or taunting language, were copiously resorted to. Such cries were *Allāhu akbar!* (God is great) and *Dīn! Dīn!* (The faith! The faith!). Akbar used the cry of *Yā Muʿīn!* (O Helper!), Horn 109, quoting Budāonī, ii, 167, Lowe 170. The passage in Budāonī is:

Kamān-i-kiyānī dar āmad ba-zih,
Yake guft "Ba-sitān", yake guft "Dih".

"The royal bow was drawn to the full,
One called 'Seize', and another 'Strike'".

In another place, Budāonī, i, 335, line 3 from end, speaks of *awāz-i-"Dih" o "Sitān" o "Ba-kash" o "Ba-zan"*, ghostly cries of "Strike", "Seize" "Slay", "Smite", still supposed to be heard after night-fall from the battle-field of Pānīpat. Steingass, 547, has *dih*, strike thou, inf. *dādan*, and 548, *dihādih zadan*, to raise a battle cry Khāfī Khān ii, 58, speaks of *ṣadāe "Ba-kash!" "Ba-kash" buland sākhtah*, "having raised loud cries of 'Kill! Kill!'" We are reminded of Michael Drayton's "Battaile of Agincourt":

"Whilst scalps about like broken potsherds fly
And 'kill', 'kill', 'kill', the Conquering English cry".

The most common cry in later times was *Dīn! Dīn! Muhammad!* This was used by the Arabs at Nāgpur in 1817 (Fitzclarence, 103). It is what Robert Orme represented, "Mil. Trans." ii, 339, as "the sound of Ding Mahomed", or as a contemporary account of the battle of Baksar, Oct. 23rd 1764, says (Carraccioli, "Clive", i, 57) "when our seapoys observed the enemy they gave them a *ding* or *huzza*". One Mahratta war cry was "Gopāl! Gopāl!" (*Aḥwāl-ul-khawāqīn*, 207*a*); this is one of the names of Krishn. Another, according to Grant Duff, 109, was "Har, Har, Mahādeo"; these are also the names of Hindu gods.

Cavalry charges. When the guns were supposed to have done their work and had sufficiently demoralized the opposing army, successive charges were delivered from first

one wing, then the other. The horsemen began with matchlock fire and a discharge of arrows, finally coming to close quarters and hand to hand fighting with sword, mace, or spear. This latter was the *chapqalash*, evidently from چاپغولاش, P. de C. 271, a combat. Aḥmad Shāh, Abdālī, seems in 1165 H. (1752) to have brought in a mode of attack, resembling the *taulqamah*, (ante, p. 228) in which the matchlock played a conspicuous part. He divided his horse into several bodies of one thousand each, all with matches ready lighted. The first body (*dastah*) rode hard at the enemy, delivered its fire, then galloped off again. A second body followed and did the same, and so on in succession (Ghulām ʿAlī Khān, *Muqaddamah*, fol. 79*b*). At the battle of Pānīpat, fought on the 7th Jamādī ii, 1174 H. (13th January 1761), he repeated this manœuvre at a critical moment with conspicuous success, thereby throwing the Mahrattah centre into confusion, (*Tārīkh-i-Ḥusain Shāhī*, fol. 44*b*, 45*a*). In the *Maʾāsir-ul-umarā*, ii, 671, we are told that in the south of India it was the practice to make the first attack against the rear of an army.

Chevaux de frise or Caltrops. According to the dictionary, Steingass, 460, *khasak* is the word for a caltrop thrown down to impede the movements of cavalry. I have seen only one mention of their employment, namely, in the *Akbarnāmah* (Lucknow edition, i, 75, five lines from foot) where Taimūr is said to have used them. But I have come across the word in Saʿdī's lines quoted by Muḥammad Munʿim, Jaʿfarābādī, in his *Farrukh-nāmah*, fol. 27*b*, (1128 H.) and by ʿIshrat, Siyālkotī, in his *Nādirnāmah*, fol. 56*a* (1151 H.):

ʿAdū rā ba jāe khasak zar ba rez,
Kih bakhshish kund kunad dandān-i-tez.

"Before an enemy scatter gold, not spikes,
For gifts will blunt the sharpest teeth".

As to the distinctive difference between Moghul cavalry and that of European armies in their methods of fighting,

Colonel Blacker has some judicious remarks ("War", 189). First of all, to show how formidable such solid but irregular bodies of cavalry seemed, he quotes Orme — "whosoever has seen a body of ten thousand horse advancing on the full gallop all together will acknowledge with the Marechals Villars and Saxe that their appearance is tremendous, be their courage or discipline what it will". Yet a few European squadrons could ride them down and disperse them. There was a want of sympathy between the parts, and this prevented one part depending upon the assistance of another. Owing to its size, an army of Moghul horse could, for the moment, meet the attack of a small compact body by a portion only of its total strength, and since as against disciplined cavalry an equal front of an irregular body of troops can never stand the shock of an attack, the Moghuls were bound to give way. The whole being thus broken up into parts, the parts avoided exposure to the brunt of the action; the part actually attacked fled, but the parts not menaced did not combine to fall on the rear of the pursuers. On the other hand, the disciplined troops divided, reassembled, charged and halted on a single trumpet-call, and threatened each single part in turn. But if the drilled cavalry tried skirmishing, it was soon found that the Moghul horse, apparently so despicable, were most formidable in detail. Wilks, iii, 392, is also of opinion that in single combat a European seldom equalled the address of a native horseman.

The objective was the elephant of the opposite leader, and round it the fiercest of the battle raged. The centre was the ultimate object of attack and every effort was made to get closer and closer to it. As a rule, a battle in India was a series of isolated skirmishes, the contending bodies holding themselves at first at some distance from each other, and ending in close individual fighting. One European observer, writing at rather a late period, declares that numbers always decided the day, that the smaller

invariably gave way before the larger force. This view may have some truth in it, but cannot be laid down as an axiom. Accident as frequently as not was decisive, while treacherous desertion or half-hearted support was a frequent occurrence.

The most decisive point of a battle was, however, the death or disappearance of the leader. If he was known to have been killed, or could not be seen on his elephant, the troops desisted at once, and the greater part forthwith sought their own safety in flight (To this effect, see De la Flotte, i, 258, Orme, "Hist. Frag.", 419, Cambridge, "War", Introd. ix). In order to be conspicuous, the leader rode on an elephant, preceded by others bearing displayed standards. "Nothing was more common than for a whole army to turn its back the moment they perceived the general's seat empty. But Europeans having these forty years past (1745—1785) gained many a battle by only pointing a four-pounder at the main elephant, Indian generals have abandoned the custom and now appear on horseback, nay have learned to discipline their troops and to have an artillery well served" (*Seir*, i, 10, note 20). The troops were very subject to panic and sudden flight; so much so that the fact was summed up in the proverb "one soldier makes off, and a whole army is done for" [1]

Many battles were lost by the event above referred to, the death or disappearance of the leader. One instance is the loss of the battle of Samūgarh in 1658, because Dārā Shukoh descended from his elephant to mount a horse, at the entreaty of Khalīlullah Khān, with the object of pursuing the flying enemy (Bernier, 54). The loss or flight or capture of the leader also determined the great battles of Jājau (18th June 1707), Ḥaidarābād (13th January 1709) Lāhor, (15th-18th March 1712), Āgrah, (10th Dec. 1712) Ḥasanpur (13th Nov. 1720). In the first Prince Aʿzam Shāh

[1] *Lashkarī garezad, o lashkare sar shavvad*, Horn, 111, quoting Budāonī, II, 196, line 4.

and two sons were killed; in the second, Prince Kām Bakhsh was mortally wounded and made prisoner. At Lāhor the three younger brothers of Prince Jahāndār Shāh were defeated by him one after another and killed. At Āgrah, Jahāndār Shāh left the field of battle and fled in disguise to Dihli. At Ḥasanpur, Prince Ibrāhīm and the rebel wazīr, ʿAbdullah Khān, both became the prisoners of Muḥammad Shāh. On this head see also Horn, 46, and the cases there referred to, *Badshāhnāmah*, i, 512, last line, *Akbarnāmah*, iii, 54, line 12 and following. Once more, Sir Eyre Coote, "Minutes of Sel. Com", 30th April 1772, reprint, 39, attributes the victory of Palāsī (Plassey) partly to the loss of one Meer Noodur, Sirāj-ud-Daulah's head general. One of our cannon balls killed his elephant and then its rider was killed by a fall from it; this, and the death of the oxen dragging the guns, threw the enemy into the greatest confusion.

Untimely plundering. There was also an undisciplined eagerness to break off and begin plundering before the day was really decided; and this habit often ended disastrously for those who had too easily assumed themselves to be the victors.

Single combat. Horn, 46, quotes instances (*Akbarnamah*, iii, 97, 98 and Khāfī Khān, ii, 304, 305), 1st where Akbar challenged his opponent, Dāūd Lodī, to a fight in single combat; and 2ndly, in 1095 H., when M. Ibrāhīm, a general of the Ḥaidarābād rulers, made a similar offer to Prince Muʿazzam, eldest son of ʿAlamgīr. We may add to these the proposal sent in 1119 H. (1707) by the same Prince Muʿazzam (afterwards Shāh ʿĀlam Bahādur Shāh) to his next brother, M. Aʿzam Shāh, when they were both claimants for the throne, then vacant through the death of their father. It does not appear that any of these duels actually took place; the last most certainly did not.

Challenges to single combat seem to have been not unusual between men of lower rank. We have an instance

in Khāfī Khān, ii, 633, line 14, where he says that Sarwā, a robber associate of Pāprā, the toddy-seller, and one of the latter's petty officers, Purdil Khān, had such a violent quarrel about each other's soldierly qualifications, that they fought a duel (*jang-i-yakyangī*), "as is the custom in the Dakhin" (see *ante*, p. 185). Later on the practice showed itself in 1782, when the English under Sir Eyre Coote were opposed to the Mysore army under Ḥaidar ʿAlī. Individual horsemen would ride up within speaking distance and, with contemptuous abuse of a mode of warfare excluding individual prowess, would give a general challenge to single combat. Many times and with uniform success these were accepted by Lieut. Dallas, a man six foot high, who rode a coal-black horse, and formed a striking exception to the general inferiority of European to native swordsmen (Wilks, ii, 392).

The Utārā. Dismounting, (from H. *utarnā*, to descend, dismount), or fighting on foot, was a peculiarity of Indian horsemen of which they were very proud. It was specially affected among Indian Mahomedans by the Bārhah Sayyads. H. M. Elliot, "M. Hist.", i, Appendix, 537, speaks of this practice, and the allied one of Colligation in Fighting, as a custom of the Hindū tribes. The *Beglar-nāmah*, (Ell. i, 293) a history of Sind written about 1625, quotes Rānā Kumbā of Amarkot as saying "it was an old-established custom amongst their tribes that both parties should alight from their horses and engage on foot". Other instances are to be found in the same Appendix.

Horn, 21, seems to be referring to this habit, when he says that the Moghul horseman had to serve sometimes as infantry. His reference in the *ʿĀlamgīr-nāmah*, 67, line 8, is undoubtedly a case of the *utārā*. It took place at the battle with Jaswant Singh, Rāthor, and it is specially said to be "the custom of the valorous reputation-seekers of Hindūstān". Anand Rām, writing in 1161 H. (1748), I. O. L. N°. 1612, fol. 87*b*, refers to it as a special feature of Rājput tactics. An instance of the practice by Rājputs

will be found in Budāonī's account, text i, 368, Ranking, 478, of the battle fought in 1562 near Ajmer between Sher Shāh and Māl Deo, Rāthor. Again, we find it in use in 1151 H. (1739) at the battle near Karnāl, where Khān Daurān, Ṣamṣām-ud-daulah, was wounded and Muzaffar Khān killed. Ashob, fol. 227*a*, tells us that "they found the dead bodies of Mīrzā ʿĀqil Beg, Kamalposh, and of others, his brethren, with their skirts tied together".

This dismounting was resorted to at the crisis of a battle; and when the horsemen alighted, they bound themselves together by the skirts of their long coats There are many references to this mode of fighting in the descriptions of battles in the early part of the 18th century. The Persians in the Indian service scoffed at this habit, and attributed it not to valour but to defective horsemanship. An anonymous writer of that nation remarks, "So when Hindūstānī cavalry go to battle, it is impossible for them to make a stand without suffering physically. If they are caught involved in a fight they have no resource left but to alight and let their horses go. Though they may be killed in either case, yet the chances are greater in favour of life when they alight. If they remain in the saddle, it is impossible for them to escape, for the horse, as likely as not, kills the rider before the enemy touches him. Anyhow, this manœuvre of *utārā* has the appearance of bravery and they boast of it. ("Memoirs of Dihli", trans. of *Tārīkh-i-Farah Bakhsh*, by W. Hoey, M. A., D. Lit., i, App. 8).

Allied to what Elliot refers to as "colligation", or men binding themselves together when fighting, is an incident which I have only met with once. In 1165 H. (1752) at the turning-point of the battle fought outside Lāhor against Aḥmad Shāh, Abdālī, the *nāzim*, Muʿīn-ul-mulk, and his chief captain, Bhikārī Khān, put each one foot in the other's stirrup, and thus, knee to knee, fought their way back to shelter in the fort of Lāhor (Ghulām ʿAlī Khān, *Muqaddamah*, fol. 79*b*).

Some other technical terms of fighting. There are several words and phrases which often occur in accounts of battles, and seem to have, in that connection, a more or less technical meaning. These I note, with such explanations as occur to me.

Ḥarakat-i-mazbūḥī. This means literally the expiring throes of a slaughtered animal, but seems used to express a feeble and hesitating attack, which is never carried home. In Budāonī, ii, 234, occurs the following passage: *o sare chand az fidaiyān-i-Rānā, kih mahal-i-ū-rā muḥāfazat mī-kardand, o sare chand-i-dīgar, suknah-i-muᶜābad, kih majmūᶜ bist kas bāshand, binābar-i-rasm i-qadīm-i-Hindūstān, kih waqt i-khālī sākhtan-i-shahr, ba jihat-i-raᶜāyat-i-nāmūs, kashtah mī shavvand, az andarūn-i-khānahhā o butkhānahhā bar āmdah, harakat-i-mazbūhī kardah, ba zakhm-i-shamsher-i-ján-sitān ján ba mālikān-i-dozakh sipurdand.* Lowe, 240, renders it thus: "And certain of the devoted servants of the Rānā, who were the guardians of his palace, and some inhabitants of the temple, in all amounting to twenty persons, in accordance with an ancient custom of the Hindūs that when they are compelled to evacuate a city, they should be killed in order to save their honour, coming out of their houses and temples *performed the sacrificial rite* and by the stroke of their life-taking swords committed their souls to the keepers of hell". See also Lowe's note. I take this passage as meaning, on the contrary, that the men made a feeble purposeless onslaught (*ḥarakat-i-mazbūḥī*), and were slain not by their *own* swords, but by those of their Moslem opponents.

Again in the *Maᵐāsir-i-ᶜĀlamgīrī*, 299, at the taking of Gūlkandah, 24th Zu'l Qaᶜdah 1098 H., 9th Sept. 1687, we have the expression used in its literal sense of a feeble useless effort. When the besiegers entered that fort, their leader seized the king *be ān kih ū o hamrāhān-ash harakat-i-mazbūḥī namāyand*, "before he and his companions could make any fruitless effort". As the prisoners thus made were

Mahomedans, it can hardly be supposed that the writer means they were about to perform a "sacrificial rite", that is, in other words, the Hindū *jūhar*, or immolation of themselves and family. In the *Maʾāsir-ul-umarā*, i, 844, the words are used to describe the opposition offered in 1153 H. (1740) by Sarfarāz Khān, *nāzim* of Bengal, to the invasion of the usurper, ʿAlī Wirdī Khān, Mahābat Jang. Wilks, ii, 552, attributes to Tīpū Sultān's personal malignity the use of this phrase for describing the "movements of the enemy". No doubt, contempt is included in the meaning, but it is a regular stock expression, used by all writers when describing the movements of troops. Khūshhāl Chand, Berlin Ms. 495, fol. 1010*b* uses it in its strictly literal signification with reference to the execution of Rajah Ratn Chand (1133 H). Once more he uses it, rather indefinitely, on fol. 1015*b*.

Qazāqī. The word comes, of course, from *qazāq*, Steingass, 968, a partisan, a light armed soldier, a highway robber, a Cossack. *Qazāqī* he defines as a military incursion, guerilla warfare, free-booting, brigandage. But in Indian writings it seems to me to have a more definite application, and is used for something equivalent to a loose attack in open order, followed by retreat as soon as the attack has been delivered, in short something the same as the *taulqamah* movement already referred to (ante, p. 227). Modern writers speak, I notice, of the Cossack "lava-like" form of attack, and I suppose the above-named is what they mean. Horn, 64, rejects, and I think rightly, the use of this word as one of the divisions of an army, but he does not give us any definition to replace the one rejected. I fancy that Dr. Oskar Mann's reading of *farāqī* قراقي, on p. 95, line 6, of *Mujmil-ut-tārīkh* might be better قزاقي, *qazāqī*.

Dar goshah-i-kamān zadan. This is in the literal sense of the words "to take in the corner of a bow". But the words seem to have also the specific meaning of surrounding and overpowering any body of men.

Talāqī-i-farīqain, "Meeting of the two parties", denotes the fact that the two armies are in touch and within striking distance of each other.

Siyāh namūdan, lit. "to show black", is the phrase for the first faint signs of an enemy's appearance in the distance.

Hallah, said by Steingass 1506 to be from *hamlah*, a fight, was the general word for an on-rush or charge.

Yūrish, Steingass, T., 1537, P. de C., 545 يورش, *marche, expédition*, was also used in the same sense as *hallah*.

Hai,at-i-majmūʿī was also a word for some sort of combined advance. Literally it means *hai,at*, form, mode, *majmūʿī*, collective, aggregate. I think this had a technical use, but I have failed to satisfy myself as to its exact meaning.

Chapkunchi, a reconnaisance, Horn 21, I have never seen. *Chapqalash* I have already referred to (ante, p 233); *Turk-tāzī* (Turk-galloping) was an expression for hard or expeditious riding. The words *Uimāq* or *Aimāq*, Horn, 21, Blochmann *Āīn*, i, 371, note, were not in use in the later period.

Sipāhī-i-fālez. This phrase, literally "soldiers of the melon bed", has often puzzled me. It is used as a description of a defeated, non-resisting body of troops. Presumably the metaphor means that in such a case their heads are as easily cut off as melons can be gathered from a melon-bed. Mirzā Ḥaidar (Ross and Elias, 323) puts words something like it into the mouth of a prince, looking on at a review of raw undisciplined troops: "with such a troop as this it would be dangerous to try and rob a kitchen-garden (*pālīz*)".

Defeat. In case of a reverse the heavy guns were generally abandoned, as they could not be removed. We are told that in such cases they were spiked and rendered useless (Blacker, "War", 128) One instance where this was done was at Gūlkandah in 1097 H. (1685-6) by ʿĀlamgīr, Khāfī Khān, ii, 355, last line, *mīkh zadah nābūd sākhtand*. Generally, on the retreat of an Indian army, so great was the dispersion that some days elapsed before the direction

of flight taken by the principal body could be ascertained. There were no dispositions taken to cover its escape, no stratagems to mask its route, cover its baggage, gain an advance, lay an ambuscade, or mislead a pursuer. All impediments to flight were successively abandoned, and a retreat became a *sauve qui peut*. This result is attributable partly to the want of discipline and to defective leadership, which leaves every individual to rely more on himself than on his commander (Blacker, "War", 162).

Jūhar. This well-known Hindū practice of killing women and children to prevent their falling into the enemy's hand was once, I find, proposed for adoption by a small body of Mughals under Khwājah Asa'd Khān (son of Mubāriz Khān), when surrounded by an overwhelming body of Mahrattahs (*Aḥwāl-i-khawāqīn*, fol. 194*a*).

Proclamation of Victory, Horn, 109. When the day was won, the victor ordered his drums to strike up and his horns to blow, both to announce the victory to his own side and to produce further disheartenment among his opponents. Sometimes, to re-animate the drooping energies of his men, a general would order his drums to beat as for a victory, in the hope that they would be cheated into the belief that the day was going favourably for them, and thus inspirited, might turn an imagined into a real success.

Pillars of heads. It was the custom for a subordinate commander to accompany his despatch announcing any success with as many heads of the slain as could be collected. This was a survival of the Central Asian practice of erecting a pillar or pyramid formed of the heads of the dead enemy. There are two cases in Budāonī, ii, 17, 169, Lowe, 10, 172. In 964 H. (1556-7) Akbar built a pyramid of heads at Pānīpat; again in 981 H. (1573-4) near Aḥmadābād, he did the same. There are also several instances of heads being sent in during the reigns of 'Ālamgīr and Bahādur Shāh. For example, Dānishmand Khān tells us, entry of 18th Ramaẓān 1119 H., 12th Dec. 1707, that an

imperial officer, after taking the Jāṭ fort of Sansanī, near Mathurā, sent in one thousand heads in ten carts, along with the weapons taken. Nicolāo Manucci also speaks, Phillipps 1945, Part i, p. 85, of having seen piles of heads, once as many as ten thousand heads; and in his many journeys between Āgrah and Dihlī (1656—1680), he always saw fresh heads in the niches made for them on the pillars. In 1122 H. (1711) Mhd Amīn Khān, when announcing the capture of Sihrind, sent in six cart-loads of heads, and reported that the rest had been built into a pillar (*mināṛ*), Kām Rāj, *ʿIbrat-nāmah*, fol. 43*b* Again in 1715, in Farrukhsīyar's reign, between two and three hundred heads carried on poles graced the triumphal entry into Dihlī of the victors of Gurdāspur. And, according to the *Akhbār-i-Muhabbat*, fol. 279, pillars of heads were constructed by Jaʿfar Khān in 1124 H. (1712) on the edge of the high road to Hindustān, just outside Murshidābād, after he had defeated Rashīd Khān. Ashob, fol. 111*b*, speaks of Saʿādat Khān Burhān-ul-mulk sending to Court the heads of the slain after his defeat of Bhagwant Singh, Khīchar, in 1148 H (Oct. 1735) Abdullah Khān, Fīrūz Jang, who died in 1054 H., 1644-5, boasted, according to the *Maṛāsir-ul-umarā* ii, 788, that he had cut off 200,000 heads, and all the way from Āgrah to Paṭnah had built pillars with them.

CHAPTER XXII.

PARTICULAR BATTLES, STRATAGEMS, LOSSES.

Dr. Horn devotes many pages (71—105) to reproducing detailed battle pieces. These comprise Bābar's first battle at Pānīpat, 21st April 1526, Bābar's battle against Rānā Sangā, 16th March 1527, Akbar's battle at Pānīpat, 5th Nov. 1556, the battle at Korah between Shāh Shujāᶜ and ᶜĀlamgīr, 3rd Jan. 1659, and the taking of a mountain pass near Ajmer. Most of these serve more as specimens of style than as plain and direct reports of what happened at these actions. All of them, except Bābar's own description of the battle of the 21st April 1526, are written in that deplorably inflated, rhetorical style, of which Persian and Indian writers are so proud, where sense is drowned in sound and plain facts are buried under far-fetched metaphor. Such turgid stuff reduces the translator to despair and engenders disgust in the European reader. As will have been noticed, Dr. Horn brings his specimens no further down than the first year of ᶜĀlamgīr's reign. There was much fighting in the rest of that reign and in the following reigns, and from the later historians it would be possible to put together accounts of many other battles. I may instance those of Jājau (1707), Āgrah (1712), Ḥasanpur (1720).

For the first of these recourse might be had to Niᶜamat Khān (afterwards Dānishmand Khān), poetically Āᶜlī. This well known poet and literary man, who died 30th Rabiᶜ i, 1122 H., 28th May 1710, was appointed historiographer

by Bahādur Shāh, and has left two descriptions of the battle at Jājau, in which his patron defeated a brother, Aʿzam Shāh, and obtained the throne. That in the *Bahādur Shāh-nāmah* is the simpler; the other, a separate work known as the *Jang-nāmah*, is written in the florid, full-blown manner which was considered requisite for such show pieces. It is a very clever performance; an admirable specimen of a detestable *genre*. The proportion of bread to sack may be known from the fact that when, after transcribing the whole piece, I proceeded to make an excerpt of the bare facts, I found that they occupied only one-fifth of the original space.

Following Dr. Horn's example, I will give a description of the battle of Ḥasanpur, fought on the 13th Nov. 1720. On the 28th Sept. 1719, Muḥammad Shāh had been raised to the throne at Āgrah by the two Sayyad brothers, ʿAbdullāh Khān and Ḥusain ʿAlī Khān. Shortly afterwards (8th Oct. 1720), with Muhammad Shāh's tacit approval, the younger brother was assassinated. ʿAbdullah Khān thereupon raised another scion of the royal house, Prince Ibrāhīm, to the throne, and marched from Dihlī against Muḥammad Shāh, who was coming from the south-east. Just before the decisive battle, the emperor's head-quarters were at Ḥasanpur, those of ʿAbdullah Khān about six miles further north. at Bilūchpur. Both places are between Mathurā and Dihlī, on the right bank of the Jamnah, in parganah Palwal. The authorities on which the following description is founded are 1) Kāmwar Khān, 2) Shiū Dās, 3) Khāfī Khān, 4) Mḥd Qāsim, Lāhorī, 5) Mḥd Shafīʿ, Wārid, 6) Khwājah ʿAbd-ul-Karīm, Kashmīrī, and 7) Mḥd ʿUmr, son of Khiẓr Khān.

The Battle of Ḥasanpur. Early in the morning of Wednesday the 13th Muḥarram 1133 H. (13th Nov. 1720), before the sun rose, Muḥammad Shāh mounted his elephant, Pādshāh Pasand, and took his place in the centre. Ḥaidar Qulī Khān was sent on ahead with the strong artillery

force under his command [1]; while Khān Daurān and Sābit Khān were ordered to follow and support him with the left wing. Muhammad Khān, Bangash, and Saʿādat Khān were sent towards the river and the rear. Round his Majesty's person were the new wazīr, Muḥammad Amīn Khān, and his son, Qamr-ud-dīn Khān, Dil Daler Khān, Sher Afkan Khān, Hizbar Khān and others. Zafar Khān, Fakhr-ud-dīn Khān, his brother, Rājah Bahādur of Kishngarh, Nuṣrat Yār Khān, Jag Rām (Jai Singh's *diwān*) ʿAzīz Khān, Mīr Mushrif, and Rājah Gopāl Singh, Bhadauriyah, were placed in charge of the main camp, which was at a distance of one kos from the position taken up by the emperor. The prisoner, Ratn Chand, dīwan of ʿAbdullah Khān, was now sent for. He was brought before the emperor on an elephant, he was there made to dismount, and was at once executed The severed head was thrown before the emperor's elephant and trodden under foot.

[1] If we are to interpret Khūshhāl Chand literally, Berlin Ms 495, fol 1014*b*, Haidar Qulī Khān used a telescope to make out the enemy's position He says H. Q. K. at a distance of one *farsakh* (3 miles) saw the enemy s army by the eye of a *dūr-bīn* (telescope) Or is it only his "farseeing eye" (*chashm-i-dūrbīn*)? A late writer (c 1790) Rustam ʿAlī, Bijnorī, in his "History of the Rohelahs", fol 52*b*, states that at the battle of Panīpat in January 1761, Ahmad Shāh, Durrānī, used a telescope (*dūr-bīn*) to watch the movements of the Mahrattahs As he was writing thirty years after the event, I do not know whether he is to be relied on for such a detail Also in the *Husain Shāhī* of Imām-ud-dīn Chīstī, fol. 65*b*, we have mention of the field telescope as used by Taimur Shāh, son of Aḥmad Shāh, Abdālī "The king mounted his elephant and slowly inspected the army. From time to time he raised his telescope to his eye" (*qarīb-i-chasm-i-mubārik ǵuzāsht*) This telescope produced unexpected results for some of the commanders they received a severe beating from the sticks of the *nasaqchis* sent to them. A learned man standing by the king, puzzled by this infliction of punishment, asked what it meant Taimūr Shāh replied "Through my telescope I saw that these commanders were seated under the shade of their horses, while the men of their regiments were exposed to the full heat of the sun Tomorrow I will give them robes of honour to console them".

Churā Jāṭ, who was hovering near the army on the west, cut off many followers and penetrated into the camp. But the above-named Rājahs drove him out again. Next the Jāṭs attacked on the south, whence they carried off some goods and part of the imperial property. Zafar Khān, Muzaffar Khān and Muḥammad Khān, Bangash, once more repelled them. They then made a further attempt on the east side. Here Mīr Mushrif and ʿAlwī Khān, Tarīn, of Lakhnau, met and defeated them But the uproar was very great, and the camp followers and traders were so frightened, that they jumped into the Jamnah and tried to swim across it, many losing their lives in the attempt. By three o'clock the baggage camp was moved to a safer place, and the confusion continuing, it was again moved still farther off.

When Najm-ud-dīn ʿAlī Khān at the head of the Sayyad vanguard, appeared in the distance from the direction of the river, Ḥaidar Qulī Khān, the imperial Mīr Ātash, moved out his heavy cannon into the open, and encountered the advancing enemy with a storm of balls from them and his field-pieces. The fire was so continuous and heavy that the artillery of the other side was silenced. After every volley Ḥaidar Qulī Khān urged on his men by lavish gifts of gold and silver As the artillery advanced, the rest of the army followed and occupied the ground Stimulated by their commander's liberality, the gunners worked zealously, and a second set of guns were loaded by the time the first were discharged. Khān Daurān's troops moved in support of the imperial artillery, Sanjār Khān and Dost ʿAlī Khān, in command of that noble's guns, particularly distinguishing themselves. The latter was wounded in the foot. Sayyad Nuṣrat Yār Khān and Sābit Khān also took a leading part, while Saʿādat Khān and Muḥammad Khān, Bangash, created a diversion on the left. During the day a rocket fell on Sayyad ʿAbdullah Khān's powder-magazine, exploding it and causing much loss of life.

Throughout the day of the 13th, the battle was chiefly one of artillery. The brunt of the fighting on ʿAbdullah Khān's side was borne by his brother, Najm-ud-dīn ʿAlī Khān, who commanded his vanguard. Originally the Sayyads had intended to rely on a general onset. But Rājah Muḥkam Singh, who had deserted from the imperialists, dissuaded them, pointing out that to charge down on such a powerful artillery as the other side possessed, would be to expose themselves to destruction. Their own small supply of guns ought, he said, to be entrenched in a good position on the edge of some ravine, and there they could await the favour of events. Although Muḥkam Singh had acquired in the Dakhin the highest reputation as a soldier, his advice was not adopted. The Sayyads' artillery was placed on a high mound, under the shelter of some trees, near a deserted village, and it tried to reply to the other side's fire to the extent of its ability. In the field, the usual scattered fighting, charging and counter-charging, went on all day, and at one time it looked as if the imperialists would give way. But Khān Daurān, Sayyad Nuṣrat Yār Khān, Sābit Khān, Dost ʿAlī Khān, Sayyad Ḥāmid Khān and Asad ʿAlī Khān by redoubled exertions prevented a catastrophe. In the end, some of the Sayyads' field pieces were taken, and they were ejected from their sheltered position among the trees. Najm-ud-dīn ʿAlī Khān was wounded by an arrow near the eye [1], and a ball from a swivel-gun struck him on the knee. Among the chiefs who lost their lives were Shekh Ṣibghatullah of Lakhnau, three sons, and seventy-five of his men, ʿAbd-ul-Qādir Khān, Thathawī, (nephew of Qāẓī Mīr, Bahādur Shāhī), ʿAbd-ul-Ghanī Khān (son of ʿAbd-ur-Raḥīm Khān, ʿĀlamgīrī), Ghulām Muḥī-ud-dīn Khān, and the son of Shujāʿ Khān, Palwalī. Many soldiers also were slain.

[1] He lost his eye from this wound, and the glass ball by which he replaced it was a subject of wonder to the common people for the rest of his life, (*Maʾāsir-ul-umarā*, ii, 508).

ʿAbdullah Khān had decided to single out for attack the force under Sayyad Nuṣrat Yār Khān, who had command of the advanced guard near the emperor. Against this man the Sayyads had a special grudge, because he, one of their own clan and a relation, had sided against them. Having swept him on one side, ʿAbdullah Khān hoped to be able to push on to Muhammad Shāh's centre (*qalb*). First of all, he tried to make his way to his objective from his own left, but found the river such an obstacle, that he changed his direction and moved across his front to the right of his own army. As soon as the movement was detected, reinforcements were sent for by Muhammad Shāh, the centre having been left very weak. The generals who were thus summoned objected to quit their posts. The imperial artillery present with the emperor's division was then despatched towards the river to bar the way, and part of the vanguard was also transferred to the same point.

Unfortunately the change in ʿAbdullah Khan's line of advance resulted in his being drawn away from the river bank, and thus his main position was now some miles from the water side. The battle had continued till the afternoon, and so far ʿAbdullah Khān showed no signs of discouragement. But his men, more especially the new levies became uneasy, and soon lost their heads completely. On pretence of watering their horses and camels, they rode off towards the river, only to find their opponents in possession of the banks. Group after group, on the pretext of getting water, left the standard. These desertions continued until the night fell; and all night long, from the camp to Bārah pulah just outside Dihlī, the road was encumbered with fugitives. At night-fall there were not more than a few thousands left of the huge host that had set out from Dihli a few days before.

At first ʿAbdullah Khān had ordered a small tent to be put up for the night where he stood, but countermanded

it, when he reflected that it would be a target for the enemy's fire. The night was a moonlight one, and the imperial artillery never ceased its fire. If any man stirred in the Sayyad position or showed himself, a gun was at once pointed in that direction and discharged; and from time to time the guns were dragged forward, the oxen being harnessed to the muzzle instead of, as usual, to the breach end of the gun. Among the guns in use were those named Ghāzī Khān and Shāh Pasand. These heavy guns were fired oftener than had ever been done before in the recollection of the oldest man Ḥaidar Qulī Khān kept up the energy of his men by continual gifts, ʿAbdullah Khān's continued to make off in small parties. Muhammad Shāh passed the night seated on his elephant so near the vanguard as to be under fire

When day dawned on the 14th Muharram (14th Nov. 1720), Abdullah Khān found his army reduced to a few of his relations and his veteran troops. They were altogether not more than one thousand horsemen; with these he continued the fight to the best of his power. Najm-ud-dīn ʿAlī Khān and Saif-ud-dīn ʿAlī Khān, the wazīr's younger brothers, Sayyad Afzal Khān, High Almoner (*Ṣadar-uṣ-ṣadūr*), Rāe Tek Chand, a Bālu Khatrī, his chief officer, Ghāzī-ud-dīn Khān (Ahmad Beg), Nawāb Allahyār Khān, Shāhjahānī, and Rūhullah Khān were found among these faithful few, who had passed a sleepless night on their elephants, having seen neither food nor water for many hours. Access to the river-side was blocked by the Jāṭs, who plundered impartially friend and foe. As dawn was drawing near, a ball struck the seat upon Muḥkam Singh's elephant. The Rājah got down, mounted his horse, and galloped off, for many years it was not known whether he was alive or dead.

Early in the morning, returning to his plan of the previous day, ʿAbdullah Khān, joined by Najm-ud-dīn ʿAlī Khān and many Bārhah chiefs, again delivered an attack,

in the hope of reaching the emperor's centre. The imperial left opposed a stout resistance to this onset, and at length the Sayyads dismounted to continue the fight on foot at close quarters. Shahāmat Khān and his son, Fath Muhammad Khān, Taḥavvar ʿAlī Khān (better known as Bahādur ʿAlī Khān), and many others on the Sayyads' side were slain. Darvesh ʿAlī Khān, head of Khān Daurān's artillery, was killed; Dost ʿAlī Khān and Nuṣrat Yār Khān were severely wounded. Saʿādat Khān and Sher Afkan Khān were also prominent in this encounter. ʿAbd-un-Nabi Khān and Māyah Rām, two of Ḥaidar Qulī Khān's officers, and Mḥd Jaʿfar (grandson of Ḥusain Khān) were the only other men of name who lost their lives on the imperial side.

After a time the men of Khān Daurān, Ḥaidar Qulī Khān, Saʿādat Khān and Muhammad Khān, Bangash, surrounded the ex-wazīr, and an arrow struck him on the forehead, inflicting a skin wound. The soldiers then tried to make him a prisoner. But, clad although he was in chain-mail, he leapt to the ground sword in hand, with the intention of fighting to the death In spite of their knowing his practice of fighting on foot at the crisis of a battle, the ex-wazīr's troops, when they saw his elephant without a rider, imagined that their leader must have fled, and each man began to think of his own safety Then Tāh ʿYār Khān charged at the head of his men, and cut down Shekh Nathū, commanding ʿAbdullah Khān's artillery; the Rājputs, coming up, took possession of the Shekh's body, and carried it to the imperial camp. Najm-ud-dīn ʿAlī Khān and Ghāzī-ud-dīn Khān did their best to rally their men, but no one paid them any heed. Shujāʿat-ullah Khān, Zulfiqār ʿAlī Khān, and ʿAbdullah Khān, Tarīn, fled. Even Saif-ud-dīn ʿAlī Khān, the ex-wazīr's brother, thought the day was lost, and left the field along with two or three hundred men, taking with him Prince Ibrāhīm, who abandoned his elephant and mounted a horse. His elephant

and imperial umbrella were afterwards found, and taken by Muḥammad Shāh's men The feebleness of the defence would be fully proved, if we believe, as Wārid tells us, that after two days' fighting, only forty men were left dead on the field.

Najm-ud-dīn ʿAlī Khān, a drawn sword in his hand, rode on to enquire after and search for his brother. He found ʿAbdullah Khān standing on the ground quite alone, and although wounded in the hand, still fighting like a lion, while on every side the crowd of assailants grew greater every minute. Still not one of them had the courage to lay hands upon him; one of Khān Daurān's men had wounded him on a finger of the right hand, but the Nawāb returned the blow by a cut, which struck the man's leg and his horse's shoulder. Najm-ud-dīn ʿAlī Khān dismounted from his elephant and joined his brother. ʿAbdullah Khān called out to him "Behold the inconstancy of Fortune, and the end of all earthly greatness!", adding a verse of Saʿdī, Shīrāzī, fitting to the occasion [1]. Ḥaidar Qulī Khān, who had noticed that the howdah of ʿAbdullah Khān's elephant was empty, made enquiries, and was informed by one of his soldiers that the Nawāb was on foot and wounded. Coming up at once with a led elephant, Ḥaidar Qulī Khān addressed the Sayyad, in the humblest manner, with words of praise and flattery. "Was he not a well-wisher, and was not his life one with his? Except to set forth for the presence of the emperor, what course was there left?" Najm-ud-dīn ʿAlī Khān made a movement to cut the speaker down, but ʿAbdullah Khān held his

[1] Khiẓr Khān, who took part in the battle as one of the Sayyad army, was near enough to know that ʿAbdullah Khān called out, but from the uproar could not hear his words. Some years afterwards (1138 H) he met at Mathurā, Najm-ud-dīn ʿAlī Khān, then on his way to Ahmadābād, and obtained from him the details in the text. Khāfī Khān, ii, 933, on the contrary, makes out that A. K. claimed *aman* (safety for life) by announcing himself as a Sayyad

brother back. Then, with a haughty and dignified air, he took Najm-ud-dīn ʿAlī Khān's hand and mounted the elephant. Ḥaidar Qulī Khān followed on his own elephant, and conducted his prisoners to the emperor, Muḥammad Shāh.

His hands bound together by Ḥaidar Qulī Khān's shawl, ʿAbdullah Khān was brought before Muhammad Shāh. Saluting him with a "Peace be upon you", the emperor said "Sayyad! you have yourself brought your affairs to this extremity". Overcome with the disgrace, ʿAbdullah Khān answered only "It is God's will". Muhammad Amīn Khān, unable to contain himself, leapt from the ground with joy, and exclaimed "Let this traitor to his salt be confided to this ancient servitor". But Khān Daurān, in respectful terms, intervened. "Never! never! Make not the Sayyad over to Muhammad Amīn Khān, for he will at once slay him in an ignominious manner, and such a deed is inadvisable. What did Farrukhsīyar gain by the murder of Zu,lfiqār Khān? Let him remain with Ḥaidar Qulī Khān, or be made over to the emperor's own servants". The prisoner was accordingly made over to Ḥaidar Qulī Khān, along with Najm-ud-dīn ʿAlī Khān, his brother, whose wounds were so severe that he was not expected to recover. Ḥāmid Khān, Turānī, was also taken a prisoner and brought, bare-headed and bare-footed, before his cousin, Muḥammad Amīn Khān, and Khān Daurān. The wazīr calmed his fears and assured him of being tenderly dealt with. There were many other prisoners, among them the chief being Sayyad ʿAlī Khān, (brother of Abu,l Muhsin Khān, Bakhshī) and ʿAbd-un-nabī Khān.

On the Sayyads' side the entrenchments were held and the fight maintained by Ghāzī-ud-dīn Khān and others for nearly an hour after the capture of ʿAbdullah Khān. When at length they were satisfied that the day was lost, they desisted. Ghāzi-ud-dīn Khān with such baggage as

could be saved, followed by Allahyār Khān and many others, moved off and marched straight for Dihlī; while the Bārhah Sayyads endeavoured to cross the Jamnah, in order to make their way to their homes. Saif-ud-dīn ʿAlī Khān had brought Prince Ibrāhīm off the field of battle, but owing to the entire absence of carriage, was obliged to leave him in the orchard of Qutb-ud-dīn Khān close to the village of Nekpur. Saif-ud-dīn ʿAlī Khān went home to Jānsaṭh, sending Bāqir ʿAlī Khān and Khiẓr Khān to Dihlī to bring away the Sayyad women and dependents These messengers reached the capital before the emperor, and carried off the ladies and children to the Sayyads' country

To return to the field of battle. The Moghul soldiery, as their custom was, took to plundering, and appropriated to themselves whatever horses, camels, mules, and cattle fell into their hands Churāman Jāt followed suit, and plundering both sides with strict impartiality, made off with his booty to his own country. Among his spoils were over one thousand baggage oxen and camels, which had been left negligently on a high sandy mound close to the river, several camel-loads of goods meant for charitable distribution, and the records of the Grand Almoner's department.

Reports of Battles. Somewhat in the same way that after a battle a modern general sends off a despatch to his superiors, a Moghul commander prepared and submitted a report (*ʿarẓah-dāsht*) to the emperor. Often he also drew up a separate description of the fight for distribution to his friends and equals. These latter papers were styled *tūmār*, or roll, (a word which had another technical signification in the finance department). If the emperor was especially satisfied with any general, he gave orders that the victory should be recorded in the imperial diary of proceedings (the *wāqiʿah*), equivalent to our gazette. Many specimens of battle reports sent in from Bundelkhand by Muḥammad Khān, Bangash, will be found in Ṣāḥib Rāe's *Khujistah Kalām*; and the same work contains a *tūmār*

circulated by Nizām-ul-mulk after his victory over Sayyad Dilāwar ᶜAlī Khān, Rājah Bhīm Singh, Hāḍā, and others

Stratagems of War. Dr. Horn, 70, states that deceit and stratagem did not play a leading part in Moghul warfare. This may be so, still they were not unknown. Of a character similar to the pretended desertion, in order to obtain information of the enemy's plans and strength, which was employed by Rūmī Khān at Chunār in 1538 (Horn, 71, quoting Erskine, ii, 140, note), is a plot put into execution once by Nizām-ul-mulk. In the middle of 1720, when about to fight for supremacy in the Dakhin against Sayyad ᶜĀlim ᶜAlī Khān, governor of Aurangābād, he arranged with one of his principal officers that a fictitious dispute about pay should be raised, that the officer should behave disrespectfully, and after receiving his money, should desert to ᶜĀlim ᶜAlī Khān's camp. So said, so done After an altercation, Nizām-ul-mulk paid the man and let him go. When he reached the Sayyad's camp, this officer was received with honour and taken into the Sayyad's service. But on the day of battle, as secretly agreed on with Nizām-ul-mulk, the deserter turned his men traitorously on ᶜĀlim ᶜAlī Khān's rear, and bringing him under two fires contributed materially to his defeat (Shiū Dās, fol. 42*b*).

Ambush (*ba kamīn-gāh nishistan*) was not an uncommon stratagem. Matchlockmen were hidden in high crops, or on the edge of a ravine, at a spot where the opposite leaders would most probably pass. At the proper moment a volley would be discharged, and occasionally with deadly effect. It was in this manner that Qāim Khān, nawāb of Farrukhābād, and many of his chief officers lost their lives on the 12th Zu,l Ḥijjah, 1162 H. (22nd Nov. 1749), see J. A. S. B for 1878, p. 381. An ambush was not unfrequently supplemented by pretended flight, so arranged as to draw the pursuers on and bring them under fire. We have an instance of this in Nizām-ul-mulk's fight with Sayyad Dilāwar ᶜAlī Khān in Barār on the 19th June 1720.

Between the two forces there were deep ravines, where a large army could have been effectually concealed. Nizām-ul-mulk sent out his guns and placed them in position, so as to command from both sides the only road across this ravine. His advanced guard was concealed in the hollows on each side. Then two or three men, closely resembling the Nawāb in beard and features and age were dressed up, placed on elephants, and sent out to represent Nizām-ul-mulk at the head of his main body, which showed itself in front of the entrance to the ravine. Dilāwar ʿAlī Khān's men came straight at their foe, and were drawn on and on by a simulated retreat. Anxious to slay or capture the opposite leader, who as they believed was in command, they pursued steadily, disposing on their way of several pretended Nizām-ul-mulks. When Sayyad Sher Khān at length brought his elephant close to that of ʿIwaẓ Khān, the Moghul by a sign caused his elephant to kneel, and by this trick, escaped with his life. When the ravine was reached, the guns did their work; and their leaders being killed, the rest of Dilāwar ʿAlī Khān's army dispersed (Shiū Dās, 37*b*, M. Qāsim Lāhorī, 314, *Tārikh-i-muzaffarī*, fol. 183).

This device of having "six Richmonds in the field" was not unusual, it having been put in practice against us in our own early fighting in the Dakhin (R. O. Cambridge, "War", Introd. xi). It was also resorted to earlier in the century by Saʿādat Khān, Burhān-ul-mulk, founder of the Audh family. The Khīchar zamīndārs of parganah Ghāzīpur in *sirkār* Korah, *ṣūbah* Allahābad, had long given trouble to the imperial officers, although several ineffectual attempts had been made to reduce them to order. At length, the *Sirkār* was made over to Burhān-ul-mulk; and on the 10th Jamādī ii, 1148 H. (27th Oct. 1735) that noble while on his way from Audh to Dihlī, undertook to eject the then zamīndār, Bhagwant Singh, son of Udārū. When the contending parties came face to face, a servant, clad in

rich robes belonging to the Nawāb, was placed upon the Nawāb's elephant. Burhān-ul-mulk took his seat upon another. Several fierce attacks on the suppositious Nawāb were repelled successfully. Finally, the Rājput chief gathered together some seven hundred men, and fully resolved on death or victory, made his way to the centre of the Mahomedan army, which he reached at the head of only forty to fifty men. Then, with not more than seven or eight men left, he arrived close to the leader's elephant. Bhagwant Singh knew the Nawāb's attire, and thought he was in presence of Burhān-ul-mulk himself. Before the Mahomedans could attempt a rescue, he pulled the supposed leader out of his high-sided seat (*ʿimārī*) and slew him, with rejoicings at having successfully carried out his enterprize. But Burhān-ul-mulk, who had stood aloof, now ordered one of his officers to advance with five hundred men, and in a few moments Bhagwant Singh was slain. The body was skinned and the skin filled with straw: then, with its head and that of the rebel's son, it was sent to Dihli, where in Shaʿbān of the same year Rustam ʿAlī, Shāhābādī, saw them hanging in the main street, near the chief police office (*Nādir-uz-zamānī*, B.M. Or. 1844, fol. 152*a*, 152*b*, and Rustam ʿAlī, fol 268*b*).

When a leader took to flight on his elephant, it was not unusual for him to change places with the driver in order to escape molestation in case of pursuit and capture (Fitzclarence, 133).

Night surprizes (*shab-khūn*, night-blood, or *shab-gīr*, night-seizing) were also a form of stratagem not unfrequently employed It was in this way that Aḥmad Khān, Bangash, on the 1st August 1750, attacked and overcame the superior force of Naval Rāe on the bank of the Kāli-nadī river near Khudāganj (13 miles east of Farrukhābād) The Pathāns started during heavy rain at three hours after sunset, and avoiding by a long detour the front of Naval Rāe's position, they got round to his rear near the river

An hour and a half before sunrise, when it was so dark that you could not tell friend from foe, the attack was delivered. Naval Rāe's guns were fired at random and did no execution, he was killed, and his troops dispersed.

Statistics of Losses. Dr. Horn devotes one section of his work (xiii, pp. 113—115) to the subject of losses in battle. Here again, as in the question of the total number present, or the strength of particular divisions, I agree with him that to obtain any idea of the numbers of killed or wounded is exceedingly difficult, historians either omitting to mention them, or if they do so, contradicting each other irreconcilably. After a battle no attempts were made to ascertain the losses or count the slain. Any statements that we may meet with are thus mere guesses, and we may be quite certain that they are much exaggerated for the defeated, and much diminished for the victorious army. From these causes such statements are quite worthless, and can form no basis for the calculation of percentages, or such-like strict arithmetical treatment. Incidentally, we learn from passing allusions the severity of the losses in a battle, or the number of the slain in some special group of those who were present. Thus, after the battle of Jājau, fought on the 18th June 1707, we are told that the defeated fugitives made off towards Gwāliyār "and so many lost their lives on the way at the hands of Jāṭ plunderers and the Rohelahs of Dholpur, that the ravines leading to the Chambal were encumbered with decaying bodies" (Kāmwar Khān). Another writer, Khūshhāl Chand, fol. 373*a*, tells us that the loss on both sides in this battle is said to have amounted to ten thousand men. As to losses among a particular group, or of men from one town, we have an instance in the *Tabṣīrat-un-nāzirīn* of Sayyad Muḥammad, Bilgrāmī, who informs us, under the year 1163 H., that thirty seven men from Bilgrām lost their lives on Naval Rāe's side, when he was attacked by Aḥmad Khān, Bangash, near Khudāganj. Scattered notices of this sort might be

collected. But of what value would they be? They might enable us to say whether the fighting had been severe or not. But as we do not know the total strength and have only vague accounts of the losses, how can any minute calculations be made? The figures, such as they are, for nine battles in the time of Bābar and Akbar will be found collected in a table on p. 115 of Dr. Horn's essay. De la Flotte, i, 258, who knew something of the south of India between 1758 and 1760, is of opinion that battles were much less bloody than in Europe.

Slain and wounded. Plundering of the slain and wounded seems to have been universal, the camp followers were those chiefly concerned, but the fighting men were not above lending a hand. In reading the memoir of Colonel Skinner's life, a man half Indian by blood and wholly so by education, one is struck with his exultation over a piece of valuable plunder, and his obvious belief that it was a legitimate source of income. The dead bodies left on a field of battle do not seem to have been usually buried, they were left to lie as they fell; but once or twice we are told of their being collected in great pits, which were styled *ganj-i-shahīd*, or martyr store-houses. For an instance, see Rustam ʿAlī, *Tārīkh-i-Hindī*, fol. 217*b*. The wounded seem to have been left mostly to their fate; there was no organization for their succour, nor any attempt to heal their wounds; this was left to their relations or friends.

CHAPTER XXIII.

FORTS AND STRONGHOLDS

As early as Alexander's time the Indians possessed walled and fortified towns (Mc Crindle, *Invasion of India*, 119). The practice of building such strong places was never abandoned, and by the sixteenth century, when the Moghul rule began, petty forts held by chiefs of Hindu clans or by grantees from Mahomedan sovereigns, were scattered thickly over the country. Speaking of the Mahratta territory at the end of the 18th century, Colonel Blacker, 305, believed that no province of the same extent in India, or perhaps in any part of the world, possessed so many fortressess.

In the plains of the Ganges and Indus, these forts were usually placed on an artificial mound, the earth for which was taken from the foot of the site, thus forming on one or more sides a large pond or marsh, which protected the fort from a sudden attack. As a rule these forts consisted of four high walls, enclosing a rectangular space; they were provided with a bastion or tower at each corner; and had a fortified gate on one side, the entrance lane turning several times at right angles before arriving at the interior of the place. This narrow tortuous entrance lane was generally enfiladed with guns and loop-holed on every side. These gates with their intricate passages are well described by R. Orme ("Mil. Trans." i, 320, Trichinoply), and in the south of India generally by Lake, "Sieges", 56, who considered the gateways the strongest part of the Indian forts. The outer walls were generally of clay and very thick: they were loop-holed for musketry, round

earthen-ware pipes being inserted in the walls for this purpose (Fitzclarence, 245, Orme, "Mil. Trans." ii, 203, 255). If the owner were lucky enough to have any wall-pieces, they would be mounted on the flat roofs of the houses built against the inside of the wall. These outer walls might be from twenty to thirty feet in height. Such a stronghold was safe against any small force, and with the means then in use, could hardly be reduced except by starvation. At the more important places they added one and sometimes two ditches, together with outworks, so as to render regular approaches necessary (E. Lake, "Sieges", 11). In hilly country and in the Dakhin the fortresses were of much more elaborate construction Of these I shall speak in a subsequent paragraph.

Bound Hedge. As an additional protection, such places were often surrounded by a thick plantation of thorny trees or an impenetrable screen of bambus. Some of the latter were of great depth and in the operations in Rohilkhand during the suppression of the Mutiny of 1857, our troops came across bambu hedges which a cannon ball was unable to penetrate. This was no new thing. For instance, Khushḥāl Chand, fol. 177*a*, tells us that when Muhammad Shāh came in 1158 H. (1745) to besiege ʿAlī Muhammad Khān, Rohelah, in Bangaṛh, he found "a great wilderness of bambūs round the fort, through which the wind even found its way with difficulty; quick-handed diggers and axemen were collected to cut this down and uproot it" Again, in 1805 we found Rāmpur in the same province surrounded by a bambu hedge thirty feet thick (Thorn, "War", 435). In the same way, it was in Bundelkhand the usual custom to protect a fort by a wide belt of thorny jungle; and in 1140 H. (1728) Muḥammad Khān, Bangash, when reporting to Dihlī his campaign there, speaks of these jungles as retarding his operations considerably.

Going to an entirely different part of India, we find that the town adjoining the fortress of Aḥmadnagar in

the Dakhin had inside a low wall an immense prickly-pear hedge about twenty feet high. No human being could pass it without cutting it down, a work of the utmost difficulty, as it presented on every side the strongest and most pointed thorns imaginable. Being full of sap, fire would not act upon it, and an assailant while employed in clearing it, would be exposed to the enemy's matchlocks from behind it; thus it was stronger than any *abbatis* or other barrier (Fitzclarence 241). We find another good instance of the adoption of these protective belts of jungle in the case of Bobili, 140 miles N. E. of Vizagapatnam, which was attacked by Bussy in 1757: "An area of five hundred yards or more in every direction is preserved clear, of which the circumference joins the high wood, which is kept thick, three or four miles in breadth, around this centre. Few of these forts admit more than one path through the wood..... The path admits only three men abreast, winds continually, is everywhere commanded by breast-works in the thicket, and has in its course several redoubts, similar to that at the entrance, and like that flanked by breast-works on each hand" (R. Orme "Mil. Trans.", ii, 256) In early Anglo-Indian writers, for instance Wilks, iii, 217, such plantations are styled a "bound-hedge", of which definitions will be found in the glossaries of Major Dirom's and Lieut. Moor's works. "Bound-hedge" = *quasi* "Boundary hedge"?

Hill Forts. In the parts of India where detached eminences, often of great extent, are found, these were commonly selected for the sites of fortresses. The most celebrated of these in Northern India were the two forts of Ruhtās, one in the Panjāb, the other in Bahār, Kālinjar in Bundelkhand, Chitor in Mewār. Further south there were Asīrgaṛh in Khāndesh, Daulatābād[1] near Aurangābād, and many others equally celebrated. Forts on the tops of

[1] There is a good view of this fortress as the frontispiece to Fitzclarence's "Journal".

hills were extremely numerous in the Dakhin. In that part of the country there was generally a walled town (or *pettah*) at the foot of the hill, and the fort itself was provided with two or more enceintes. In the Dakhin stone walls were common, that material being abundant. Lake, 205, is of opinion that many of these hill forts, if properly defended, were absolutely impregnable, unless by the tedious process of strict blockade. On the contrary, he thought the fortresses in the plains exceedingly weak (id. 208).

Places of Refuge. Most of the petty semi-independent princes were careful to provide themselves with some fort or place of safety, generally situated in a country difficult of access and at some distance from their capital. Here their reserves of treasure and munitions of war were stored and carefully guarded. Ranthambhūr used to furnish such a store-house for the rajahs of Jaipur; and as will be recollected, the rajahs of Banāras provided such places at Latīfpur and Bijigarh, in the hills south-east of Mirzāpur.

Walled Towns. In the western half of Northern India, walled towns were frequent; all the principal places being provided with a high brick wall. In that part of the country, even the smallest village was capable of some defence, the flat-roofed, clay-built huts being huddled very close together, and the only entry being through a few narrow, tortuous paths between the houses. Some of the largest towns had walls as well as fortresses, as for instance Lāhor and Dihlī. At these places the fortress was built in one corner of the town, a continuation of the town wall forming its outer side. Such strongholds were palace as well as fortress, and covered a considerable extent of ground. Other towns, such as Āgrah and Allahābād, although they possessed first-class fortresses, had no wall round the town itself. In their case, the fortress stood apart from the rest of the town.

Technical words. I insert here such technical terms connected with fortification as I have come across in my reading. The names for a fort were *ḥiṣār* (Steingass 421),

haṣīn (id 422), *qalʿah*, *qilʿah* (id 984), and H. *garh*. A small fort or redoubt was a *qalʿahchah* (Steingass, 985) or *garhī*. To be invested was *mahṣūr* or *mahṣūn shudan:* to invest was *mahāṣarah kardan*. The walls were collectively *bnrj o bārah*, the former word meaning a bastion, a tower, (Steingass, 170) and the latter, the curtain, the walls, fortifications (id. 142). The Central Asian word for the curtain of a fort was *badan*, see *Mujmil-ut-tārīkh baʿd Nādirīyah*, p. 79, line 13. The battlements were *kungur*, *kungurah*, (St. 1056); the ditch was *khandaq*. *Faṣīl* in the dictionary (St. 931) is defined as breastwork inside a fortification, an entrenchment, wall, rampart; but I believe that strictly speaking it meant the platform running round the inside of the wall, on which the guns were mounted, or from which the defenders fired. (J. Shak. 1494). It is apparently what Europeans call the *terre-plein* (Lake, 113, Voyle, 428). *Safīl* (Shak. 1292) was a vulgar form of the same word. Ashob, fol. 284*a*, speaks of the *Chhatah-i-qilaʿh* at Shāhjahānābād. I cannot find any meaning for this. Is it only *chhat*, the Hindī for roof? The word *khākrez* in *Mujmil-ut-tārīkh* baʿd *Nādirīyah*, p. 78, line 12, meaning "foot of the wall", "the glacis", does not seem to have been in use in India.

Goonga. I cannot restore the true form of this word, as I have not found it except in books by Europeans. Can it be intended for *kungur*, battlements? In the "Military Memoir of Col. Skinner", i, 230, we have at the taking of Hānsī in Dec. 1801, the passage: "we commenced mining, and advanced to within ten yards of the crown work, called in Hindustani *goongas*". On *id.*, 266, the word is spelt *goonju*: "these brave fellows stood upon the *goonjus* for a full hour, under one of the heaviest fires of musketry and great guns I have seen", (this was at the siege of ʿAlīgarh by Lake in 1803).

Kummurgah (*Kamrgāh*). I find this word used for the second line of defence at Asīrgarh in the Dakhin (Blacker,

"War", 420). This is a metaphorical use of *kamrgāh*, the place where the belt is placed, the waist (Steingass, 1049). As Lake explains, 156, "it has been aptly styled *kummurgah* (or the belt)".

Raunee, Rainee, Renny. Fitzclarence, 110, saw at Nāgpur "a fine piece of masoury" in front of and covering the bottom of the wall "which I suppose to be what is in this country called a *rainee*, similar to a fausse-braye" [1]. And again, *id.* 245: "though they do not understand the construction or advantages of a glacis, they saw the necessity of covering the foot of the wall from an enemy's fire, and formed a defence, similar to our fausse-braye, which they call *rainee*". Thorn, 400, speaking of Hāthras fort (now in the ʿAlīgaṛh district, N. W. P.) says "a *renny* wall, with a deep, dry, broad ditch behind it, surrounds the fort". James Skinner, "Mil. Mem.", i, 172, spells it *rounee*, and Fraser erroneously translates "counterscarp", being as Yule says "nonsense as well as incorrect". Blacker, "War", 299, writes "Sholapur had a fausse-braye of substantial masonry". I suppose this was a *rauni* or *rainee*. Such a wall is shown in his plan and sections of Malligām (Plate 31). This was about twenty feet high, and about fifty feet from the main wall. The word *raunee* is used by him on plate 38 (Asīrgaṛh); and here the secondary wall stood at the foot of a slope, about eighty feet from the main wall. The derivation of the word *rounee* is a puzzle: Yule, 583, says it is the Hindi word *raonī*, but suggests no etymology and admits that it is not in either Shakespear or Wilson. Can it have any connection with a word in J. Shakespear, 1189, *rūndhnā*, to surround or enclose as with a hedge? Fallon evidently did not know it, and in his "Eng. Hind Dictionary", 264 renders "fausse-braye" by *Dhus, Mattī kā pushtah*, equivalents which also show fairly well that he had no clear idea of what a fausse-braye was.

[1] Moor, "Narrative", (Glossary, 504) "Fausse-braye, a work between the ditch and curtain not much adopted by modern engineers" See also E. Lake, "Sieges", 219, and note.

Sang-andāz. Budāonī, ii, 146, uses this word when describing the fort of Sūrat. This is here evidently "embrasure", and so translated by Lowe, 150. Steingass, 703, has *sang-afkan* and *sang-andāz*, a loophole in a fortress. But a passage in the *Maāsir-ul-umarā*, i, 76, referring to the siege of Dhārwar in the Dakhin in Shāhjahān's reign, would lead one to infer that *sang-andāz* was a pathway or tunnel, down which stones were literally thrown.

Damāghah. When Sindh was taken by us, we found 'Karāchī surrounded by a tall wall, tipped with fancy crenelles and perpendicularly striped with what the Persians call *Damāgheh*, or nostril holes, down which the besieged could pour hot oil or boiling water" ("Life of Capt. Sir R. F. Burton", i, 126). Possibly the derivation might be from *damāghah* (Steingass, 534), the crest of a falcon or similar bird. We have an instance of the use of boiling oil at Akbar's siege of Asīrgarh (Von Noer, French trans., ii, 336, Horn, 128).

Descriptions of small Forts. I find a good description of a petty Rajah's fort in W. H. Russell's "My Diary in India", ii, 318. Although this was written in 1858, it is quite as applicable to an earlier time. "The low bank of earth was the outer parapet of the fort of Amethī (in south-east Audh), with a very deep ditch of irregular profile separating it from the level of the field. It was some time ere we made out the entry. The gateway was approached by a dam across a ditch full of water, which was dominated by a bastion with the embrasures directed upon the dam. A sort of causeway at the other bank led us to a high gateway in a mud curtain, which was also flanked by a musketry fire and by a few embrasures. The lines of all the works were exceedingly irregular. The gates were of wood, studded and clamped with iron".

Again, this time in Bundelkhand, we get the following description of the ordinary native fort (Fitzclarence, 59). "These forts are in general of mud, but from six to twelve

feet at the bottom of the wall are often of masonry. They are surrounded by a deep ditch, and the defences consist of small round-towers connected by curtains. Some of them have two or three lines of these walls and towers within each other. On the glacis are generally large excavations for grain; but this, of course, is only in dry situations. The mud walls receive the shot without being shattered, and they are in consequence very difficult to breach". A similar description applying to the southernmost part of India, is to be found in Wilks, ii, 95.

Blacker, "War", 229, gives a good general description of the small forts in the Dakhin. "Imagine a mound of earth of about one hundred and fifty yards diameter and about sixty or seventy feet high. Then the sides of this are scarped off by labour, and the prominent parts shaped into flanking towers. Let the whole be revêted and surmounted by a parapet, and then only an entrance will be wanted. A gateway pierced in the *revêtement* of a re-entering angle, something lower than the interior of the fort, will form the inner communication, and on each side will be projected a tower to flank it and to plunge a fire into the next (gateway?). This will be found in a lower wall, the extremities of which will terminate in the *revêtement* of the place, inclosing a small space; and it will be likewise flanked by projecting towers, independent of the defences being loop-holed. These works, it is evident, may be frequently repeated; and the form of the traverses as well as the relative position of the gates continually varied; but the general practice avoids placing two successive gates exactly opposite, and the outer aperture is invariably on lower ground than that next within, to favour the ascent. On some occasions so much earth may be scarped off as to form a high glacis, which makes the space left between it and the wall actually a ditch; but in very few cases is a ditch actually excavated round a garhi".

Particular Forts. I have collected from European writers

the descriptions of a good many Indian fortresses; and I have no doubt that many more such notices are in existence. I append a list of those I have seen, arranged in alphabetical order with references.

Aḥmadnagar. Fitzclarence, 241, a detailed account.

Ajaigaṛh. Fitzclarence, "Journal", 62; Pogson, "Boondelas", 136, in whose book a plan, a general view of the east face, and of the breach at the N. W. gateway may be seen.

ʿAlīgaṛh. Taken by the English on the 4th Sept., 1803: it was of European design. Thorn, "War", description on p. 102, view on plate 3.

Asīrgarh. Blacker, "War", a description on p. 414, two views, one from the north and one from the east, and on Plate 38 plan and sections.

Bhartpur. This town and its fortifications are described in Lord Combermere's "Memoirs". Vol ii, p. 236.

Chinglapat. Description by John Call, chief Engineer, Madras, in Cambridge, "War", appendix

Daulatābād. A detailed account in Fitzclarence, 216, and also in Anquetil Duperron, "Zend Avesta", I, ccli. Anquetil visited the place on the 18th April 1758, when it was held by a French officer on behalf of M. Bussy.

Dhārwar. A view and description in Moor, "Narrative", 39.

Hāthras. Fitzclarence, "Journal", has a plate of it opposite p. 18.

Kālinjar. This place is fully described in Pogson, "Boondelas", 148—157; he tells the story of the siege of 1812 on pp. 139—147.

Nāgpur. Described in Fitzclarence, "Journal", 110, Lake, "Sieges", 35.

Trichinopoly. There is a description of this fortress by Col. Stringer Lawrence in R. O. Cambridge, "War", 15.

Imperial Fortresses. In the official manuals we have several lists of these places. The greater number of these forts were in the Dakhin, and in the better days of the Moghul period, the charge of them was committed to

imperial officers called *qilaʿhdārs*, who were appointed direct from the capital, and were quite independent of the governor of the province. This arragement was rendered necessary from the importance of these strongholds, both as a means of retaining hold of the country, and owing to their employment as great store-houses and arsenals. Moreover, if left under the control of a governor, he might be tempted to make a try for independence, when the possession of one of these fortresses would contribute largely to his chances of success.

I find from a list referring to the reign of ʿĀlamgīr (B. M. Or. 1641 fol. 52*b*), that there were forty-two imperial forts. I cannot read all the names but I have made out the following. 1) Shāhjahānābād, 2) Akbarābād, 3) Lāhor, 4) Kābul, 5) Kashmīr, 6) Aṭak, 7) Allahābād, 8) Ājmer, 9) Jhānsī, 10) Gwāliyār, 11) Kālinjar, 12) Sitāpur, 13) Tārāgarh, 14) Bargaṛh, 15) Chāndū, 16) Ujjain, 17) Rāesen, 18) Rānīgaṛh, 19) Dohad, 20) Kākrūn, 21) Ranthambhor, 22) Ruhtās Khūrd, 23) Ṣūrat, 24) Kāngrah, 25) Munger, 26) Jodhpur, 27) Maırtah, 28) Sāmbhar, 29) Ghaznain, 30) Pishāwar, 31) Zafarābād, 32) Shergarh, 33) Lankarkot. The identity of Nos 12, 13, 14, 18, 32, 33, is doubtful; the others are well-enough known places. However, this list, although containing as many as forty-two places, must be looked on as very incomplete. In it are included none of the strongest places in the Dakhin, where to say the least, fortresses were as numerous as in Hindūstān.

CHAPTER XXIV.

SIEGES.

In India the art of fortification remained in the same state as it was in Europe before the introduction of the regular systems. The Indians placed their reliance more on a strong profile than on a judicious plan; and they never realised the importance of the maxim that every work of a fortress should be flanked by some other (Lake, 11). Blacker holds that nothing proved more forcibly their ignorance of the attack and defence of fortified places than their manifest superiority when acting on the defensive. A native army scarcely ever succeeded in taking a place which attempted resistance: it was generally reduced to terms through the distress caused by the force lying around it. On the contrary, some very vigorous defences had been made, prolonged by determined defence of the breach and by bold sallies to the trenches. Mining had found its way to some but not to all parts of India; but there were few instances of its being practised with effect (Blacker, "War", 23). In the *Mujmil-ut-tārīkh ba'd Nādirīyah*, p. 78, line 7, it is stated that the Afghans had a practise before commencing a siege of killing a dog and throwing it in the direction of the fortress. I have never seen this mentioned elsewhere, and one does not quite see what was symbolized by the act.

Strong places were most commonly reduced by strict investment and starving out (Fitzclarence, 245). There were few captures by a *coup de main* (*sar-i-suwārī*), the walls were not often breached, and rarely escaladed. Treachery

within the walls was as frequent a cause of surrender as any other thing. In sitting down before a fortress, a Moghul army tried to surround it completely so as to prevent any ingress or egress. As Grant Duff, 165, expresses himself, "they never considered an army capable of undertaking a regular siege unless sufficiently large to surround the place invested and completely obstruct communications". Earth works (*mūrchāl*) were thrown up, in which the siege guns were placed. The system of digging approaches and laying mines (*naqb*) was known and practised, at any rate in Northern India. No doubt, Lake, 14, holds the contrary view; he says "the natives appear to be utterly ignorant of the art of conducting approaches by sap: and generally they are also unacquainted with Mining". But this opinion must be understood as applicable to the Dakhin only.

There was also a plan, to which recourse was sometimes had, of building high towers with the branches of trees, and when these were of a height to command the interior of the place, guns were mounted on them. These were called *sībā*. Scaling ladders (*nardubān*) were not unknown, and were occasionally brought into use. Elephants were frequently brought up to batter in the wooden gates of a fort. The *Seir* translator, iii, 182, note 45, says the gates, being always covered by some work, could not be broken in except by grenades (of which the natives knew nothing), or by pushing against them elephants, protected by iron, or by setting fire to them. It was as a protection against elephants that the gates were studded with iron spikes; to meet which it was the practice to furnish the elephant with an iron frontlet (Fitzclarence, 137). For instance, we read in the *Sīyar-ul-mutākharīn* (translation, iii, 181), with reference to an assault by the Mahrattas in 1173 H. (1759), that the Khiẓrī gate of the Dihlī citadel "was covered with sheets of brass and set thick with iron nails jutting out twelve inches, and an inch square at the bottom". Often the gateway was bricked up when a siege was im-

minent, and this device rendered it impossible to blow it in. At Cuttack in 1803, the gate was partially built up in this way, and we had considerable difficulty in entering (Lake, 211, note).

These general remarks are borne out by a passage in Lake's "Sieges of the Madras Army", 14: "when one of their armies sits down before a place, the object appears rather to be to harrass the besieged and weary them out by a strict blockade, than to effect an entrance by breaching the walls: for although guns are used, they are placed at such a distance from the town, out of musket shot, and not always in battery, that their effect is uncertain, and even this desultory fire is only kept up at intervals during the day; for at night, to guard against the consequences of a sally, the guns are always withdrawn to the camp; and this ridiculous process is continued till the besieged are tired out, and a compromise is entered into".

Fitzclarence, "Journal", 245, also enters at some length into the question. "The investment of an eastern fortress did not in general consist of anything beyond a blockade; and it will be seen by a reference to Indian history, that the surrender of these forts has been caused more by treachery and scarcity than by any other means, and that the length of some sieges in this country equal those of Troy, Ostend, and Mantua. The food of the Indians being almost entirely rice [1], which is the least perishable of any article of subsistence, the defence of such places may be the longer protracted. Though the natives did not understand the advantage of a glacis, still they saw the necessity of covering the foot of the wall from the enemy's fire when exposed to it, and formed a defence similar to a fausse-braye, which they call *rainee* (see back, p. 265). They are very partial to loopholes to fire through, ... Each of

[1] This is not true of Hindūstan, outside of Bengal. If "corn" were substituted, the argument would still hold good, and exactitude would not be sacrificed.

these narrow and confined [entrance] lanes is generally enfiladed with guns and loopholed on every side, so that should the enemy force the outer gate, they find themselves exposed to a continuation of fresh dangers from an invisible garrison at every turn. I am not, however, a good judge of native fortresses, having only seen those of Chunar on the Ganges, of Alighur, of Agra, and Delhi. The gates at Agra, Alighur and Chunar are examples of this difficulty of entrance" [1].

"The Indians, in the defence of their forts, behave with the greatest gallantry and courage, and in this differ from the Europeans, who often fancy that, when a practicable breach is made in their walls, surrender becomes justifiable But here all feel desirous of fighting man to man, and look upon the contest in the breach as the fittest occasion for meeting their enemies with sword and dagger. They use large heavy wall pieces called gingalls" (see *ante*, p. 109), "which send a ball of two or more ounces to a very considerable distance. Having no shells or handgrenades, they cast bags of gunpowder into the ditch, which exploding by fire thrown on them, scorch the assailants; and at times they have recourse to thick earthen-ware pots with fuses and full of powder, the pieces of which wound dreadfully They have been known to line the sides of the ditch with straw thatches, and by throwing other lighted thatch on their enemies, envelop them in flames. Our success against Hatras by bombardment has been a wonderful encouragement to taking all the native forts by similar means, and from their having no casements, shells are the most effective means for reducing them"; (id. 246).

Approach by sap and mine. The word used for the galleries of approach seems to have been *sābāt*. This is defined by the Lucknow editor of the *Akbarnāmah* (Vol. ii, p 245, note 7) as a roof (*saqaf*) between two walls, which is also

[1] After this date the author also saw Daulatābād, pp. 215—221, and Ahmadnagar 241 242

called "the path of safety" (*kūchah-i-salāmat*); *sābāt* is, he says, the name of a town in Transoxiana. Steingass, 638, explains it as a covered passage connecting two houses. The ordinary Hindi word for a mine is *surang* (Platts, 656) and *surang urānā* is to spring a mine. This mode of attack was known and practised. For instance Sher Shāh in 952 H. (1545-6) at the siege of Kālinjar advanced galleries (*sābāt*) to the foot of the wall, and then prepared *naqb*, which appears to mean here mines, and not the mere digging through of a wall (Budāonī, Text, i, 371, Ranking, 482). Again at a siege of Budāon in 963 H. (1555-6), the besiegers resorted to mining, and the commander of the garrison thwarted them by counter-mining, having detected the direction of their approach by putting his ear to the ground and listening, just as our engineers did at Lucknow in 1857, Budāonī, Text, i, 465 (Ranking, 599), and McLeod Innes' "Siege of Lucknow". And again, at the siege of Gurdāspur in 1715, ʿAbd-uṣ-ṣamad Khān made covered ways or approaches (*sābāt*), Yahyā Khān, 123*a*. Once more, at Allahābād in 1719 the imperialists worked their way close to the walls of the fort "and began to mine under the walls", and Girdhar Bahādur, believing that the day was lost, made overtures through Muḥammad Khān, Bangash, (*Siwāniḥ-i-Khiẓrī*, 13). So also at the siege of Āgrah (July, August 1719) Ḥaidar Qulī Khān, who had under his command many Europeans whom he had brought from Sūrat, drove several saps towards the walls (*id.*).

Sābāt. According to the dictionary this is "a covered passage connecting two houses"; and as a military term it means a trench or approach made in besieging a fortress. According to Briggs, "Firishtah", ii, 230 (siege of Chitor) the *sābāt* were constructed in the following manner. "The zigzags, commencing at gunshot distance from the fort, consist of a double wall, and by means of blinds or stuffed gabions covered with leather, the besiegers continue their approaches till they arrive near to the walls of the place

to be attacked". There is another passage to the same effect with reference to the year 1595 and the siege of Ahmadnagar.

The text of Firishtah is even more explicit as to the siege of Chitor (Lucknow edition, Maqālah ii, p. 257, beginning at line 22). A body of five hundred carpenters, stone-cutters, blacksmiths, excavators, earthworkers, and shovelmen were set to work to construct *sābāt*, "which are peculiar to India" These men laboured at making *sābāt* and digging mines (*naqb*). "*Sābāt* is the name for two walls which are made at the distance of a musketshot; and under the shelter of planks and baskets which are held together by skins, the said walls are carried close to the fort. Then the matchlock men and the mine-diggers (*naqqāb*) come in safety, through the wide way between those walls, to the foot of the fort, and there they dig a mine and fill it with gunpowder When the fort has been breached (*rakhnah shud*), the rest of the army reaches the spot by way of the *sābāt*, and effects an entry into the fort".

We have the story of the same siege told by Nizām-ud-dīn in the *Tabaqāt-i-Akbār Shāhi*, fol. 209*a*, line 17, (under the 12th Ilahī year, the beginning of Ramaẓān 974 H., 1566 A D.). It is practically the same as Firishtah, sometimes word for word the same. He says work was begun in two places. They prepared something like a lane (or narrow street) up to the wall of the fort. "The *sābāt* which began from the emperor's entrenchment was so wide, that ten horsemen could ride abreast along the bottom of it, and so deep [1] that a man seated on an elephant, holding a spear in his hand, could go along it". In spite of the shields of ox-hide, a hundred men a day were killed by shots from the garrison. The bodies were built into the walls

There was in addition a place upon which Akbar sat

[1] The word actually used is *irtafāᶜ*, "height", which evidently means "height" from the floor of the trench to the natural surface of the ground, or to the top of the earth thrown out on each side. In other words, what we call "depth", when speaking of an excavation

and picked off men appearing on the fortress walls. "His Majesty sat upon the top of a building (*khānah*) prepared for his reception upon the *sābāt* of his entrenchment (*mūrchal*). He sat there matchlock in hand". Budāonī, ii, 103, (Lowe 106), here copies and abridges Nizām-ud-dīn: and in describing the siege of Kālinjar in 952 H. (1545), he uses the word *sābāt* as if he meant by it a sap or trench, and not a tower.

Allowing for a certain amount of obscurity and vagueness in the native historians, we may, I think, assert that, so far, the meaning of *sābāt* is tolerably plain. It was a trench begun at some distance from a fortress, deep and wide enough to conceal the workers, the excavated earth being thrown up on each side to increase the protection. In rocky soil it may have been necessary to form the protecting wall of material, such as planks, trees, or earth, brought from elsewhere; but in most instances the obvious and easy method was to dig a trench in the ground, and use the earth from it to heighten the sides. But a *sābāt* was not a tower or erection, built up from the surface of the ground. If Ab,ul Faẓl had not thrown the subject into confusion by his use of the word *sābāt* in the *Akbarnāmah*, the meaning of the word would be clear enough. But he persists in using it as the name for a temporary tower, or a battering ram, as he explicitly says in ii, 261, last line, (Lucknow edition), describing the siege of Ranthambhūr in the 14th year, 22nd Ramaẓān 976 H. The besiegers of Ranthambūr came to the conclusion that the fort could not be taken without recourse to *sābāt, kih sarkob-i-gardan-kashān bāshad.* As to this siege Nizām-ud-dīn fol. 212*a*, also uses the word *sābāt*, but enters into no details. Budāonī, ii, 107 (Lowe, 111), follows Nizām-ud-dīn very closely.

Ab,ul Faẓl persists in using *sābāt* in a different sense from everybody else. To begin with the siege of Chunār, Ab,ul Faẓl (Lucknow edition), Book i, 114, line 6, says

Rūmī Khān, *ba kishtīhāe tartīb-i-sābāt sākhtah.* The passage is translated by Mr. Beveridge, i, 331, "Rumī Khān, ... constructed a covered way (*sābāt*) upon boats, and arranged such a roof (*sataha*) ... ..". But if we go to Jauhar, Āftābchī, my Ms. fol. 16*b*, or to Nizām-ud-dīn, *Tabaqāt*, fol. 151*b*, we find that Rūmī Khān took three boats and built on them a battering ram (*muqābīl-kob*). The passages are rendered to the same effect in Stewart, *Tezkereh-al-Vakīat*, p. 20, lines 11—25, Erskine, "Bābar and Humāyun", ii, 140, 141, Budāonī, Ranking, i, 456, and Elliot, "Mahomedan Historians", v, 199. In none of them is there a word about a *sābāt*, nor did they ever dream of calling this high erection built on boats, a *sābāt*.

It is the same with Abu,l Faẓl's long account of the siege of Chitor, (Lucknow edition) ii, from line 11 of p. 245, although in one place he says they made *diwāı-i-gılın-i-ᶜāriz-ı-mārpech*, "serpentine, wide, earthen walls"; but he writes elsewhere that Akbar sat aloft upon a *sābāt*, which commanded the walls, and from thence he shot. How could a serpentine wall be a tower, from which a man shot; or a battering ram, as he elsewhere defines a *sābāt* to be? Abu,l Faẓl has misled Count von Noer "Kaiser Akbar", i, 234—240, French editıon, i, 165 (Horn 121) into asserting that a *sābāt* should "if possible command the walls", that from "the top of the *sābāt*, cannon breach the walls of the fortress". Then he speaks of the rolling of movable shields. Dr. Horn seems here, by a reference to the *tūrah* (see ante p. 142) to identify it with the *sābāt*. But I think the text of the *Akburnāmah* ii, 243—254, Lucknow edition, leads to the conclusion that three things were employed by Akbar at Chitor, 1) a long and deep trench (*sābāt*), 2) movable shields to protect the workmen (*tūrah*), and 3) a high erection commanding the walls (*sībā*).

Apparently open trenches were resorted to by the Mahrattahs so far back as 1670 at the siege of Karnāla, for

Grant Duff, 110, quoting the Bombay Records, says "they advanced by throwing up breastworks of earth".

Sandbags. In order to facilitate an attack, the ditch of a fort was at times filled up with sacks (*juwāl*, Steingass, 376), filled with earth. This was done at ʿĀlamgīr's siege of Gūlkhandah in 1097 H (1685-6), Khāfī Khān, ii, 356, line 1. We find these bags mentioned as part of the Sikh equipment when they advanced in 1710 against the town of Rāhūn in the Jālandhar *dūābah*, Khāfī Khān, ii, 658, line 9, *o juwālah-hāe pur az reg, barāe mūrchāl bastan*, "and bags full of sand to make batteries".

Movable shields. In 1710 the Sikhs, when attacking the town of Jalālābād in the Ganges *Dūābah*, adopted the plan of using movable wooden screens, or mantlets, mounted on ordinary cart-wheels. These they brought close to the walls, and from their shelter showered bullets and arrows on the besieged, (Khāfī Khān, ii, 656). Mantlets in general have been described, ante p. 142, under the word *Tūrah*, when dealing with Light Artillery.

Shātūr, شاطور. In Budāonī, Text, i, 382, we find this word, and it would seem from the context to refer to some article made of the trunks of trees, something connected with a siege Colonel G Ranking, 494, note 7, not finding it in any dictionary, suggests the Turkish *sātū*, the roof of a house, meaning a shelther under which to approach the walls, something like the Roman *vinea*, a roof of planks and wicker work supported on poles eight feet long, and carried by the men as they advanced. May not the correct word be *shāhtīr*, a beam?

Malchār. This is an obscure word used by ʿAbd-ul-ḥamīd twice, *Bādshāhnāmah*, i, Part 2, p. 107, l. 15, and p. 108, l. 18. Both passages belong to the year 1044 H., 1634-5, and the first refers to the siege of Urchhah, the second to that of Dhāmonī, fortresses in Bundelkhand. The wording in the second instance leads one to infer that the *malchār* was something in the nature of an approach by trenches.

Temporary wall. Another device was to surround a fortress with a temporary wall, leaving a few openings at which strong guards were posted, and no one was allowed to enter or come out without a pass. This was done by ᶜĀlamgīr at Gūlkhandah in 1098 H. (1686-7), *Māʾasir-i-ᶜĀlamgīrī*, 296. The materials employed were trunks of trees and clay. A somewhat similar plan was resorted to by ᶜAbd-uṣ-ṣamad Khān, when he invested Bandah, the Sikh, in Gurdāspur.

Towers (*Sībā*). In connection with this siege of Gurdāspur, we are told of the building of high wooden towers, on which guns were mounted, the inside of the fortified place being thereby commanded, so as to make it untenable. The following passage gives a description of these towers by a contemporary, who was present "At a distance of two arrows' flight, batteries were erected of a size sufficient to allow of the guns being worked. They were about three cubits (4½ feet) in height and in shape like bastions. A constant fire was kept up on both sides. Whenever a gunner shewed his head above the top of the earthwork, he would be fired at by one of the Sikhs concealed behind the battlements. In the same way a head showing above the wall was immediately fired at The Sikhs answered shot for shot, and the imperialists were unable to move out to an attack in the open. Then, at the battery of ᶜĀrif Khān, ᶜAbd-uṣ-ṣamad Khān prepared a tower over-topping the fort wall, and mounted his guns upon it. This device disconcerted the besieged, as the interior of the fort was now commanded and their movements thereby hampered. Similar towers were raised on two other sides of the attack, where Zakarīyah Khān and Qamr-ud-dīn Khān commanded respectively", Ghulām Muḥī-ud-dīn Khān, fol. 57*a*.

Ijād, fol. 23*a*, with respect to the same operations, uses a word which I read *chob-sībāe*, and I suppose it applies to these towers. "The besiegers threw up *chob-sībāe*, and drove subterannean passages towards each corner of the

fort". But I am doubtful of this interpretation, as he had just spoken of "mounds of earth raised on the trunks of trees and placed from distance to distance round the fort" i. e. in other words, "towers". Why then should he refer again to the same thing by another name (*chob-sībāe*) in the next sentence?

Sībā is defined by Steingass, 714, as from the Turkish, "a place surrounded by walls"; but Horn, 103, quoting the *ʿĀlamgīrnāmah*, 313, translates *sībā* "aus den Befestigungen sich erhebender Bastionen", or in other words what was called in Europe, a *cavalier*. This latter meaning would apply equally to ʿAbd-uṣ-ṣamad Khān's towers, although they were independent structures, and not part of a fortress.

It was evidently a *sībā* that was built by Dārā Shukoh when besieging Qandahār in 1063 H (1653). "He mounted a battery on a high and solid mound of earth" (Elphinstone, "History", 513). We also find the word used in the *Mirāt-uṣ-ṣafā*, foll. 99*b*, when in 1169 H. (July 1756 [1]) the French under Bussy were invested in the Chahār Maḥal at Ḥaidarābād. The assailants erected *sībah*. Something of the same sort was had recourse to by the native besiegers of Arcot in 1751 (Orme "Mil. Trans." i, 191). They filled up a house with earth, and on this as a base they raised a square mound, which commanded the gate and every part within the fort. The same kind of thing is referred to by Orme, "Hist. Frag.", 153, on the authority of Manucci (Catrou, 4to edition of 1715, 3rd part, p. 177), as having been used at the siege of Gūlkhandah in 1687. A vast mound of earth was raised to a level with the wall and the artillery mounted on it. Wilks, ii, 360, was told by Sir Barry Close, one of the garrison, that when Tellicherry (Malabar District) was besieged in 1782, Sirdār Khān employed what was evidently a *sībā*, though the name is not used. "An immense extent of base served as

[1] See Malleson, "French in India", (new edition) p. 490.

the foundation for several successive stories, constructed of the trunks of trees in successive layers, crossing each other and compacted by earth rammed between the intervals; the contrivances in the rear for raising the guns were removed when the erection was complete; successive stories were raised as the besieged covered themselves from each in turn". Lake, 221, calls these erections "cavaliers", and compares them to the great mounds raised by the ancients in their sieges. (For "Cavalier", see Voyle, 69).

Storming. With the inefficient artillery of those days, a breach was very rarely effected, and we hear of very few forts being actually stormed. Entrance was oftener secured through breaking in the gate, and for this purpose elephants, as already stated on p. 177, were employed.

Scaling ladders. The name for scaling ladders was *nardubān*, Steingass, 1395. Bābar mentions them more than once. Their use in the reign of Humāyūn, 963 H., 1555-6 is proved by a passage in Budāonī, text, i, 465, Ranking 600. The words employed there are *zīnah-pāe*, the round of a ladder or step of a stair, and *kamand*, which Ranking translates literally "noose", though from the context "rope-ladder" would be better. Again they were used in Shāhjahān's reign, (1044 H. 1634-5), at the siege of Urchhah, *Bādshāhnāmah*, i, part 2, p. 107, line 15. From time to time we hear of their being used at a much later period. For instance, at the end of 1719, when Girdhar Bahādur was besieged in Allahābād fort by Ḥaidar Qulī Khān and other imperial officers, we read that a general attack in two directions was ordered. One of these was headed by Sher Afgan Khān, Dāūd Khān, an officer under Muhammad Khān, Bangash, and others. They drove the besieged back to the very foot of the wall, then "Dāūd Khān, Bangash, brought up the scaling ladders, hoping to make an entry, but after much struggle and effort, he was obliged to abandon the attempt", *Siwānih-i-khizrī*. In 1710 the Sikhs had scaling ladders with them when they tried to take

Jalālābād in the upper Ganges *Dūābah*, Khāfī Khān, ii, 657.

Modes of repelling assault, Burning oil, Powder Bags &c. In a quotation already given on p. 273, from Fitzclarence, reference has been made to the throwing down from the walls of bags of gunpowder and burning thatch. I have also referred on p. 131 to the *ḥuqqah-i-ātash* used for a similar purpose. Other missiles are named by Horn, 123, quoting Von Noer i, 254 ("French trans.", i, 161), who says that at the siege of Chitor the Rājputs brought sacks of cotton cloth and fascines steeped in oil, which they endeavoured to set fire to while the breach was being stormed. As to the throwing of skins full of gunpowder with a match attached, we read of this being done by the defenders of a fort in the Dakhin in the fourth year of Shāhjahān (1631 A.D.). Horn, 132, quotes the passage from the *Bādshāh-nāmah*, i, 376, sixth line from end, *az darūn-i-ḥiṣār bān o tufang o ḥuqqah o sang o mashk-hāe bārūt rā ātash zadah mī andakhtand*, "From inside the fort they threw rockets and bullets and grenades and stones and lighted powder-skins". A somewhat later instance of the use of the *ḥuqqah* or hand-grenade and the *hāndī* or firepot, was at the siege of the Ghasahrī fort (ʿAligārh district) by Suraj Mal, Jāṭ, in the year 1753. In the *Sujān Charitr*, Canto v, stanza 24, we have:

Uththan māru ghanī padau, saththī mukh moḍe;
Handī hukke aggi de, gadh-wālaun chhode.

"There he fierce fighting fell, his men turned back;
The defenders threw lighted *hāndis* and *huqqahs*".

Quite at the end of the Moghul period, we find these means of defending a breach resorted to by George Thomas' officers, in resisting the Mahratta assault on Hānsī (3rd Dec. 1802): "Burning *choppers* (i. e. thatch from the roofs of houses), powder-pots, and everything he could get hold of, were showered upon us; but our greatest loss was from the powder-pots, which greatly disheartened the men"

("Military Memoirs of Lt. Col. James Skinner, C. B." i, 228). Again, at the siege of Bhartpur in 1805, we find in use similar means of repelling an assault. Thorn, "War", 457, says "the people on the walls continually threw down upon their heads ponderous pieces of timber and flaming packs of cotton previously dipped in oil, followed by pots filled with gunpowder and other combustibles, the explosion of which had a terrible effect". See also a case, which occurred in 1781, quoted by Lake, "Sieges", 212.

Stones. Where the fort was on an eminence and stones were available, these latter were stored, and rolled down the hill upon any besieger. (Blacker, "War", 318). In 1044 H., 1634-5, when Dhāmonī in Bundelkhand was besieged, the defenders rolled stones down on their assailants. *Bādshāhnāmah*, i, part 2, p 108. This was also done at a fort in the Dakhin in 1674, when it was attacked by Shivā-jī (R. Orme, "Hist. Frag.", 47). And it is only a year or two ago that we found the same mode of defence still resorted to at Hanza in the Himalayas.

This use of stones was the principal cause of our failure at the first storming of Chunār on the Ganges, Nov. 29th 1764, (Carraccioli, "Clive", i, 64) "Large stones, which the enemy rolled out of the breach and on each side of it, threw our men so often down and rolled them back again by twenties at a time..... Our people were at last so fatigued that they were obliged to give it up". Here Captain Dow (the historian) had his skull fractured by a stone, for which he was obliged to be trepanned. Khair-ud-dīn, *ʿIbrat-nāmah*, 75, tells us that *sang-asiya* were thrown from the walls of Paṭnah when it was attacked in 1173 H. (1759); the dictionary, St. 701, says these are whetstones, possibly the stones of hand-mills are intended by the author. We were also repulsed twice, in 1789 and again in 1791, at Kistnagaṛhī (Salem District) "simply by (the garrison) rolling down stones and large masses of granite on the assailants", Lake, 207, note. Again, at

Trimbak, in Khāndesh, our assault on the 24th April 1818 was chiefly repulsed by the garrison rolling down large stones on their assailants (Lake, 105); and great damage was done in the same way at Gopādrūg on the 13th May 1819 (id. 201).

Evacuation after a repulsed Assault. Lake, 150, remarks, as among the many inconsistencies of the Indian character, that while they surrendered impregnable fortresses without a blow, they would not only defend a mere walled town, but stand an assault after a practicable breach had been made. Another curious habit connected with these defences is pointed out by Blacker, 346. It frequently happened that a garrison would repulse an assault in the most dauntless manner and with severe loss. Yet during the following night they would silently evacuate the place they had defended so well. Naturally Europeans wondered and sought for a cause. The object did not seem to be to divert the attacking force from some enterprize of greater danger to the general cause. The effort was nearly always isolated and desperate. Why not abandon the place at once, or ask for terms? It seemed that it must be a point of honour with them to try their strength, and having proved their valour, they then withdrew.

Reduction by Starvation. Many instances of this cause of surrender might be adduced. This was, for example, the principal reason of the surrender of Āgrah in 1131 H. (Aug. 1719), when Nekūsīyar, after laying claim to the throne, was invested in that fort by Ḥusain ʿAlī Khān. "After a month, provisions began to be scarce. Many of those who had joined from the country round began to desert, getting over the walls at night, only to be seized by the Nawāb's sentries. These fugitives informed Ḥusain ʿAlī Khān of the disheartened and suffering condition of the garrison. All the good grain had been used up, and nothing was left but inferior pulses, and even these had been stored over seven years and smelt so strong, that even

the fourfooted beasts would not eat them with avidity. Attempts were made to bring in small supplies of flour, which were dragged up by ropes let down from the battlements. Some of the artillery of the besieging force took part in this traffic. After this was found out, the strictness of watch was redoubled, anything moving in the river at night was fired upon, and expert swimmers were kept ready to pursue and seize any one who attempted to escape by way of the river", Mhd Qāsim, Lāhorī, 286, 287. Negociations commenced, and the fort was surrendered on the 12th Aug. 1719, after an investment of nearly three months.

Gurdāspūr. The reduction of Gurdāspur and the consequent surrender of Bandah, the Sikh leader, is another instance of the starving out of a garrison. ʿAbd-uṣ-ṣamad Khān appeared before the place in April 1715, but it was not taken before the 17th Dec. of that year. Some time before this happened, the provisions had come to an end, not a grain being left in the storehouses. The garrison obtained a little food from the common soldiers outside, for which they paid at the rate of two or three shillings a pound; they also slaughtered oxen and other animals, and having no firewood, ate the flesh raw. Then they picked up and ate whatever they found on the road. They gathered the leaves from the trees; when these were gone, they stripped the bark and gathered the smaller shoots, and grinding these down, used them as a substitute for flour. The bones of animals were also ground down and used in the same way. It is said that some of the Sikhs even cut flesh from their own thighs, roasted it, and eat it.

Thūn (*First Siege*). In another instance the attempt to take a place by starvation was not successful. Thūn was a fort built by the ancestors of the Jāṭ rajahs of Bhartpur, and it was their chief place of strength before they removed to Bhartpur. It was situated somewhere between Dīg and Gobardhan, to the west of Mathurā. In 1716 the cup of

Churāman's transgressions being full, it was resolved to proceed against him, and the duty was confided to Rajah Jai Singh Sawāe of Amber. Thūn having been completely invested, the siege began on the 19th Nov. 1716. The fortress was provided with lofty walls and a deep ditch filled from springs, and round it spread a thick and thorny jungle "through which a bird could hardly make its way". Supplies were abundant; indeed (though this is probably an exaggeration) there were, it was said, grain, salt, ghī, tobacco, cloth and firewood sufficient for twenty years. When the siege was imminent, Churāman had forced all merchants and traders with their families to quit the place, leaving their goods behind them. He made himself personally responsible for compensation, if he gained the day, and as the property could not be removed, the owners gave their consent without much demur. Churāman's son, Muhkam Singh, and his nephew, Rūpā, issued from the fort and gave battle in the open. In his report of the 21st Dec 1716, the Rājah claimed a victory He next cut down the trees round the fort, and erected a large number of small guard-houses, in which he placed his men. A large cannon was sent to him from Dihlī, while three hundred *mans* of gunpowder, one hundred and fifty *mans* of lead, and five hundred rockets were supplied from the arsenal at Āgrah. The siege dragged on for twenty months, and even in the end Thūn was not taken. The rains of 1717 were very late in coming, prices rose very high, and great expense fell on the Rajah in bringing supplies from his own country of Amber. In January 1718 the Rajah reported that he had had many encounters with the Jāṭs, in which he had overcome them, but owing to support at Court, they were not willing to yield. Soon after this Sayyad Khān Jahān, Bārhah, a near relation of the wazīr, negociated a peace over Jai Singh's head, and Churāman was allowed to settle matters by offering a tribute of thirty lakhs of rupees to the government, and a present of twenty

lakhs for the minister himself. Rajah Jai Singh was then recalled.

Thūn (Second Siege). On a second occasion, in the year 1722, Rajah Jai Singh was more successful, and Thūn was then razed to the ground. He reached Thūn a few days before the 25th Oct. 1722; the fort was then held by the sons of Churāman, and at first there were daily fights. On the 31st a report came from the Rajah stating that he had taken three small forts from Muḥkamā (who was the son of Churāman), and he expected that Thūn would soon fall. He asked for a large cannon, one hundred *rahkalahs*, five hundred *mans* of lead and powder, and three hundred rockets. The capture of the fort was reported to the emperor on the 20th Nov 1722 Churāman's sons had fled. This speedy and apparently brilliant victory was, however, the result of treachery and not of hard fighting. Badan Singh, who was on bad terms with his cousin, Muḥkam Singh, had been persuaded to betray the fort, on a promise that he would be appointed to the chieftainship.

Communication between Besiegers and Besieged. In Fraser, "Mil. Mem. of Lt Col. J. Skinner", i, 231, we read that at Hānsī the Mahrattas rolled letters upon arrows and shot them into the fort from the trenches, and received answers from George Thomas' men in the same way, agreeing to give their leader up. In 918 H. (1512) at Gazhdawān, Bābar is said to have communicated in this way with the Uzbak garrison, (Budāonī, i, 444). Another case is at the siege of Qandahār in 1545: "The dwellers in the fort wrote daily accounts of Mirzā ʿAskarī, and shot them down from the walls, twisted round an arrow", *Akbarnāmah* (Beveridge) 1, 466, line 4. The same mode of communicating, Manucci tells us, Philipps Ms. 1945, Part i, p. 251, was employed by the besiegers of Bhakkar in Sind (1658); one of these arrows struck Manucci on the shoulder, and he took it just as it was to the eunuch commanding the garrison.

Keys of Fortresses. Horn. 133, quoting Elliot, v, 176,

says that the fortresses had gold or silver keys; in this particular passage the place referred to is Ranthambhūr. An instance of this practice in *Persia* is found in *Mujmil-ut-Tārīkh-i-baᶜd-nādirīyah* (ed. Oskar Mann) 85, line 21. We are told here that the keys of Naishapur were delivered to Aḥmad Shāh, Durrānī, when peace was made. Again, we have a somewhat earlier instance. In 1119 (1707) when Mīr Wais, Ghilzai, killed Gurgīn Khān, Gurji (Georgian), governor on behalf of Sultān Ḥusain Mīrzā, Ṣafawī, and took possession of Qandahār, he sent his submission to Shāh ᶜĀlam Bahādur Shāh, together with a golden key (*M.-ul-u.*, iii, 702). Another Central Asian practice is to be found in *Mujmil-ut-tārīkh baᶜd Nādirīyah*, p. 88, line 2, the planting of a flag on the bastion of a fort as soon as it was taken. I have found no mention of this in India. As showing the importance attached in India to the keys of a fortress, we may instance the trouble taken by Aurangzeb ᶜĀlamgīr to make his father, Shāhjahān, surrender those of Āgrah, sending his eldest son, Sultān Muḥammad, to demand them (Bernier, 63). In 1707, Mḥd Yār Khān, the *qilaᶜhdār* of Dihlī, sent his son with the keys of the fort to Bahādur Shāh in token of submission (Khāfī Khān, ii, 577). And we read in Ghulām ᶜAlī Khān's *Muqaddamah-i-Shāh ᶜĀlam-nāmah*, fol. 61*b*, that during Nādir Shāh's invasion (1738), Burhān-ul-mulk and Tahmās, Jalāir, were sent ahead from Karnāl with a note from Muhammad Shāh addressed to Lutfullah Khān, Ṣādiq, (*sūbahdār* of the province), directing him to give up the keys of the fortress at Dihlī to the Shāh's agent, which was done accordingly. Then, when Najaf Khān took Āgrah from the Jāts in 1773, the messenger conveying the news to Dihlī "carried with him the keys of the fort to be laid at His Majesty's feet", W. Francklin, *Shāh Aulum*, 53.

Particular Sieges. For the period covering the end of Shāhjahān's reign and the whole reign of ᶜĀlamgīr, I add a few notes and references in respect of the more notable

sieges. I. then give an account, in a little more detail, of sieges belonging to the 18th century. In the second half of ʿĀlamgīr's reign sieges, or at least attacks on forts, were very numerous

Qandahār. Dārā Shukoh had at the siege of Qandahār in 1063 H. (1653) four heavy guns, 30,000 iron shot, great and small, 1500 *mans* (60,000 lbs) of lead, 5000 *mans* (20,000 lbs) of gunpowder, 5000 artillerymen, 10,000 musketeers, 6000 pioneers, sappers and axemen, 500 *pakhālīs* (men bringing water in large skins carried on animals), 3000 *ahadīs*, 60 war elephants, and a great number of Brinjārīs (grain-carriers), Raverty, "Notes", 22. There is a long account of the campaign, id., 23—28.

Bījāpur, 1097 H., 1685-6 B M 1641, fol 113*a* (sixteen entries), id. 138*a*, Khāfī Khān, ii, 322—368, *Maʾāsir-i-ʿĀlamgīrī*, 275

Gulkhandah, 1098 H., 1686-7, Abʾul-Ḥasan left Ḥaidarābād and took refuge in Gulkhandah in Zūʾl Qaʿdah 1097 H Possession of Gulkhandah was obtained on the 24th Zūʾl Qaʿdah 1098, *Maʾāsir-i-Ā.*, 299 The siege lasted eight months and some days, *id*, 300 Description of the fort, *id.*, 301. See also B M. 1641, fol 113*a*, (forty entries)

Jinjī, 1105-9 H, 1693-7 Khāfī Kh ii, 418, *Maʾāsir-i-ʿĀ.* 391

Khelnah, 1113 H, 1701-2 Khāfī Kh ii, 499, *Maʾāsir-i-ʿĀ*, 445—457.

Kandānah, 1114 H, 1702-3 Khāfī Kh. ii, 510, *Maʾāsir-i-ʿĀ.* 469.

Wākankherā, 1116 H., 1704-5 Khāfī Kh. ii, 527, *Maʾāsir-i-ʿĀ.* 490.

Jaitpur. One of the best known sieges of the 18th century was that of Jaitpur in Bundelkhand, where Muḥammad Khān, Bangash, was invested by the Bundelahs aided by the Mahrattas. This siege is memorable, among other reasons, as the occasion on which the Mahrattas first took a prominent part in imperial politics north of the Narbadā The siege lasted over three months, namely, from the 15th

May to the 31st Aug. 1729. Chattarsāl, Bundelah, had submitted himself earlier in the year, and Muḥammad Khān, quite unsuspicious of danger, was out settling the country at the head of a small force. Suddenly he heard that a large Mahratta army, under Bājī Rāo and eleven other chiefs, was close at hand. From the 12th March to the 15th May, he maintained himself in his camp, but finally was forced to retreat on Jaitpur. There were no stores of food, and no time to provide any. Soon they were completely surrounded, but the Mahrattas, always poor hands at siege operations, made no impression on the place. They resolved to starve the garrison out. After a month or two there was no longer any grain for food. Recourse was then had to the slaughter of the horses and bullocks. Flour could not be procured even at one hundred rupees the *seer*; the only supplies were those furnished surreptitiously by the Mahrattas outside, and this flour was composed mainly of ground bones. Money was let down by a rope, and the corresponding amount of flour, at the rate of 100 rupees for a *seer*, was attached to the rope and drawn up. Many men died of starvation. But by Bājī Rāo's orders, any man on giving up his arms was allowed to pass out unmolested. In the end only some thousand or twelve hundred men remained. At last Muḥammad Khān was forced to make terms and evacuate the fort (Journal A. S. B. for 1878, p. 300, and *Mirāt-i-wāridāt*, my copy, pp. 25, 26.

Allahābād. This fortress was besieged twice in the 18th century, first in 1131 H. (1719) and again in 1163 H. (1750). On the first occasion the imperial forces were sent to eject the governor, Girdhar Bahādur; on the second, it was attacked by the Pathāns of Farrukhābād, when held by the officers of the then governor, Ṣafdar Jang, who was also *ṣūbahdār* of Audh and *wazīr* of the empire. The first investment lasted about nine and the second some seven months, but on neither occasion did the besiegers succeed

in reducing the fort. In 1131 H. (1719) Girdhar Bahādur yielded on obtaining the government of Audh, and marched out with all the honours of war. In 1163 H. (1750) the Pathans, before they had made the least impression upon the fortress, were recalled hurriedly to defend their homes against a combined attack by Ṣafdar Jang and the Mahrattas.

Bangarh. Almost the last expedition commanded by a Moghul emperor in person involved a siege. Between Abū'l Manṣūr Khān, Ṣafdar Jang, governor of Audh, and ʿAlī Muhammad Khān, Rohelah, a man who had recently risen to power in what we now call Rohilkhand, there had long been ill-blood from one cause and another. Now, Amīr Khān, ʿUmdat-ul-mulk, a favourite of Muḥammad Shāh, had been banished from court and sent as governor to Allahābād, the boundary of which runs with Audh With this noble Ṣafdar Jang struck up an intimacy. After a time, Amīr Khān was recalled to Dihlī, where he resolved to oust his enemy, the *wazīr* Qamr-ud-dīn Khān. For this purpose he sought the aid of Ṣafdar Jang, and caused the emperor to summon him from his government. Ṣafdar Jang was received with marked favour and appointed *Mīr Ātash*, or commander of the imperial artillery Having secured influence at court, he proceeded to use it for the destruction of ʿAlī Muhammad Khān. The latter had, however, a friend in the *wazīr*, with whom he had prudently formed a matrimonial connection. Meanwhile Ṣafdar Jang's influence with the emperor was on the increase, and was crowned on the 25th June 1744 by the honour of a visit to his tents from Muḥammad Shāh in person.

The importance of ejecting ʿAlī Muḥammad Khān was so fully impressed on the emperor, that for the first time in his reign he was persuaded to take the field in person. Amīr Khān and Ṣafdar Jang worked hard to secure this result, for without the emperor's presence they could effect little or nothing. The *wazīr*, Qamr-ud-dīn Khān, was friendly to ʿAlī Muḥammad Khān, Qāim Jang, the nawāb

of Farrukhābād, was in secret concert and alliance with him, and his army was efficient and well-equipped. On the 24th Muḥarram, 1158 H. (25th February 1745), making a pretext of a hunting expedition in the Lonī preserve, Muhammad Shāh crossed the Jamnah, his real purpose being kept secret even from the *wazīr*.

Omitting the intervening events, we pass on to the 21st Rabīᶜ II (May 22nd 1745), the day on which the army reached Budāon, and here Muhammad Shāh effected a reconciliation between Qāim Jang and Ṣafdar Jang, which was ratified by an exchange of visits. All the same, Ṣafdar Jang continued actively to carry on the campaign. Then, seeing the imperial army so close to him, ᶜAlī Muhammad Khān quitted his abode at Anwalah, and took refuge in his stronghold of Bangarh, some *kos* to the south. To this place he was followed by the imperial army On the one hand, the *wazīr* persisted that he could bring in ᶜAlī Muhammad Khān, on the other, Ṣafdar Jang urged that if he were given a free hand, he would soon overcome the rebel by force. To strengthen his position, Ṣafdar Jang also sent to Audh for reinforcements. His *bakhshī*, Naval Rāe, was ordered to march with this force by way of Shāhjahānpur to Bangarh.

Bangarh was now surrounded by the imperialists. Kalyān Singh, rājah of Kumāon, who had recently suffered from an irruption of the Rohelahs, joined the army as an ally. Round the fort was a thick screen of bambus "through which the wind found its way with difficulty". Labourers and axemen were set to work to cut this hedge down, and batteries were erected. But the army and its commanders were only half-hearted in their exertions, many nobles had passed long years at court and had never seen a skirmish or heard the roar of cannon, and others again blamed the *wazīr* for bringing them to do a work which he did not care to do himself. The remarks just referred to caused great annoyance to Qamr-ud-dīn Khān; so much so, that

Ḥaiyāt-ullah Khān, Hizbar Jang, (son of Saif-ud-Daulah Zakarīyah Khān, and son-in-law of the *wazīr*), begged urgently for leave to advance and end the matter.

In spite of the overwhelming odds, ʿAlī Muhammad Khān held his ground. Khūshhāl Chand, although an imperial officer, cannot help admiring his courage He also breaks forth into unstinted praise of the flourishing state of the Rohelah territory, the lands being fully cultivated, the crops good, the peasants well-off. Theft, outrage and highway-robbery were unknown within those boundaries. These results were the fruits of the ruler's strong reason and good understanding:

> "The fox carried off the morsel from the wolf,
> For the former has great wits, the latter, little".

One day ʿAlī Muhammad Khān came out of the fort, and was attacked by one of Ṣafdar Jang's officers. Ṣafdar Jang mounted and was anxious to make an onset. Muhammad Shāh thought this imprudent, when on the one side were the Moghuls (the *wazīr*'s troops) and on the other the Pathāns (Qāim Jang and his men), neither of whom were to be trusted, and might act in collusion with the besieged Several days elapsed Then ʿAlī Muhammad Khān fired some balls which fell in the camp of the nobles, some even coming near to the imperial enclosure "to make obeisance". Muhammad Shāh sent for the *wazīr* and consulted. There was no want of men, one division by itself would have sufficed. Yet nothing was done Once Muhammad Shāh appealed to Rāe Hemrāj, a Saksena Kāyath, a mere clerk in the artillery office, "If I made over this business to you, how long would it take?" The *kāyath* replied: "Your Majesty's artillery is so powerful that I could reduce Bangarh to ashes in four *ghari* (about one and a half hours)". But the imperialists continued to discuss helplessly what should be done next In this interval, Naval Rāe arrived with 20,000 horsemen and 40,000 infantry Ṣafdar Jang

went out a *kos* or two to meet him. Naval Rāe commenced the siege in earnest, and ʿAlī Muḥammad Khān began to think of flight or surrender. He sent an intimation to this effect to the wazīr, whose second son, Muʿīn-ud-daulah (commonly called Mīr Mannū) was sent to talk the matter over. Having received a promise that his life would be spared, ʿAlī Muhammad Khān came to the Presence on the 3rd Jamadi I, 1158 H. (2nd June 1745), Khūshhāl Chand, B.M Or. 1844, foll. 164*a*—181*b*.

Āgrah. After their defeat by Ahmad Shāh, Abdālī, in January 1761, the Mahrattas for a time quitted Northern India. Sūraj Mall of Bhartpur was then the only powerful ruler left from the gates of Dihlī to the banks of the Chambal. The only place of strength remaining to the Moghuls was the fort of Āgrah, and in 1763 Sūraj Mall determined to acquire it. Since 1754 the commander and troops had received no pay, living on the produce of what they sold from the magazines within the fort. Obviously such people would not be difficult to deal with. Sūraj Mall made a pretence of crossing to the north bank of the Jamnah, then turned suddenly and blockaded Āgrah. Still, he could never have taken the place, had it been in charge of a good commandant. At this time the command was held by a mere boy, and he was under the thumb of a subordinate, a greedy coward From this traitor overtures were received, and the fort was given up. The blockade had lasted twenty days, but though the inhabitants of the city suffered from plundering, no damage had been done to the fort. Sūraj Mall is supposed to have carried off fifty lakhs of rupees from the town. "When Sūraj Mall took Āgrah, it had the most numerous and the best artillery in the kingdom, with powder, balls and bullets, and other goods of the Royal Wardrobe, collected during a long course of years. Everything was carried off. The best cannon were removed to Dīg and Bhartpur. Two years ago (1765?), Juwāhir Singh caused most of the

houses to be demolished, imitating what had been done at Allahābād, to allow room for the artillery to play. But the fort guns can do no harm as the bastions are so high. Nay, the *débris* of the houses could be used as ready-made entrenchments and batteries, to secure an approach to the main body of the place. The present commandant and the leaders of the Jāṭs know nothing of war, they are men of low extraction, owing their rise solely to their devotion to young Juwāhir Singh", "Orme Collections", p. 4303.

CHAPTER XXV

GENERAL OBSERVATIONS.

The war organization of the Moghul empire offers something more than a mere antiquarian interest. The more I study the period, the more I am convinced that military inefficiency was the principal, if not the sole, cause of that empire's final collapse. All other defects and weaknesses were as nothing in comparison with this Its revenue and judicial system was, on the whole, suited to the habits of the people, they looked for nothing different, and so far as those matters were concerned, the empire might have endured for ages. But long before it disappeared, it had lost all military energy at the centre, and was ready to crumble to pieces at the first touch The rude hand of no Persian or Afghan conqueror, no Nādir, no Ahmad Abdālī, the genius of no European adventurer, a Dupleix or a Clive, was needed to precipitate it into the abyss The empire of the Moghuls was already doomed before any of these had appeared on the scene, and had they never been heard of, there can be little doubt that some Mahratta bandit or Sikh free-booter would in due time have seated himself on the throne of Akbar and Shāhjahān. It is a curious problem, then, to consider what causes could have led to the military decrepitude of a monarchy which had been founded and maintained by its military prestige. How came it to pass that what had been gained by the sword was at length to perish by the sword?

In the Moghul army there was little loyalty to the sovereign's person, and absolutely no patriotism or devotion

to one's country. To a slight extent the zeal and fervour of Mahomedanism was on the side of the ruler. But in a country where the majority were still Hindūs, any excess of this feeling was as much a danger as an advantage. In a faint degree, there was some attachment to the reigning house, which still lived on the reputation of such great rulers and soldiers as Bābar and Akbar But Aurangzeb had alienated both the Rājput warrior clans and the general Hindu population The army was thus, in effect, a body of mercenaries, men who served only for what they could get, and ready at any moment, when things went badly, to desert or transfer themselves to a higher bidder. The army was full of Persian, Central Asian, and Afghān soldiers of fortune, whose swords were at the service of any one who chose to pay them.

By its original constitution everything turned, in such an army, upon the character of its head If he were an able and successful soldier, or even one gifted with the power of leading and governing men, all went well, some sort of discipline was maintained, and some unity of purpose was secured. Thus the first necessity was a strong emperor, for no one but the emperor was readily obeyed, and even he could not always secure obedience. But after the death of Aurangzeb in 1707, efficient rulers ceased to be found among the scions of Taimūr's house. A free field was thus opened to the jealousies and rivalries of the nobles. All courts seem more or less hot-beds of petty intrigue; but in eastern countries this evil growth seems to find its most congenial soil. Intrigue seems to accord with the genius of eastern races, and in that respect perhaps no eastern country equals India. My experience of India is that if a man has only two servants, one of them will at once attempt to supplant the other and monopolize his master's confidence.

Disastrous consequences followed from these jealousies among the great men and nobles. As one writer aptly says

a noble was *hasad-peshah*, "one whose profession was envy". In military matters we have not to go far in our search for examples of this jealousy and its consequence, base treachery. At Jājau in 1707, Zū,lfiqār Khān left Aʿzam Shāh to his fate, because he had been made to serve under Bedār Bakht, that prince's son. Again, in 1712, the same Zū,lfiqār Khān stood aloof at Āgrah, in the hope that his rival, Jahāndār Shāh's foster-brother, might be destroyed, leaving him to reap the benefit of an unshared victory. In this same battle we see treachery at work, the troops of Turānī race having been bought over by the other side. Instances might be multiplied *ad infinitum*.

Furthermore, the constitution of the army was radically unsound Each man was, there can be no doubt, individually brave, even to recklessness Why then do we find them so ready to retreat from a battle-field, so anxious to make off after the slightest reverse? Simply because they had so much to lose and so very little to gain A trooper rode his own horse, and if it was killed he was ruined irretrievably. As a European writer of the middle of the 18th century justly enough says: "Their cavalry (which are among them very respectable, and also well paid) though not backward to engage with sabres, are extremely unwilling to bring their horses within the reach of our guns; so that they do not decline so much through fear of their lives, as for their fortunes, which are all laid out in the horse they ride on", Cambridge, "War", Introd. viii. In 1791-2 Moor, 204, noticed among the Mahratta cavalry that the same cause produced the same effect "A reluctance to charge will be frequently observed; which does not proceed from any deficiency in personal courage, but from this cause a great part of the horses in the Mahratta service are, we have understood, the property of the riders, who receive a certain monthly pay, according to the goodness of the horse, for their own and their beast's services. If a man has his horse killed or wounded, no equivalent

is made him by the Sirkar, but he loses his animal and his allowance; he will therefore, of course, be as careful as possible to preserve both". See also *Seir*, i, 315, note 250, Orme, "Hist. Frag.", 418, Fitzclarence, "Journal", 73, Blacker, "War", 21.

Then in addition to this hindrance to zeal caused by his personal interests, we find that the individual soldier did not look to the sovereign and the State, or consider his interests identical with theirs. He was the soldier of his immediate commander and never looked beyond him If a great leader was luke-warm in the cause or was bought over, was forced to flee from the field, or was slain in the battle, his men dispersed at once. With the leader's disappearance, their interest in the fight was at an end, and their first concern was their own and their horse's safety. To take one instance out of many, Sayyad Ḥusain ʿAlī Khān left Āgrah in Muhammad Shāh's train at the head of as large a force as had ever been collected by any Moghul general. A week or two afterwards, he was suddenly assassinated. An hour or two had hardly elapsed, and not a trace of his mighty army was left, his camp had been plundered, and even his tents burnt.

The death or disappearance of the general-in-chief always decided the battle. Outside Lāhor, when prince ʿAzīm-ush-shān's elephant ran off and drowned him in the Rāvī, his army dispersed and his treasure was plundered. Again, when Jahāndār Shāh fled from the battle-field at Āgrah, the day was lost, although Zū,lfiqār Khān's division was intact. Of treacherous defection in the field the examples would be endless. The luke-warmness of Indian troops serving with allies was shown many a time in our earlier campaigns; for instance, in Rohilkhand in 1774, where Shujāʿ-ud-Daulah allowed us to do all the work, and in the Dakhin in 1792, when the Ḥaidarābād and Mahratta troops proved more of a hindrance than a help to their English allies. In 1803 the Nizām's horse were useless, and

in the campaign of 1817 the conduct of the irregular horse was contemptible. As an auxiliary force they were hurtful in consuming forage and provisions, for which they made no return (Blacker, 348).

Speaking of the Nizām's army, a writer at the end of the 18th century says: "As an army, the composition is no less expensive than defective, and totally unfit for military operations They encamp at random, without proper pickets in front, flank, or rear, and in consequence of this and other negligence are easily to be surprized — in short, these numerous bodies of robust men and active horse, seem designed for no other purpose than to adorn the march of their chief, who rides in the midst of them, upon one elephant, his standard displayed upon another, attended by *chobdārs* calling out his titles" No orders were given for a march; word of them was conveyed to each chief by his news-writer, who attended the *darbār* every evening. Little attention was paid to merit, preferment was obtained through birth and connections, intrigue, cabal, and other means equally destructive to military character (Ouseley's "Oriental Collections", 1795 i, 21—32)

Similar comments are to be found in the chapter on war in R. Orme's paper on the government and people of Indostan ("Hist. Frag" 417—420) In short, excepting want of personal courage, every other fault in the list of military vices may be attributed to the degenerate Moghuls: indiscipline, want of cohesion, luxurious habits, inactivity, bad commissariat, and cumbrous equipment. In fact, Mountstuart Elphinstone, in his "History", 579, gives us succintly the conclusion of the whole matter, "They formed a cavalry admirably fitted to prance in a procession, and not ill-adapted to a charge in a pitched battle, but not capable of any long exertion, and still less of any continuance of fatigue and hardship".

THE END.

LIST OF AUTHORITIES QUOTED AND REFERRED TO.

I. **Persian** (printed books).

1. *Dastūr-ul-Inshā*, by Yār Muḥammad, (*c.* 1170 H.), Calcutta, 1270 H. (1853).
2. Firishtah (Muḥammad Qāsim, son of Hindū Shāh), *Gulshan-i-Ibrāhīmī*, 4⁰., lithographed, Lakhnau 1281 H. (1864).
3. *Bādshāh-nāmah*, by ᶜAbd-ul-Ḥamīd, 2 vols. (Bib. Ind.), Calcutta, 1867-8.
4. *Muntakhab-ut-tawārīkh*, by ᶜAbd-ul-Qādir, Budāonī, 1004 H. 3 vols. (Bib. Ind.) Calcutta, 1868.
5. *ᶜĀlamgīr-nāmah*, by Mḥd. Kāẓim, (Bib. Ind.) Calcutta, 1868.
6. *Maᵓāsir-i-ᶜĀlamgīrī*, by Mḥd. Sāqī, Mustaᶜid Khān, 1122 H. (Bib. Ind.) Calcutta, 1871.
7. *Muntakhab-ul-lubāb* by Khwāfī Khān, 1137 H., 2 vols. (Bib. Ind.) Calcutta, 1874.
8. *Tārīkh-i-Jahān-kushāe Nādirī* by Mirzā Mahdī Khān (lithographed) Bombay, 1292 H. (1875).
9. *Akbarnāmah* by Abū'l Faẓl, 3 vols., 4to. (Bib. Ind.) Calcutta, 1873—1886. Id. — (lithographed edition) — Lakhnau 1883.
10. *Mirāt-i-Aḥmadī* by ᶜAlī Muḥammad Khān, composed 1174 H. (lithographed) Bombay, 1307 H. (1889).
11. *Bābarnamah* or *Tūzuk-i-Bābarī*, lithographed edition, Bombay 1308 H. (1890).
12. *Maᵓāsir-ul-Umarā*, by Shāh Nawāz Khān, 3 vols. (Bib. Ind.) Calcutta, 1888—91.
13. *Mujmil-ut-tārīkh baᶜd Nādirīyah* by Abul Ḥasan b. Muḥammad Amīn, (composed 1196 H.), edited by Oskar Mann, Leiden, 1891 and 1896.

II. **Hindi** (printed books).

Chhutru Prukash of Lal Kuvi, edited by Captain W. Price, Calcutta 1829.

III. **Persian** (Manuscripts).

1. Jauhar, Āftābchī, *Tazkirat-ul-wāqiᶜāt*, Irvine Ms. N⁰. 43, 995 H.
2. Nizām-ud-dīn, *Tabaqāt-i-Akbar Shāhī*, B.M. Additional Ms. N⁰. 6543, 1002 H.

3. *Dastūr-ul-ᶜaml*, British Museum Nº. 1641 (*c.* 1118 H).
4 dº. B.M. 6598
5. dº B M. 6599.
6 dº B M 1690.
7 Kāmrāj, *Aᶜzam-ul-harb*, B M 1899 (*c.* 1119 H).
8 Dānishmand Khān, *Bahādur Shāh-nāmah*, B.M. Oriental, Nº 24 (*c* 1120 H.)
9 Bhīm Sen, *Nuskhah-ı-dılkushā*, B.M. Oriental Nº. 23, 1120 H
10 History of Jahāndār Shāh, B M Oriental Nº. 3610 *c.* 1124 H.
11 Muḥammad Munᶜım, Jaᶜfarābādī, *Farrukhnāmah*, I O L Nº 1876, (1128 H)
12. Hidāyatullah, Bahārī, *Hidāyat-ul-quwāid*, Irvine Ms Nº. 251, 1128 H.
13 Mīrzā Muḥammad (son of Mutaᶜmad Khān), *Tazkirah*, India Office Library Nº. 50, (1131 H)
14 Kāmrāj, ᶜ*Ibratnāmah* (Daftar I), I O L Nº 1534 (*c.* 1131 H)
15 Mhd Ahsān, Iyād, Samānawī, *Farrukhsīyar-nāmah*, B.M Or 25 and Irvine Ms Nº 113, both incomplete (*c.* 1131 H.).
16 Mhd Qāsım, Lāhorī, ᶜ*Ibratnāmah*, I O. L Nº 194 (*c* 1133 H)
17. Shiū Dās, *Shāhnāmah*, *Manavvar-ı-kalām*, B.M Or. 26 (*c* 1134 H)
18. Chhabīlah Rām, Nāgar, letters of, ᶜ*Ajāib-ul-āfāq*, B M. Or Nº. 1776 (*c* 1134 H)
19. Ghulām Muḥī-ud-dīn Khān, *Fatūhāt-nāmah-ı-Samadī*, B M. Or. 1870 (*c.* 1135 H).
20 Kāmwar Khān, *Tazkirat-us-salātīn-ı-Chaghtaiyah*, Irvine Ms Nº. 70 (*c.* 1137 H).
21 Rāe Bihārī Rām, Nāgar, *Guldastah-ı-bahār*, Irvine Ms Nº 176 (1139H).
22. Mhd Qāsım, Aurangābādī, *Ahwāl-ul-khawāqīn*, B.M. Addl. 26,244 (*c.* 1147 H.).
23. Yahyā Khān, *Tazkirat-ul-mulūk*, I. O L Nº 1149 (1149 H.).
24. Rustam ᶜAlī, *Tārīkh-ı-hindī*, B.M. Or. 1628 (1149 H.)
25. Mhd Shafīᶜ, Wārid, *Mirāt-ı-wāridāt*, B M. Nº 6579 (*c* 1149 H).
26 *Maᶜlūmāt-ul-āfāq*, B.M 1741 (*c* 1150 H.)
27 *Risālah-ı-Mhd Shāhī*, B.M Or. 180 (*c.* 1150 H)
28. *Risālah-ı-tīr o kamān*, B M Additional Ms. Nº. 5629 (*c.* 1150 H.)
29 *Jauhar-ı-şamşām*, B.M Or 1898, and Col. Fuller's translation, B.M. 30,784 (*c* 1152 H).
30. Anand Rām, Mukhlis, *Mirāt-ul-ıştilāh*, B M. Or. 1813 (1157 H)
31. Ṣāḥib Rāe, *Khujıstah-kalām*, Irvine Ms. Nº 18 (1159 H).
32 Khushḥāl Chand, *Nādir-uz-zamānī*, B M. Or. 1844, id Addl. 24,027 and Berlin Ms. Nº. 495 (Cat p. 476) (*c.* 1161 H)
33 Anand Rām, Mukhlis, Events of 1159—61 H., I. O. L. 1612 (1161 H).
34 Mirzā Muḥammad, *Tārīkh-ı-Muḥammadī*, B M. Or. 1824 and Irvine Ms Nº 143 (*c.* 1163 H)
35. *Tārīkh-ı-Aḥmad Shāhī*, B.M. Oriental Nº. 2005 (*c.* 1167 H.).

36. Maḥmūd-ul-Munshī, *Tārīkh-i-Aḥmad Shāhī*, B.M. Or. Ms. No. 196 (*c.* 1171 H.)
37 Rāe Chatarman, *Chahār Gulshan*, Irvine Ms. No 118 (1173 H).
38. Shākir Khān, *Gulshan-i-ṣādiq*, Irvine Ms. No 69 (*c* 1174 H.)
39 ʿAlī Muḥammad Khān, *Mirāt-i-Aḥmadī*, B.M. Addl. 6580 (1174 H)
40. *Tārīkh-i-ʿĀlamgīr Ṣānī*, B M. Or 1749 (*c* 1174 H.)
41. Muḥammad ʿAlī, Burhānpurī, *Mirāt-us-ṣaffā*, B.M Addl Mss. Nos 6539, 6540 (1179 H.)
42. Dalpat Sing, *Malāhat-i-maqāl*, B M Or. Ms. No. 1828 (*c.* 1181 H).
43 Sayyad Muḥammad, Bilgrāmī, *Tabṣirat-un-nāzirīn*, Irvine Ms No 34 (1182 H)
44. ʿAbd-ul-latīf, *Ahmad-nāmah*, Irvine Ms No. 100 (1184 H.).
45 Ashob, *Shahādat-i-Farrukhsiyar wa julūs-i-Muḥammad Shāh* by Mirzā Muhammad Bakhsh, Ashob, B M. Or. 1832 (1196 H)
46. Ghulām Hasan, Bilgrāmī, (Samīn), *Tazkirah*, Irvine Ms. No 113 (1197 H).
47. Ghulām Hasan, Bilgrāmī (Samīn), *Sharāif-i-ʿusmānī*, Irvine Ms No 27 (*c.* 1200 H)
48. Ghulām ʿAlī Khān, *Muqaddamah-i-Shāh ʿĀlam-nāmah*, B M Addl. 24,028 (*c* 1204 H.).
49 Khan-ud-dīn Mhd, ʿ*Ibratnāmah*, Irvine Ms No 15 (3 vols) (*c.* 1204 H)
50 *Waqāiʿ-i-diyār-i-maghrib*, Irvine Ms. No. 189 (1213 H) (almost identical with *Tārīkh-i-Husain Shāhī* by Imām uddīn, Chīstī, Rieu, 904)
51 Imām-ud-dīn Chīstī, *Husain Shāhī*, B M Or No 1662 (1213 H)
52 Mḥd ʿUmr, *Siwānih-i-khizrī*, Irvine Ms. No 80 (*c* 1213—14 H)
53 Mḥd ʿAlī Khān, *Tārikh-i-muzaffarī*, Irvine Ms No. 25 (*c* 1215—16 H).
54 Rustam ʿAlī, Bijnori, *Roholon kī tārikh*, B.M. Addl Ms No 26,284 (1803 A.D. Urdū).
55. Muhabbat Khān, son of Faiz ʿAtā Khān, Dāūdzai, *Akhbār-i-muhabbat*, Irvine Ms No. 21 (1220 H.).
56. Collection of Portraits, B M Oriental No. 375 (*c.* 1835 A.D)

IV. Books and Mss. in European languages.

1. N Manucci, Storia do Mogor, Konigliche Bibliothek, Berlin, Ms. Phillipps 1945 (1700).
2 Robert Orme, Ms Collections now in the India Office (1760—1805).
3. F. Catrou (and N. Manucci). Histoire Générale de l'Empire du Mogol, one vol. 4to. Paris, 1705, and 4 vols 12° or one volume 4to. Paris, 1715.
4. F. Valentijn, Beschrijving van Oud en Nieuw Oost Indien, Vol. IV, fol. Dordrecht, 1726.
5. Gemelli Careri, Voyage autour du Monde, 6 vols. 12mo. Paris, 1726.
6. James Fraser, History of Nadir Shah, 2nd ed 1742.
7. R. O. Cambridge, Account of the War in India, 1750—60, 4to. 1761.

8 Jonas Hanway, Revolutions of Persia, 3rd. ed., 1762.
9. De la Flotte, Essais Historiques sur l'Inde, 2 vols. 12mo. Paris, 1769.
10. P. M Anquetil Duperron, Zend Avesta, 3 vols 4to., Paris, 1771.
11 Minutes of Select. Com House of Commons of 1772. 8vo. (T. Evans). London, 1772.
12. J Z. Holwell, India Tracts, 3rd. ed 1774
13. C. Carraccioli, Life of Robert Lord Clive, 4 vols. 1775?
14 Davy and White, Institutes of Timour, 4to Oxford, 1783
15 Asiatic Miscellany, 2 vols. 4to Calcutta, 1785-6
16 J. Bernouilli, Description de l'Inde, 3 vols. 4to Berlin, 1788
17. Seir Mutaqherin (1195 H), trans. by Notamanus (Haji Mustapha), 3 vols., 4to. Calcutta, 1789
18 Asiatic Miscellany, 3 vols, 8vo. Cal. 1788. New Ditto, 4to, Cal. 1789.
19. J. Rennell, Memoir of a Map of Hindoostan 3rd. ed. 4to. 1793
20 E Moor, Narrative of Capt. Little's Detachment, 4to 1794.
21. Jonathan Scott, History of Dekkan, 2 vols, 4to Shrewsbury, 1794.
22 A Dalrymple, Oriental Repertory, 2 vols. 4to. 1794-5
23 W H Tone, A letter on the Maratta people (1796), Bombay, 1798
24. Oriental Miscellany, Calcutta, 1798.
25 W. Francklin, History of the reign of Shah Aulum, 4to 1798
26 Sir W. Ouseley, Oriental Collections, 3 vols 4to 1797—1800.
27 R. Orme, Historical Fragments of the Mogul Empire, 4to. 1805.
28 W Francklin, Military Memoir of Mr. George Thomas, 8vo. 1805.
29 Lewis F Smith, Rise and Progress of the Regular Corps, 4to Calcutta 1805
30 Thomas Williamson, Oriental Field Sports, folio, 1807.
31 Lieut-Col Mark Wilks, Historical Sketches of the South of India, 3 vols 4to 1810—1817
32 W. Thorn, Memoir of the War in India, 1803-6, 4to 1818
33 Lieut-Col. Fitzclarence, Journal of a Route across India, 1817-8. 4to 1819.
34 Lieut-Col V Blacker, Memoir of Operations in India 1817—19 4to. 1821.
35 Major D. Price, Chronological Retrospect of Mohammedan History, 4 vols 4to 1811—1821
36 L Langlès, Monuments Anciens et Modernes de l'Hindoustan, 2 vols., folio, Paris 1821.
37 J B. J. Gentil, Mémoires sur l'Indoustan. 8vo. Paris, 1822.
38. E. Lake, Sieges of the Madras Army, 1825
39. J Leyden and W Erskine, Memoirs of Baber (translated), 4to, 1826
40 J Ranking, Historical Researches on the Wars and Sports of the Mongols and Romans, 4to. 1826
41 W. R. Pogson, History of the Boondelas, 4to. Calcutta, 1828.
42 J. Prinsep, Useful Tables, Part. I, Calcutta 1834.
43 Despatches of the Marquess Wellesley, K. G., ed M. Martin, 5 vols., 1836.
44 E. Quatremère (translator), Histoire des Mongols de la Perse, by Rashīd-ud-dīn, folio, Paris 1836
45 H Wilkinson Engines of War 1841

46. Chevalier P. Armandi, Histoire militaire des elephants, Paris, 1843
47. G. A. Hansard, Book of Archery, 1845.
48. Captain St J. D. Showers, Inscription on a gun at Moorshedabad, Journal A. S. Bengal, XVI, Calcutta, 1847
49 J Shakespear, Hindustani English Dictionary, 4th. ed. 4to. 1849.
50. J. B Fraser, Military Memoirs of Lieut.-Col James Skinner, C B, 2 vols. 1851
51. A. Rockstuhl and F. Gille, Musée de Tzarkoe (folio), St Petersbourg 1835—1853
52 Colonel F. Colombani, Les Zambourek, Paris, 1853.
53 W. Erskine, History of India under Baber and Humayun, 2 vols 1854.
54 M Elphinstone, History of India, 4th ed, 1857.
55. G. C Mundy, Pen and Pencil Sketches in India, 3rd ed., 1858.
56 H. M Elliot, Supplemental Glossary, Roorkee, 1860.
57. W. H. Russell, My Diary in India, 2 vols. 1860.
58 R Orme, History of the Military Transactions in Indostan (reprint), 3 vols. Madras, 1861.
59 E. Thornton, Gazetteer of India, 1862
60 G. A. Herklots, M D Qanoone-Islam, 2nd ed. Madras, 1863
61. E W. Lane, Arabic-English Lexicon, 1867.
62 Colonel T. Seaton, From Cadet to Colonel, 2 vols 1866
63 P. Meadows Taylor and James Fergusson, Architecture of Beejapore, 1866
64. Viscountess Combermere and W. W Knollys, Memoirs of F M. Viscount Combermere, 2 vols. 1866.
65. A. Pavet de Courteille, Dictionnaire Turc Oriental, Paris, 1870
66 id. , Mémoires de Baber, 2 vols. Paris, 1871.
67 H. Blochmann, *'Ā,in-i-Akbarī*, 1 vol. (translation), Calcutta, 1873
68 Yoyle and Stevenson, Military Dictionary, 3rd. ed 1876
69. H. M Elliot, History of India, Muhammedan Period, 8 vols. 1867—1877
70. W. Irvine, Bangash Nawabs of Farrukhābād, Journal of the Asiatic Society of Bengal, vols XLVII and XLVIII, 1878, 1879
71 R. B. Shaw, Sketch of the Turkī Language, Journal A. S Bengal, 1878.
72. M. J Walhouse in "Indian Antiquary", Vol VII, 1878
73. Honorable W. Egerton, Illustrated Handbook of Indian Arms, 1880.
74 Graf F A. von Noer, Kaiser Akbar, Leiden, 1880.
75. id , L'empereur Akbar, trans Alf Maury, 2 vols, Leide, 1883.
76. Col. T H. Hendley, Memorials of the Jeypore Exhibition, 4 vols London 1883.
77. H. G. Raverty, Notes on Afghanistan, 4 parts, folio, 1881-3
78. S. W. Fallon, New Eng. Hindustani Dictionary, Benares, 1883
79. W H. Lowe (translator), *Muntakhab-ut-tawārīkh*, Vol. II, of 'Abd-ul-Qādir (Bib. Ind.) Calcutta, 1884.
80 John T Platts, A Dictionary of Urdū, 1884.
81. H. Yule and A C. Burnell, Hobson-Jobson, a Glossary, 1886.

82. David Mac Ritchie, Account of the Gypsies, 1886.
83. Sir E. C. Bayley, The Local Muhammedan Dynasties, Gujarat, 1886.
84. J. B. Tavernier, Travels in India, trans. by V. Ball, 2 vols. 1889.
85. W. H. Lowe (translator), *Tuzuk-i-Jahāngīrī*, Fasc. 1 (Bib. Ind.) Calcutta, 1889.
86. W. Hoey, M. A., D Lit., *Tārīkh-i-Farah Bakhsh* (1233 H.), trans., 2 vols. Allahabad, 1888-9.
87. F. Bernier, Travels in the Mogul Empire 1665-8, ed A. Constable, 1891.
88. Syad Muḥd Latif, History of Lahor, Lahor, 1892.
89 F. Steingass, Persian-Eng Dictionary, 1892
90. T. D. Broughton, Letters written in a Mahratta Camp, 1809, new edition, 1892.
91. Herbert Compton, European Military Adventurers in India, 1892.
92. G B Malleson, History of the French in India, 1893.
93. Manual of the Administration of the Madras Presidency, Vol. III, fol Madras, 1893
94. W. Forbes Mitchell, Reminiscences of the Great Mutiny, 1893
95 E. G Browne, M. A , A year among the Persians, 1893.
96 I Burton, Life of Captain Sir R F Burton, 2 vols. 1893.
97. J. W. Mac Crindle, Invasion of India by Alexander, 1893.
98 August Demmin, Die Kriegswaffen, 4th ed Leipzig, 1893
99 Paul Horn, Das Heer und Kriegswesen der gross Moghuls, Leiden, 1894
100 Emile Berbé, Le Nabab René Madec, Paris, 1894.
101 Sir Hope Grant, Life and Correspondence, ed. H Knollys, 2 vols 1894.
102. Parliamentary Paper, N°. 538, March 1894.
103. N Elias and E. D. Ross, *Tārīkh-i-Rashīdī* of Mirzā Ḥaidar Dughlāt, 1895.
104. John Martineau, Life and Correspondence of the Right Honorable Sir Bartle Frere, 2 vols 8vo. 1895.
105. Dr. S. Weissenberg in "Mittheilungen der Anthropologischen Gesellschaft in Wien", Vol. XXV, Vienna, 1895.
106 Col. R. C. Temple, Calcutta Review, October 1896.
107. T. P. Hughes, Dictionary of Islam, 1896.
108. W. Irvine, Nādir Shāh and Muhammad Shāh, by Tilok Das, Journal A. S. Bengal, LXVI, Calcutta 1897.
109. George S. A. Ranking (translator), *Muntakhabu-t-tawārīkh* by ʿAbd-ul-Qādir Badāoni, Vol I (Bibl. Indica), Calcutta 1898.
110. R. S Whiteway, The Rise of Portuguese Power in India, 1899.
111. E. G Browne, The *Chahār Maqālah* of ʿArudī, composed about 1161 A.D, Journal R. Asiatic Society, 1899.
112. C. R. Wilson, Early Annals of the English in Bengal, Vol. I and II (part 1), Calcutta 1895, 1900.
113. E. Blochet, Inventaire des miniatures des manuscrits orientaux, Paris 1900.
114. W. Irvine, *Jangnāmah of Farrukhsiyar* by Shridhar Murlīdhar, Journal A. S Bengal, LXIX, Calcutta 1900.

CORRECTIONS, EMENDATIONS AND ADDITIONS.

Page 7 (six lines from bottom). For "te" read "to".

» 48, l. 20, Miskīn, *Tahmāsp-nāmah*, B M. Oriental Mss N° 1918, fol. 59*a*, states that the *chihrahs* of the *mansabdārs* were written on red paper.

» 49. *The Imperial Brand* Manucci, Phillipps 1945 part III, fol 27, says that the imperial brand was of this shape , and was impressed on the horse's right flank.

» 50 *The Noble's Brand* Manucci, *id*, mentions that the nobles had a separate mark, but it was put on the horse's left flank. It consisted usually of the first letter of the noble's name.

» 51, (line 2) For "niferred" read "inferred"

» 62, note. For "jems'" read "gems".

» 64. The *Akbarnāmah* (Lucknow edition), III, p 17, lines 10 and 11 from foot, has *dabalghah* (spelt دبلغه) The same passage has the word *pesh-bīnī* for nose-guard.

» 76 (line 11). For "scated" read 'seated"

» 99 (Add at end of paragraph). D S Margoliouth, "Journal of the Royal Asiatic Society" for July 1903, p. 491, in an article 'On the origin and import of the names *Muslim* and *Hanīf*", quoting a story from the *Kāmil*, I, 210, refers to an ancient Arabian custom of giving protection to a stranger by writing on an arrow "So-and-so is my Guest".

» 101 (line 26). Delete "to" after "into"

» 110 (line 12). For "these" read "there".

» 114 (line 9) For "fumaces" read "furnaces".

» 117 (line 11) For "more" read "move"

» 120 (line 4). For "is" read "it".

» 148 (line 21, add at end of paragraph). The expression is also nsed in a Hindī poem (c. 1720) by one Sudishṭ, line 725, *Mangāe kahak bān sabh Hind ke.*

» 188 (line 28) For "tell" read "till".

» 192 (last line). For "these" read "there" and for "coops" read "crops"

» 205 (line 19). For "these" read "there".

» 216 (line 14). For "tho" read "the".

» 233 (add under *Caltrops*). In the Edinburgh Museum of Science and Art, among the oriental exhibits, is a four-pronged caltrop said to have been found on the battle field of Multan (1849) This goes to show that the Sikhs used this mode of obstructing cavalry as late as the middle of the 19th century.

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