SUPPLY SYSTEM (COMMISSARIAT)

No army can function without a well regulated supply system, especially in war when the needs are great, sudden and unexpected. Therefore a regular supply of ammunition, materials and food is absolutely necessary. No fighting force can dispense with it for any appreciable length of time.

The development of the Company's Supply System was gradual. In India there were no big towns and bazars, which posed considerable difficulty for the Indian soldier who had to find his own food and supplies and the army had to find its own 'Commissariat'. In early stages the absence of regular supply system can be attributed to two reasons; the first, that the finances did not allow a well organised supply system and the second, that there was no pressing requirement for it.

Most of the early battles of the Company in the eighteenth century were fought near the nuclei of their settlements, that is Bombay, Madras and Calcutta where garrisons could be kept well supplied by the navy. The battle grounds were not very far from these garrisons and the lines of communication were short. Victories transferred the battle grounds from near the coast to places farther into the interior. This change in general posed problems of supply for which resources were mustered at short notices. The armies had to find their own Commissariat and were accompanied by a great number of non-Military followers. An Indian Army's description by Malcolm as a nation in migration guarded by its troops than like a
military force appears justified.¹ The followers greatly outnumbered the fighting force.² The difficulties of mustering a requisite number of men and cattle for supply trains as they were then termed on an ad hoc basis and the uncertainty and unreliability of the persons enrolled, posed the need of a regular supply system, guided by rules and regulations under the authority of the government and controlled by officials paid by it.

The regular Supply System came into being in 1809, when the old system in vogue was abolished. In 1775, a Board of Ordnance had been formed in the Bengal Army but it was mainly required to meet the needs of Artillery and Engineers. In Bombay and Madras too there existed Military Boards, which issued instructions regarding supply procurement from time to time.³ To the Bengal Board "all returns of Ordnance and military stores were made by Commanding Officers of garrisons and Cantonments artillery officers, and all other incharge, all contracts for the supply of stores, proofs of ordnance and powder, plans for new construction of ordnance, reports


². (a) Where the force consisted of 1000 soldiers, the followers numbered about 10,000 non-combatants. Vide Majumdar 'A Study of Indian Military History', Delhi 1963, p44

(b) In early campaigns the native followers that accompanied the army outnumbered the fighting men by at least five and frequently ten to one. At Seringapatam for example, the fighting men numbered about forty thousand, and the followers about two lakhs, and covered a front of three miles and depth of seven miles. Fortesque John, The Early History of Transport and Supply, London 1899, p.16, 19.

of powder works, laboratory and arsenal, were to be submitted; in short the general control of stores for the army was vested in this Board.\textsuperscript{1} It is clear that the Board was concerned with supply of technical equipment; the supply of food and clothing were excluded. Moreover the military boards at the three Presidencies only issued instructions and appear to have done clerical work rather than the actual handling of supplies.

The system of agency was employed for supplies in early days but was discovered to be expensive and unsatisfactory and therefore in 1800 it was replaced by contract system.\textsuperscript{2} Contracts were given for victualling the European troops, the supply of elephants, camels, bullocks and other animals and also for feeding them; but no contracts were given for other needs. Even the requirements of the animals were not met fully\textsuperscript{3} and the incompetence of the Board in this respect posed difficulties in manoeuvering an army, because when animals were required to fit out gear for war, an acute shortage was experienced. Moreover the animals provided were not of good quality and breed and were wasted out and replaced by contractors prematurely which resulted in a great loss to the government and huge profits to contractors\textsuperscript{4}. Efforts were made to eradicate...

this defect by the introduction of a system of inspection of all animals coming in service to discharge the unfit animals. The introduction of branding and inspection of animals must have considerably improved the system of animal supply. In spite of the improvement, the innumerable duties that the Board was expected to perform rendered it incompetent, for the growth of army demanded a well organised system of supply. The campaigns against Hyder Ali and Tipoo had proved the need of a regular supply system, but as soon as the war came to an end, its need was forgotten. The demands of the Maratha wars, however, precipitated the need of a regular system.

In 1809, the system of victualling the European troops, and providing and maintaining the army cattle by contract was abolished, and the Commissariat was placed entirely under directions and control of Commissary General, assisted by a deputy and a requisite number of subordinate officers. The mode of supply was left to his discretion; advances of money were made by him as far as possible; the expenditure of the department was left to his discretion, for he was made the sole judge of expenditure and disbursement. In 1815 a separate accounts branch was opened which relieved its officers from the laborious details of accounts and enabled them to pay more

1. Minute by Honourable F. Millet dated 1 March 1845, vide Report of Commission to Enquire into the System of Army Commissariat. (Hereafter referred to as Report Army Commissariat)
2. Loc Cit.
attention to their executive duties, that is superintendence of all public cattle, public buildings, preparation of army equipment, victualling European troops and storing supplies of all kinds. The new office was placed under the general superintendence of the Deputy Commissary General permanently attached to the Commissariat Department. To him the native agents of several divisions furnished their accounts, which after examination and checking, were forwarded to the Commissary General.

Until 1821, the entire control, executive and financial over the department, was vested in the Commissary General. The system did not work well. Although the executive officers had no responsibility of accounts, they could not devote a wholehearted attention to their own work as they could not without adequate means check the charges of native agents; and thus, the financial and Commissary Generals worked without harmony. These defects necessitated re-organisation of the department, and in 1821 the Commissary General was freed from the charge of accounts; he could now move at the army headquarters and exercise at all times personal supervision of the department. The duties of checking and correctness of accounts was made the responsibility of the Military Board. On the re-organisation of the Military Board in 1830, it was vested with a general control over the Commissariat Department, by the exercise of which the functions of the Commissary General

became very much circumscribed. After 1830, some changes were introduced in the department, but with little appreciable change on the whole.

The chief duty of the Commissariat was to supply food for men and beasts. It entered into contracts not only for the army, navy and police service, but for all services required by the government; for other services than army and navy, the duty, however, was restricted to entering into the contract. In the purchase of Commissariat supplies contracts were advertised in the newspapers and the lowest price and the best quality was obtained in open competition. If two or three tenders were sent at the same rate, the man with the best security was preferred; or, if a man had previously entered into a contract and performed it satisfactorily, he was given the contract.

Generally, contracts were entered into for twelve months but in some cases they were for a longer period. As a rule they were renewed annually. At times when it became difficult to enter into contract because no contractors came forward, the Commissariat had full liberty to go into the market and get the articles in the best way he could; for this purpose he established the price to be paid by taking a tender.

1. A Minute by Honourable F. Millett vide Report Army Commissariat.
3. Ibid, Q.1473 and 1474.
4. Ibid, Q.1480.
5. Ibid, Q.1481.
for the articles in writing, and he then obtained the approval of the officer commanding for its acceptance.

At times the Commissariat made purchases without a tender, especially when the army was in the field; they made the best purchases they could and supported the reasonableness of the price by two merchants; or, they occasionally employed an agent, and allowed a customary commission to them. But these were only exceptions, the rule being the tender and the contract. ¹

The system of contract was also employed for the erection of works and buildings for housing and sheltering the soldiers. Every work was put to unlimited competition; a drawing was made of the work, a specification was prepared and an advertisement was published in the leading papers. ² The system was employed for the execution of all extensive works, whether they were new buildings, or considerable additions, repairs or alteration of existing buildings. There was another class of contracts which were made for ordinary current repairs, such as repairing roofs, walls and so on. The current repair contracts were entered into for three years. It was done by establishing a list or schedule of prices at which the contractor was to engage to provide material and workmanship for all works required of him during the three years, and tenders were required for the performance of these works during these years.

1. Evidence of Sir S. Petrie, Director General of Commissariat vide Report from the Select Committee on contracts for Public Department, 7.1489,

2. Evidence of Captain Laffan to C.1532 vide PP Vol.7, P.117, Commons 3&2 of 1856.
at a fixed percent, profit.¹

By the first quarter of the nineteenth century, the supply system was well organised, but there was no provision as yet made to supply the Irregular Troops of which Irregular Cavalry formed the largest part. The Irregular Troops had no bazars from where they could obtain their supplies and the government was not in any way concerned with how they obtained supplies.² They were, however, authorised to obtain their supplies like camp followers from bazars closeby, which was rather an abstract facility than an authorised system of obtaining supplies.³ Even in times of war the government was not responsible to furnish carriage for Irregulars and they provided their own carriage, for which some allowances were given.

In the Camp there was what was called a Sudder Bazaar, which was for the supply of the regular army, but the irregulars also could make use of it. Each man carried a day or two's food of some kind, which rendered him independent in some degree of what he could obtain through regular system.⁴ The supply of rations to these bazars were not regular, but as and when required the bazars were supplied. It was not binding on Irregulars to buy from bazars if they were closeby,

¹ Loc. Cit.
² Evidence of General Bullock vide Report of Commissioners, p. 121 to 125.
they were at liberty to procure their supplies from a source which they chose. The aggregate number of fighting men and registered followers was considered before arrangements were made by the department.

The system outlined above remained in operation so long as a force operated within the Company's frontier but beyond the English frontiers the regulars were provided with no better facilities than the irregulars; they too had no claim on the government for supplies beyond the frontiers.

Even though the Commissariat was there in 1809 and replaced the Military Board as an institution of supply, the duties of providing saddles, bridles, harness and horse appointments of Horse Artillery, Horse Field Batteries and Native Cavalry, devolved on the Military Board. The Commissariat undertook these important duties at a very late stage. All harness and saddlery were issued, in the first instance, from the Government Stores, and afterwards maintained complete in all respects from the contract allowance issued monthly to officers in command of troops and batteries, who were responsible to the superior authorities. When an officer was appointed to a troop or battery to fill a vacancy, he was required to purchase, such of the stock ordered to be kept up as may remain in store, the property of his predecessor; and whenever an

1. Ibid, Q.656.
2. Ibid, Q.658-664.
3. Minute by His Excellency the Commander-in-Chief Sir P. Grant dated 21st November 1856 vide PP Vol.19, P.73 Commons 216 of 1859.
4. Loc Cit.
officer was removed from a troop or battery, the horse furniture and stores were surveyed by a Committee, and he was called upon, previous to his departure, to make good all deficiencies according to an adjustment, which was determined by the Regimental Commanding Officer.

A good supply system was considered an essential requirement in operations, especially in sieges where the success or failure was largely determined by this single factor. The siege operation began with a supply sufficient for the first week or ten days, when the train and animals employed in transferring the stores were sent back to depots for fresh supply. This went on until the place was reduced.¹

A siege was, however, not commenced, until all the depots for siege material were fully established and ample means secured for supplying the materials for vigorous attacks. The distance and position of these depots depended entirely on the nature of the country and the relation in which the besieging army stood with the government and the inhabitants.² Any suspension of the operation was naturally taken advantage of by the enemy to repair the defences of the place, and the besieger had to recommence the work of destruction; it was therefore of great importance to the success of a siege that the supplies suffered no interruption.

When the siege was on an extensive scale, it was

² Loc. Cit.
usual to form one great depot for each service from where smaller depots in the immediate neighbourhood of the scene of operation could be supplied.\footnote{Papers Compiled for the use of Gentleman Cadets at the Royal Military Academy Woolwich, London 1861, p. 72.}

In the early stages, there was no well organised system of supplying clothing. Ananda Ranga Pillai records in his diary the post of 'Chief Dubash', about 1748: The most important functions of his office consisted in managing the merchants who supplied cloth for the Company.\footnote{Podwell, The Diary of Ananda Ranga Pillai, Vol.V, Madras 1917.} About 1760, agents were appointed in Madras and Bengal by Captains Commanding the Companies for regular uniform and clothing, and this system was subsequently adopted by Bombay too.\footnote{Bombay Government Consultation 11 March 1760, Public Diary 34 of 1760.} Subsequently all ranks of Cavalry were clothed, armed and equipped by the State in Bengal; but that does not appear to be the case with other arms.\footnote{Calcutta Review Vol.XVII, p. 557.}

The system adopted in about 1800 for the supply of army clothing was by contract. The contracts were advertised by the Military Board and they were undertaken for a period from 1 to 3 years at the directions of the Governor General.\footnote{Military Proceedings, dated 6 August 1801.} The contractors were not at liberty to purchase any cloth from any other source than from Company's stores, except
when there was not sufficient cloth in the Company's stores, and even under such circumstances approval of the Commander-in-Chief or the Commanding officers of the forces was necessary, which is evident from several advertisements published from time to time and recorded in Military Proceedings. The clothing after stitching was inspected by a Committee of Officers, who gave a certificate of goodness in quality and workmanship. To enable the contractor to fix the contract, an advance was paid to him—15% for European clothing and 10% for native clothing. The contractor was required to supply the uniforms in three distinct sizes—large, medium and small, in equal proportion. When the largest size did not fit a man, the contractor supplied special clothing for him.

There were some clothing provided free of charge by the State, but for certain items of clothing a certain rate of stoppages was recovered from the individual. Rules regarding the amount of stoppages, and also their payment at one time and their non-payment at another for certain items had been changing. For example, Bombay Native Soldier after 1816 had to pay for some items of clothing which were previously given free of charge, whereas in the Bengal Native Infantry certain clothing were purchased by the soldier at 5 rupees stoppage, which from 1825 onwards came to be provided by the state, free of charge.

Clothing allowances called off-reckoning were advanced to Colonels of Regiments who provided clothing to men under their Command.

1. PP Vol.7, P.117 Commons 362 of 1856.
2. Military Letter from Court dated 28 October 1814.
4. Refer to Chapter on Financial Administration, Section on
A separate Army Clothing Department was formed in 1855. The department was responsible for the procurement, storage and delivery of clothing to all units according to requirements and authorisations, and to keep account of such clothing.1 When the regiments wanted clothing, requisitions were made direct by them to the war office, where the Deputy Adjutant General of Clothing examined and sealed the pattern and sent them to the regiments after comparing them with standard patterns. The Deputy Adjutant General of Clothing was in communication with the Store Department and he arranged new supplies of clothing and equipment.2 The regiments on receipt of any clothing and equipment, held boards for inspection and demands were forwarded and receipts obtained in due course.3 This system ensured supply of good quality cloth to the army.

The Government made contracts for the cloth of the army, and after the cloth had been procured it was examined by the inspectors, and then another contract was made for making up the rejected clothing, and when made up it was delivered into the stores, and then sent to the headquarters of each regiment. The patterns were fixed by the Commander-in-Chief with the consent of the Governor General.4 It was a practice

2. PP Vol. 13, Page 1 Commons 269 of 1857; Evidence of Deputy Adjutant General of Clothing vide 7.5, 7.4 and 6.
3. Ibid, 7.16.
in the army of attaching a certain number of tailors to units who were expected only to do alteration in clothing that became necessary.

The manufacture, supply and conveyance of artillery equipment was not easy in those early days in the absence of mechanical transport. Indeed, transport presented the biggest problem to the Commissariat.

There existed at Cossipore the Company's gun manufactory from where all presidencies obtained their brass pieces. But all iron pieces were obtained from England. Even the shot and shell for iron pieces were obtained from England. At each presidency there was an agency, conducted by an officer of the army and generally of artillery, where gun carriages were manufactured. The gun carriages were made of teak wood almost entirely and the weight of standard field gun carriage, that is six-pounder, was about 14 cwt, with limber and ammunition in boxes, about 1 ton. Though the principle of making gun carriages was the same at the three presidencies, the Bengal carriages were heavier than the other two presidencies. Thus, on account of the ammunition and various other equipments required to be carried with each gun, became a major problem.

1. Evidence of Lieutenant Colonel Hopkinson vide Minutes of Evidence, 7.1349.
An important part of artillery equipment, besides guns, were howitzers, carronades and mortars. Before the middle of the 19th century, smooth bore weapons of low velocity were used and the use of modern Artillery dates only from 1855, with the invention of William George Armstrong, gun which was capable of loading at the breach and was rifled. All guns prior to that date were muzzle loading and usually threw round balls, which were solid masses and extremely heavy and the carrying of ammunition alone was a big problem. Since the new gun, capable of throwing light elongated projectile, was adopted only in 1859, throughout the Company's period solid iron round shells and grape shots were used during operations. Carronades were short iron guns with no trunnions, which had been introduced in 1779, and were scarcely carried in field role and were often employed on coasts. Howitzers were used mixed with guns and were specially useful at sieges. Mortars were short pieces of ordnance and threw shells at high angles of elevation.

The ordnance was classified as light or field, and heavy or siege. Field pieces were intended to accompany an army constantly, and were capable of being handled by men from place to place with rapidity. Those used generally were 3, 6, 9

and 12 pounder guns, and the 12, 24 and 32 pounder howitzers. All field pieces were made of brass. The heavy artillery gun made of iron was capable of firing 400 to 500 rounds in 24 hours, and the problem of carrying ammunition was still greater at a siege, where heavy ordnance was employed.

In the attack of fortresses, the ordnance having generally to be brought from long distances, lightness was desirable but field pieces being too feeble to destroy huge walls, and even for other purposes of siege, heavy artillery was required. Horses were very often employed for the purpose of draught. For a six pounder battery of horse artillery the following complement of horses was employed:

| 4 guns | 24 horses |
| 2 Howitzers | 12 horses |
| 6 Amn Wagons | 36 horses |
| 1 Forge Waggon | 6 horses |
| 2 Store Carts | 8 horses |

For heavy pieces of ordnance the scale of horses provided was as follows:

<table>
<thead>
<tr>
<th>Nature of Piece</th>
<th>Horses to Draw the Piece</th>
<th>Horses to Draw 1000 Rds Amn</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 Pounder Gun</td>
<td>8</td>
<td>43</td>
</tr>
<tr>
<td>24 &quot;</td>
<td>10</td>
<td>57</td>
</tr>
<tr>
<td>10 Inch Howitzer</td>
<td>8</td>
<td>156</td>
</tr>
<tr>
<td>10 Inch Mortar</td>
<td>6</td>
<td>120</td>
</tr>
</tbody>
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1. Loc. Cit.
2. Proceedings of a special Committee of Artillery Officers assembled at Beirut, under instructions from Government; communicated in General Order dated November 1859 (Subsequently ref. as Special Committee of Artillery Officers).
3. Loc. Cit.
When the horses started fresh, they could if the roads were not bad, advance 2 miles in half an hour; four miles in 1 1/2 hours, 8 miles in 4 hours; and 16 miles in 10 hours— as a rough guide. The average march of foot artillery, with their cattle establishment in 1832 was about the same as that of the infantry, that is, about 15 miles a day. 1

The war establishment of draught animals was in fact never too rigidly fixed at any time and each case required special sanction of the government. 2 As a guide, in Madras and Bombay 230 horses were allowed for a troop, 3 whereas in Bengal 178 horses was the accepted figure. 4 This difference was allowed because of the differences of equipment from presidency to presidency. The Bengal armament of a troop of horse artillery was five 6 pounders and one 12 pounder howitzer, whereas in Bombay and Madras the proportion was four guns and two howitzers. 5 Moreover in Madras and Bombay horses of draught were not ridden (the system was called detachment system) whereas in Bengal there were no detachments and every horse in draught carried a rider. 6

2. PP Vol.18, P.73, Commons 211 of 1859.
3. Loc.Cit.
4. Special Committee of Artillery Officers.
5. PP Vol.19, P.73, Commons 216 of 1859.
The artillery equipment too was not standardized, which caused a difference in the number of draught animals required to carry it. Assimilation was tried from time to time but for some reasons complete assimilation was never achieved. Approval of the Governor General for constructing six pounder carriages was obtained only in 1900 for all the three presidencies.\footnote{PP Vol.19, P.73, Commons 216 of 1859.} Further assimilation in artillery equipment was brought by the orders of Sir Henry Fane, the Commander-in-Chief in 1936, on the recommendation of a board and another Committee assembled in 1953 for the purpose of assimilating equipment.\footnote{I.c. cit.} In spite of the best efforts at assimilation of equipment, small differences continued to exist which account for the difference of draught animals employed for carriage.

The small arms used by the Company’s army were light weapons and every individual carried his own personal weapon on person and there was no problem of carriage. Replenishment was, however, the Commissariat’s problem. The arm used generally by a soldier of infantry until the year 1853 was a percussion musket and bayonet.\footnote{Portlock, Papers compiled for the use of Gentleman Cadets of the Military Academy at Woolwich, London 1861. Pp.} The musket was 4 feet 7 inches in length and weighed 10 lbs 2 oz, which was an easy weight to carry on person. The balls were made of lead. The bayonet projected 1 feet 5 inches beyond the muzzle, and weighed 1 lb 1 oz,

1. PP Vol.19, P.73, Commons 216 of 1859.
2. I.c. cit.
making the total weight 11 lbs 3 oz. The sepoy army commonly used matchlocks or firelocks. Quite easy to carry, the weapon had a broad and massive butt, to distribute the weight of recoil. Rifles were tried in the Sutlej campaign but the army preferred matchlocks to rifles, and it was not till a decade afterwards that rifles were used. The Enfield rifle which was approved for the use of the army about the time of the Mutiny was 6 feet 6¾ inches long. Carbines were supplied to Cavalry, Artillery and Engineers; handgrenades weighing 1 lb 13 oz each were also used. Thus we see that almost all small arms were capable of being carried on the person of a soldier, and posed no problem of carriage.

From the above account it appears that the system of supplies and transport in the Army of the East India Company was quite satisfactory.