

Camels.

**Instructions
sent to the
Punjab.**

Cost of mules of the Punjab.

Cost of mules of the Punjab.

Cost of mules of the Punjab.

Depôts at
Lahore and
Rawul
Pindee.

Depôts at
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Rawul
Pindee.

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Rawul
Pindee.

Depôts at
Lahore and
Rawul
Pindee.

Depôts at
Lahore and
Rawul
Pindee.

Punjab
mule equip-
ment.

Departure of Lahore and Rawul Pindee trains.

† Guide Corps; 1st and 3rd Seikh Infantry; 2nd and 6th Punjab Infantry; 5th Goorkhas.

The following Return shows the strength of the establishments of the Lahore Mule train as it left Lahore.

Establish-
ment of
Lahore train.

No of each.	Detail.	Pay in India per mensem.	Pay abroad per mensem.	Comple- ment.
		R. A. P.	R. A. P.	
17	Jemadars	16 0 0	19 8 0	23
98	Mates	9 0 0	12 8 0	105
1,050	Syces	6 0 0	9 8 0	1,150
7	Bheesties	6 0 0	9 8 0	23
7	Langrees (cooks)	6 0 0	9 8 0	23
3	Moochees	10 0 0	18 0 0	16
1	Salootree	20 0 0	30 or more	1
1	Nalbund (farrier)	16 0 0	24 0 0	1
1	Sirdar Mistree	20 0 0	30 0 0	2
2	2d Mistrees	18 0 0	25 0 0	2
2	Filemen	12 0 0	18 0 0	2
2	Hammermen	7 0 0	10 0 0	2
1	Fireman	7 0 0	10 0 0	2
1,541	Mules	—	—	—
78	Ponies	—	—	—

The European Officers attached were :—

1.	Lieutenant Ross	-	-	-	-	Staff pay	400	0	0	per mensem.
2.	„ Chalmers, not joined yet	-			-	„	150	0	0	„
3.	„ Gaselee	-	-	-	-	„	150	0	0	„
4.	„ Ryves	-	-	-	-	„	150	0	0	„

The following is the Return of the Establishment of the Rawul Pindee Mule Train, consisting of 1,022 animals, as it left Shahpore :—

Establish-
ment of
Rawul
Pindee train.

Establishment.	Present.	Full Strength.	Pay in India per mensem.	Pay abroad per mensem.
Jemadars	11	11	16 0 0	19 8 0
Duffadars	52	52	9 0 0	12 8 0
Drivers	514	536	6 0 0	9 8 0
Cooks	9	11	6 0 0	9 8 0
Bheesties	6	6	6 0 0	9 8 0
Moochees	6	11	10 0 0	18 0 0
Head Mistree	1	1	22 0 0	32 0 0
2d „	—	2	18 0 0	25 0 0
Assistant Mistree	5	6	7 0 0	12 0 0
Salootree	—	1	Not fixed.	
Farrier	1	1	14 0 0	22 0 0
Moonshee	1	1	30 0 0	30 0 0

The European Officers attached to this train were:—

Captain Bainbridge	-	-	-	On a Staff-pay of Rs.	400	0	0	per mensem.
„ Roddy	-	-	-	„ „	150	0	0	„

The Lahore and Rawul Pindie mule trains were under military control; the muleteers were disciplined and armed.

Besides these mule trains all regiments despatched from Bengal took with them their full equipment of mules for field service.

Several levies of Punjab muleteers and many camelmen were afterwards engaged and sent to Abyssinia, under the command of selected officers, for duty in the Transport Train generally, and to replace the Egyptian and Turkish drivers. Punjab muleteers.

The good and cheerful services of the Punjabees employed as muleteers during the expedition, the readiness with which they took service, their desire to be regarded as a military body, the facility with which they learned their work, and acquired a military organisation, were in marked contrast with the qualities of the men who engaged themselves as muleteers in Egypt, Syria, Turkey, Arabia, Persia, and other countries not under British rule. Captain Kelly, 1st Battalion, 2d Queen's Royal Regiment, who commanded a Division of the Transport Corps in Abyssinia, took 1,600 of these men, when the campaign was concluded, to the Punjab, where they were disbanded. His report showed that they went to their homes well contented with their treatment while in the Transport Service. Their good services.

On the levies of muleteers being raised, the Punjab Government, as noted above, appointed Officers to command. These Officers had an opportunity, before arrival in Abyssinia, of learning something of their men, correcting faults in the organization, promoting the smart and intelligent, and reducing the worthless. The latter was necessary, as, with the best intentions, it was difficult for the civil authorities always to select the men most fitted for the positions of Native Officers in so short a period. An opportunity was also afforded to teach the men a few military movements, such as falling in quickly, taking ground to the right or left, and moving together compactly. On arrival in Abyssinia, the levies were broken up and distributed to the different divisions. Distribution on arrival in Abyssinia.

The levies were divided into companies. The strength of each was, one jemadar, five duffadars, one bheestie, one cook, 50 drivers, or, as they preferred to be called, "Sepoys." As it was not anticipated that a company would be broken up, subdivisions and sections were not formed. Organization and discipline.

The natural aptitude of these men for a military life, their perfect obedience and desire to please made their organization and discipline a comparatively easy task. Amongst a large number of men, raised in so short a period, there were some bad characters, but crime was not prevalent, it generally arose from disputes about money lent, gambling, &c. Disobedience of orders or breaches of discipline were rare.

The good conduct of the men was attributable to their natural dispositions, and to the influence which the Native Officers exercised over them for their good. The Jemadars were an excellent body of men. Native officers.

During their return march in India to their homes there were no regular monthly payments made. They received advances sufficient for their wants. Though this was a subject of complaint at the time, it was a measure which ultimately tended to their good and contentment. On discharge, each man took with him to his home a sum varying from Rs. 20 to Rs. 60. The accounts were kept by the Commanding Officer in English, a similar account being kept by a Moonshee in the vernacular, and a Duffadar in each company kept an account of the advances, &c., issued. Pay on their return.

Adjustment
of claims.

The Government of India caused a Committee to be assembled at Mooltan, to inquire into the claims of the men. Every individual was brought before, and questioned by, the Committee. They generally claimed compensation for clothing lost in Abyssinia, or for a deficiency in the issue there. These claims were all registered, but the Committee recommended that they should be disallowed. The claim on account of money deducted for family remittances, which did not reach their destinations, was in every case allowed, and the different amounts were paid. Pay ceased from the day they arrived in the Punjab. The heirs of those men only who died between the dates of the embarkation of the levies from Kurrachee and the arrival in Bombay, returning from Abyssinia, were considered as entitled to pensions. The number of deaths under this head was comparatively few.

Pensions for
heirs of
deceased.

Quarantine
at Mooltan.

At Mooltan the detachment was placed in quarantine. The arrangements made at Mooltan by the Civil authorities were reported as admirable. Huts and tents were ready; hospitals were established, with a good staff of medical assistants; free rations, including meat, rum, and other comforts, were allowed the sick; Dr. Gray, the Civil Surgeon at Mooltan, superintended the medical arrangements; nothing was left undone which would promote the health and comfort of the men.

Caste of the
men.

The companies generally were composed of men of various castes. An effort was made to keep castes separate, but it was difficult to do so. There were, however, three companies entirely of "Muzbee" Sikhs. While the average casualties, in the 25 mixed companies, was $11\frac{1}{3}$, in the three "Muzbee" companies, the average was only $2\frac{2}{3}$. These three companies arrived in Abyssinia in February; two of them were with the advanced force; one was stationed at Pioneer Wells. The low rate of mortality speaks for the strength and endurance of the Muzbee Sikhs.

The men were generally well satisfied. The pay alone would have induced them to enrol themselves again for similar employment. Several went on to Hazara with mules, and when it was rumoured that a levy was to be raised, they all seemed anxious to join it.

These muleteers generally had to undergo much exposure in Abyssinia, and were overworked; as far as Antalo, on the advance to Magdala, and from Dildee to Zula, on the return, they had a sufficiency of food and water, but during the remainder of the time, they, in common with the rest of the army, were on short rations.

The rations served out to the Punjab muleteers were superior to those given to the other public followers. The former being allowed fighting-men's rations, including meat and fresh vegetables.

Disease was not very prevalent amongst the muleteers in Abyssinia; they suffered more from bowel complaints than from any other disease.

The men discharged as unfit were generally old, or weakly, who should not have been originally sent, or men disabled from wounds or accidents, such as kicks from mules, &c., and some from disease contracted in the country.

The condition of the muleteers at Annesley Bay after the campaign, before they embarked for Bombay, was generally healthy, considering the amount of work and exposure they underwent.

Elephants.

Instructions
regarding
their treat-
ment.

Forty-four elephants were sent to Abyssinia and shipped at Bombay. The arrangements made for their embarkation, fittings of transports, and full particulars regarding their rations on board ship, have been already noted in Chapter VII.* The following information regarding their health, ailments, &c., collected from various sources, may be useful in future campaigns where elephants are employed.

* See pages 214 and 226, Vol. I.

Appearance and feel of the skin.—The skin should be of a colour approaching to black, and the feel of it should be bristly. A pale coloured elephant with the hair on it downy instead of bristly, is not in good health. Signs of health.

Lively or dull Movements.—An elephant in good health is always in motion, swinging the well stretched trunk and flapping the ears; a listless state, with the trunk more or less gathered up, betokens ill health.

Colour of Mouth and Tongue.—The inside of the mouth and the tongue should be of a rich pink colour, without any black spots on the palate or roof of the mouth.

Colour of spots on Trunk.—The light spots on the head of the trunk and neck and ears should show bloom and health in them. They are, as it were, the complexion of the animal, or beauty spots. Too pale a colour in these spots denotes poorness of health, and too high a colour betokens an overheated state of body and feverishness. The animal will then require cautious treatment and strict attention.

Eye.—The eye of an elephant in good health should appear as large in the evening as in the strong light of the morning. When an elephant becomes overheated in blood, it will affect the eye, and create a scum over it very difficult to cure. Fresh butter, or good sweet ghee, with the rations is as good as anything for them in this state.

Lumps.—Hard lumps found on the belly or round the sides of the animal are of two kinds. One sort (called by the Natives “Butorie”) break of themselves, and are the effect of an overheated state of body, throwing itself off in superficial eruption. This sort is not dangerous; but when the lumps are hard, and won’t break, they are the forerunners of zahirbad; and if the disease be not nipped in the bud, it will carry off the elephant in the long run. Ailments of Elephants.

“Must.”—The usual season for the male to become “must” is during the monsoon, and it remains so for three months. This season may be shortened by cooling medicines. While “must” he will have a discharge of water from two small orifices at each side of the jaw and under the eye.

Nails and Toes.—Inside and under the nails are liable to sores, and so tender does the foot become that pressure of a finger on the spot will make the animal wince. This disease is called “Kandee” by the Natives, and if the sore does not get vent downwards, it will eat upwards, and perhaps even cause the nail to fall off. It is a most troublesome disease, and takes months to cure. Most elephants when in perfect health show a moisture or kind of perspiration at the junction of the toe nail with the flesh of the foot.

Scaly formations of Feet.—The lower part of the foot and above the nails are subject to formations of rough or scaly pieces of flesh. They become very troublesome in wet weather, and are likely to become sores. The Natives call it “Chajoon.” These superfluities should be pared off.

Worms—Eating Mud.—Elephants when troubled with worms eat mud, and when eating it, should go “Naga” or without rations; if this occurs oftener than once a month, it is a proof that the mussalabs are not suitable to the animal, and it will fall off in condition. A good mahout will pay great attention to the dung, urine, thirsty or unthirsty state of the animal. Caution is required, and they must be watched narrowly when an unusual state of health is indicated. Naga elephants eating ordinary food are considerably purged. To stop the purging, bamboo leaves should be given. They should also not be bathed or washed.

Sore Backs.—Tumours and abrasions or skin cuts are invariably caused by negligence or ignorance on the part of the mahouts. The mahouts after loading their elephants will often displace part of the load to stow away in concealment some private bundle or other of their property, but too often the negligence consists in the slovenly Remedies for Ailments.

and insufficient manner of stuffing the pads. It is hard work to do it properly, but a good pad is the best preservative against a sore back.*

Tumours.—When a tumour is discovered, a mahout will generally counsel its being pressed away; the effect of this is most deleterious, and will cause the sinuses to run deeper and further into the skin. Apply a poultice of Neem† leaves for two or more days till the skin becomes somewhat soft and the tumour rises near the surface, then rip it open freely, cutting it on either side down the ribs, but never across the back bone.

Treatment of incised Tumours.—There are two modes of dealing with the wound after the pus has escaped, and both are equally efficacious.

1st.—Pigeon dung and salt, or root of Madar tree and salt in equal proportions should be put into the sore for a few days after being cut open, to clear away any proud or bad flesh inside, and the wound should be kept warm by a bit of padded stuff over it. After the above has done its duty for a few days, get $\frac{2}{3}$ ds bottle of country sweet oil (meeta tel) and $\frac{1}{3}$ rd bottle of good spirits of turpentine, with about 4 ounces of clean good camphor (the light sort). Put them all into a quart bottle to dissolve the camphor. It must not be too thick, or the wound will close too quickly, and before the inside is well healed. It would then be necessary to cut it open again. There is no better ointment than this for curing elephant sores.

Treatment of incised Tumours.—2nd.—Fill up the wound with Neem leaves after bruising them in a small quantity of hot water, and remove this plugging twice a-day for three days; and then syringe out with a decoction of blue vitriol, until the wound assumes a healthy appearance. Gundabirosa may then be applied, care being taken that the lips of the wound are kept open, and that the granulation fills up from the bottom.

Treatment of Abrasions.—Abrasions or skin cuts require to be washed clean and smeared with camphor oil to prevent annoyance from flies. Take the animal off work, and such sores will soon heal.

Sore Toes or Feet.—Clear away the vicinity of the sore, wash it well with decoction of blue vitriol forcibly squirted with a syringe till the offensive smell be overcome, then apply

Chloride of lime.	2 chittacks.
Common lime (best)	4 „

Mix both into a paste and plaster the wound, which must be closed with cotton or rag to prevent intrusion of dirt. The same may be applied to whitlows or Chajoon sores.

Sore Eyes.—Caustic lotion used with syringe whenever there is any inflammation apparent. For a white film, syringe the eye with a solution of $\frac{1}{2}$ oz. alum in a pint of water.

Green
Fodder.

The best kinds of fodder are dull, beernah grass, null, ghone, khebantal, plaintain leaves, fresh paddy straw, doomraieelah (a shrub), branches of goolur, kooksa, jeal, bur, and paukur. Peepul may be given moderately and cautiously, but it is of too heating a nature to be given continuously, and affects the eyes of elephants.‡

Crossing
rivers.

Chills.—When elephants are in a heated state it is apt to give them a disease called “Chowrung,” if they be permitted to get a chill. Extreme cold has the same

* The experience of the Abyssinian campaign in fitting pads, &c., on elephants to enable them to carry heavy guns, &c., on long and continuous marches, will be found in Chapter X, page 360.

† Neem—*Melia Azadirachta*.

‡ The different descriptions of fodder named are well known in India.

effect occasionally. The sinews of the neck, chest, and limbs become cramped and contracted, and the animal can barely move. A dram of liquor or a few warm mussallahs may prevent the disease, but months of care will hardly cure it, and the animals will be more predisposed to it for the future.

Quicksands.—When an elephant gets into a quicksand, give him an ample supply of branches, young trees, and water to loosen the sand. Wherever they may be suspected, unload the animals before crossing.

Prior to the commencement of the campaign, some valuable information regarding elephants was furnished to the Government of India by Sir G. Yule, C.B. and K.S.I., resident of Hyderabad; Mr. Perry, deputy-magistrate of Purneah; Maharajah Sir Joy Mungul Sing, K.C.S.I., of Girdhore, in Monghyr; and Maharajah Diegbijoy Sing, K.C.S.I., Rajah of Bulrampore. A memorandum on the subject was drawn up for the guidance of the Commissariat Officers of the Forces.

The subjects treated were as follows:—

I. Causes of Disease.—Want of shelter from extreme heat and cold, excessive rains and storms of wind and rain; want of sleep, owing to inattention to the importance of giving them their food in the early part of the evening. Violence in the use of the ‘Guzboy,’ which induces a running of the eyes, which turns into sore eyes; heating fodder, which also produces running of the eyes. Bark and leaves covered with birds’ dung, which brings on spasms; in cutting trees for fodder this should be guarded against. Giving elephants grain when they are suffering from worms; the presence of worms is indicated by the animals eating mud. And exposure to the sun, the effect of which on the brain renders them liable to ‘Surzah,’ a tremor comes suddenly over the animal, and it falls down and dies. Causes of disease.

General Causes.—Neglect of mahouts and coolies, inattention to their food, which should be clean, wholesome, and sufficient; omission to bathe them daily, particularly in the hot weather and rains; overwork and bad driving.*

II. Treatment.—When there is a running of the eyes, the eyes should be washed with salt and water and a cooling salve applied around the orbits. Mud is the natural physic for worms. For four days after eating it, no grain should be given. On the third day an aperient, and after all signs of the mud have disappeared, half the usual quantity of grain should be given for a day or two until the animal appears quite well. To prevent ‘Surzah,’—there being no cure for it—a cotton wadded covering an inch thick should be placed over that part of the head which is oiled. This is only necessary when the animals are employed at midday. Treatment.

III. General Care.—Elephants require sleep, though not much. When an elephant has had enough to eat, and is not prevented by noise, want of room, uneven ground, &c., he will lie down before midnight, sleep for a couple hours or so, get up and eat a little, and then lie down on the other side, rising finally two or three hours before daylight to finish his fodder. It takes a considerable time for him to satisfy the first cravings of hunger, and if the fodder is not given in time to enable him to do so by midnight or thereabouts, he will go on eating all night and not lie down at all, and very few elephants can stand this want of rest for any time. But what is the practice of Government mahouts on a march? After the march is over, the elephant is tied to a tree, or his forelegs being fastened together, he is left in the sun, while the mahout eats and smokes and sleeps, till he thinks it is cool enough to take or send his animal for Care.

* Five elephants died in Abyssinia. See Captain Holland’s Report, page 263, Chapter XXVIII.

"fodder, that is, brought in late in the evening; then the animal has to be, or ought to be, bathed, then get his grain or chuppattees, and then, unless he has had a bath before dinner, be watered, so that he does not begin on his fodder till eight or nine o'clock, and then, voraciously hungry, he eats steadily on till the camp is awake again. If this sort of thing does not kill him directly, it so weakens his constitution that he is not fit for any real work again. An hour at furthest, after the march is over, the elephants should go for fodder, be well washed, or allowed to wallow in water; before sunset get a little fodder, and then the grain, and be fastened for the night with the night's fodder before them by seven o'clock at latest. An hour then is of great importance, for it gives them an hour to lie down and sleep, and that is a great deal to a beast who seldom sleeps four hours, though sometimes after very great fatigue and a good meal he will lie nearly all night. Early feeding should be insisted on.

"Habitual work and a sound and timely rest are necessary to keep elephants in health. When there is nothing for them to do, they should be sent a distance of five or six cos to bring in their own and working fellows' fodder. They should start very early in the morning and return before 3 o'clock. After an hour's rest they should be washed and left at leisure during the night, their chief time for eating and sleeping.

Diet.

"*IV. Diet.*—More attention should be paid to giving elephants fodder enough, and eatable fodder, not rubbish. No amount of grain will compensate for a continued short allowance of good fodder; an elephant requires a bellyful of fodder more even than a horse does of grass, and when not at work, and good fodder is plentiful, his grain may be safely reduced one-half *if the mahouts can be trusted*, otherwise it will be cheaper to continue the full allowance, and let the mahouts take their usual share of it.

"The grain given is rice or flour. Water should be given twice a day, and the elephant bathed daily.

Fodder.

"*V. Fodder.*—The descriptions of fodder given are:—Green charah growing in jheels, goolur, banian or burgud, jack tree, plantain, sugarcane, peepul, pakur, seemul, amrah, purme, dried dhan plant, nurkut plant, grass of every kind, bamboo, kurean kans (a kind of weed), dhan with its plants, jowar plant, mundwa, ooreed, and dāl."

In Abyssinia the elephants were placed throughout the campaign under the charge of Lieutenant Ouchterlony; and in the preceding Chapters, describing the march of the Force from Zula to Magdāla and back again, constant reference to them and the admirable manner in which they conveyed the heavy ordnance will be found.

CHAPTER XXVII.

LAND TRANSPORT.—(ORGANIZATION IN BOMBAY.)

THE organization of the Land Transport Corps at Bombay gave rise to a considerable amount of correspondence. Sir Robert Napier, on the 11th of August, nominated Major Warden of the 24th Native Infantry, to act as Director of Land Transport, subject to the approval of Government, and to such final orders connected with the organization of a Land Transport Corps as might be issued by Government; and orders were given to Major Warden to the effect that he and the officers placed under his orders were to receive charge of and tend such animals as might be made over to them by the Commissary-General; the animals being fed by the Commissariat Department on requisitions signed by the Director of Land Transport or his officers; all purchases were to be made under the arrangements and orders of the Commissary-General, either by commissariat agency or by Land Transport Officers, as the Commissary-General might find most convenient.

Major
Warden
appointed
Director.

The Quartermaster-General submitted to the Government of Bombay, on 22nd of August, the proposals of Sir R. Napier for the organization of the Land Transport Corps, in the following letter:—

“ 1. It will be in the recollection of Government that, about 11 years ago, a similar corps was raised for foreign service in Persia, and that on the return of the Expedition in 1857, its field organization was broken up, as too expensive for home service, and the cattle were distributed at certain stations of this Presidency where field columns are ordered to be held in readiness for immediate service.

Sir R.
Napier's
proposal for
a Transport
Train.

“ 2. I am careful to note this distinction between home arrangements in peace and those for foreign service in an enemy's country, because in the latter case combination of transport under one head, and its administration under one uniform system, are indispensable.

“ 3. It is requisite therefore to bear in mind that all the proposals which may now or hereafter be made with regard to the Land Transport Corps for Abyssinia have sole reference to its existence as part of the army destined to carry out military operations in that country. Thus any arrangements for purchasing and collecting cattle or equipments that may now be resorted to as a matter of economy, and indeed of necessity, in India, will not be held as binding in Abyssinia, where the officers, men, and cattle of the proposed corps will be under the same rules of discipline and organization as apply to our Artillery and other mounted corps.

“ 4. Each brigade of the Force will have its transport attached, of the kind and quantity suited to its wants; and each section of the Commissariat Department in Abyssinia will be similarly provided for as circumstances at the time being may require; but the relation of the Land Transport Corps to regiments and departments will be similar to that of any other department of supply belonging to the Force, the employ-

"ment of its resources being subject to the orders of the officer in chief command
"conveyed through his Quartermaster-General.

"5. The first section of the proposed corps now submitted was drawn up by Major
"Warden in accordance with the system of organization adopted in the original Land
"Transport Corps (now the Military Train), which Government may be aware forms a
"component part of the permanent establishment of the British Army.

"6. It treats of the number of European and Native officers, men, and establishments
"required for the efficient performance of the duties of the corps.

"7. In order to enable a comparison being drawn between the scale now proposed
"and what was sanctioned for Persia, I have had two separate statements drawn up (Nos. 1
"and 2, attached), which give the requisite information.

"8. It will be seen that there is a difference of expense amounting to Rs. 123 per
"100 mules per mensem in favour of the Abyssinian prospectus.

"9. The permanent charges in the latter will be as follows:—

"Head-Quarters' Staff of the corps, Director's pay,	} Rs.	
"and Office Establishment	} 2,520	per mensem.
"Pay of his Staff Officer or Adjutant	600	"
"Pay and Office Establishment of the Second in	} 1,388	"
"Command	} 400	"
"Pay of a Veterinary Surgeon	400	"

"Monthly Cost of each Division of Mules.

“ Establishment of one Division.	} Each Division, including European and Native commissioned, non-commissioned, rank and file, syces, veterinary, and artificers' establishments, 20,210 rupees.
“ 1 Field Officer or Captain Commanding.	
“ 2 Lieutenants.	
“ 4 Subedars.	
“ 4 Jemedars.	
“ 16 Havildars.	
“ 16 Naiques.	
“ 100 Privates.	
“ 1,040 Syces.	
“ 1 Serjeant-Major.	
“ 2 Quartermaster-Serjeants.	
“ Artificers' Establishment.	
“ Veterinary „	
“ Office „	

"10. A Division is composed of,—

"Squads.—Each 1 private, 12 syces, 25 mules.

"Sections.—Each 1 naique, 5 privates, 65 syces, 125 mules.

"Troops.—Each 2 Native officers, 4 havildars, 4 naiques, 20 privates, 260 syces,
"500 mules.

"A brigade of the corps is two troops; 1,000 mules. Each brigade is commanded
"by a subaltern. Two brigades are included in a division; the division being commanded
"by a Captain or Field Officer, as the case may be.

"11. The weight of baggage carried by a division of mules is about 180 tons, and
"in a mountainous country like Abyssinia it would be requisite to have at least half the

“ transport of the Army in mules and ponies, which, with a corps of coolies, could alone
 “ accompany the troops across country in any direction that field operations might render
 “ necessary : thus, his Excellency the Commander-in-Chief recommends that at least
 “ 10,000 mules and a corps of 3,000 coolies be procured, four coolies being estimated as
 “ equal to one mule.

“ 12. A division of camels would be subjected to similar organization, but as camels
 “ usually carry 400 lbs. each on field service, or double the burthen of a mule, the imme-
 “ diate expenses would be considerably lessened by their use. Taking, however, into
 “ consideration all the casualties of a campaign, the cost price of camels, and the great
 “ loss of life that occurs amongst them, the mules are by many pronounced the cheaper
 “ transport in the end ; but whether or no, they are the only reliable transport for a long
 “ campaign across a difficult mountainous country without roads, and they will remain at
 “ work for years afterwards, which camels do not, as we know from the fearful mortality
 “ amongst those animals which took place when the Bombay columns proceeded through
 “ Sind to Affghanistan in 1838 and 1840.

“ 13. His Excellency Sir Robert Napier recommends that a corps of coolies be
 “ sanctioned (as raised in China) to work as pioneers and porters ; but his Excellency is of
 “ opinion that this corps should be distinct from the Land Transport Corps under report.
 “ Its organization, therefore, will be treated of separately.

“ 14. The main line of communication between the base at the port of debarkation
 “ and the advanced posts of the Army having been fairly established and cleared for the
 “ passage of artillery, with depôts of supply at stated intervals, an immense saving of
 “ expense would be effected by the use of wheeled conveyances along that line ; but it
 “ must not be lost sight of that their use will be confined to that line, prior to the existence
 “ of which they would not be of the least use in so uninterruptedly mountainous a country
 “ as Abyssinia. The clearance of such line must therefore be preliminary to the intro-
 “ duction of this kind of transport. A pattern waggon and a pattern cart are under con-
 “ struction at Poona ; and his Excellency the Governor, having resolved to construct
 “ 100 wagons and 500 light carts (the former for mule or horse draught, the latter for
 “ bullocks), his Excellency the Commander-in-Chief recommends that the construction of
 “ these vehicles be contracted for in the Ordnance Department, under the orders of the
 “ Inspector-General of Ordnance, and that they be passed into the Service by Select Com-
 “ mittees of Officers.

“ As draught for the waggons referred to, I am to suggest, for the consideration of
 “ Government, the expediency of using any available aged Artillery horses of the field
 “ batteries in garrison in this Presidency, their places being filled by remounts pur-
 “ chased during the approaching season. Harness should be provided by the Ordnance
 “ Department.

“ 15. It will be the duty of the European and Native commissioned and non-commis-
 “ sioned rank and file to supervise the feeding and cleaning of the cattle, and to have
 “ charge of grain, forage, and equipments ; to see that the latter are always kept in good
 “ order by the artificers, and that the syces take proper care of the mules and other animals
 “ under their charge.

“ They are responsible that the animals are not ill-treated or overladen ; being only
 “ in the proportion of one private to 25 mules, as above detailed, they cannot themselves
 “ assist in loading and packing. This has to be done by the troops themselves, aided by
 “ the syces.

“ In the cases of the Commissariat, Field, General Hospital, Engineer, and Ordnance

“ Parks, &c., baggage must be laden by the public followers attached, such as dhoolie-bearers, store and tent Lascars, coolies, &c.

“ 16. A second section of the Land Transport Corps is also submitted, in which the question of equipments is treated of with reference especially to the carriage of ammunition. Pattern pack-saddles and cradles for this purpose are under preparation, and, when approved, I am to recommend that 2,000 be ordered to be made up by the Ordnance Department, under the orders of the Inspector-General of Ordnance, and that they be fitted to mules, and passed into the Service by Committees in the usual way.

“ For baggage, the common Native khogeer, now in use with the mules attached to the Commissariat Department, appears to be suitable; 8,000 of these, with sullectas, &c., complete, his Excellency recommends being made up under the orders of the Commissary-General for present purposes.

“ 17. It is proposed at once to organize the head-quarters of the corps and a mule division to the following extent, for which the sanction of his Excellency the Right Honourable the Governor in Council is urgently solicited :—

“ 1 Commandant or Director-General.	“ 4 Subedars.
“ 1 Staff Officer.	“ 4 Jemedars.
“ 1 Second in Command.	“ 16 Havildars.
“ 1 Commandant of Division (Field Officer “ or Captain, as the case may be).	“ 16 Naiques.
“ 2 Subalterns of Divisions.	“ 100 Privates.
	“ 1,040 Syces.

“ 18. The Native commissioned and non-commissioned rank and file will be drawn by volunteering from the Native regiments of Infantry in the Presidency, and his Excellency proposes to arm them with a short sword, or a shield and spear, as may be decided on hereafter.

“ 19. Syces may be entertained to the extent of 1,040, according as drafts of mules and ponies are received or known to have been purchased in India, or by the officers who have just left for the Persian Gulf, or by those who may be shortly despatched to the Red Sea and East African coast.

“ 20. I may here remark, with reference to what may appear a large office establishment for the Director, that the duty that devolves on his office is considerable. He keeps registers of all animals, of the various kinds of equipments, stores, material for workshops, pay and advances to the corps and establishments, general and regimental returns, and a large current correspondence. It is essential, therefore, in order to organize and to put everything into shape before taking the field, that he should at once entertain the following establishment, leaving the remainder to be filled up hereafter :—

“ 1 Head Clerk.
“ 3 Subordinate Clerks.
“ 2 Peons.

“ 21. As regards the pay of the Director's Office, it will be seen from accompaniment No. 1 that 720 rupees per mensem were allowed for the Persian Land Transport Corps. Major Warden states that a competent head clerk, who was formerly employed in that corps, and afterwards in the Pay Department in Poona, is willing to accompany him to Abyssinia as head clerk, provided his pay is equal to that of a Commissariat clerk holding a corresponding position. This may be as much as 300 rupees per mensem, but Major Warden proposes to meet any excess of this kind by keeping the aggregate

“ expense of his office establishment within the 720 rupees per mensem allowed to the
“ Director of the Persian Land Transport.

“ 22. With reference to the employment of European commissioned officers, a large
“ number have either volunteered or are willing to join the corps.

“ 23. As the work of organization progresses, selections will be made from the Army
“ for the various branches of the corps for which officers may be required.

“ Thus the mules, bullocks, and ponies, the camels, the elephants, and the wheeled
“ transport will all be subjected to the kind of organization adapted to each, but included
“ under the one general head of Transport Corps.

“ Standing orders for the guidance of the corps will be drawn up as soon as possible,
“ and submitted to his Excellency the Commander-in-Chief for approval.

“ 24. On the subject of sick carriage, our main reliance must be on the established
“ proportion of dhoolies allowed to regiments, namely, 5 per cent. for European troops,
“ and 1 per cent. for Natives.

“ 25. A proportion of ambulance carts might accompany the force, as useful for the
“ main line of communication before referred to. As regards the mule cacolet used by
“ the French, a pattern of which is in the Poona Arsenal, it may be said that even in the
“ plains it is a precarious and unsatisfactory kind of transport for a sick man, but in a
“ mountainous country, where the road is narrow and threads its way among precipices
“ and defiles, it may be pronounced too dangerous, when camels can be used. It would
“ be better to provide riding camels carrying two men than expose the sick to the danger
“ of using the cacolet in the mountains; riding saddles, with supports for the back, might
“ be made up on this account to the extent of 400. (See next para.)

“ 26. We have in store a large number of iron camel chairs, which in an open
“ country are very useful, if good animals be selected for them; they would be very
“ dangerous on narrow mountain roads, owing to their liability to come in contact with
“ projecting rocks and trees, &c.

“ 27. The proportion of dhoolies for the Force proposed by his Excellency Sir Robert
“ Napier is, at 5 per cent. for European troops, 177 with 1,062 bearers, and for the Native
“ troops at 1 per cent., 83 with 498; total, 260 dhoolies and 1,560 bearers.

“ The pack sick transport for the same Force, at 5 per cent. for Europeans, and 7
“ per cent. for Natives, will be as follows:—

“ For Europeans, 90 camels, each carrying two men.

“ For Natives, 290 camels, each carrying two men.

“ His Excellency the Commander-in-Chief would suggest that the report of the
“ Inspector-General, Indian Medical Department, be invited on the subject of pack sick
“ transport by riding camels, as above proposed.

The Memoranda by Major Warden, alluded to above, ran as follows:—

“ Section 1.—Officers and Men.

“ 1. I have, as suggested by you, taken up the organization of the Persian
“ Transport Corps to help me in this work.

“ 2. I would, however, at the outset, remind you that the stability of this organi-
“ zation or its efficiency was never sufficiently tested, in consequence of the Persian War
“ coming so speedily to an end.

“ 3. But I have not adhered to it much, as it is altogether so different (and, if I
“ may be allowed to say so, inferior) to the corps raised for the Crimean War, in which

" I held the command of a division, that in most cases I have made the latter my guide, avoiding those errors in it which after-experience brought to light.

" 4. I have taken as a basis the construction of one division, allotting to it a minimum strength of 2,140 mules; of course, if camels or elephants constituted the division the number of individuals would be reduced in ratio.

" 5. In the annexed statement, marked A, I give the distribution of a mule division.

" 6. I have included, in statement marked B, artificers and veterinary establishment, taking as a guide the rates of pay given for the Persian expedition.

" 7. You will observe that I have ignored all such persons as 'muccadums,' and given the supervision of these squads to Native soldiers and non-commissioned officers, either from the Cavalry or Infantry branch of the Army, and I will explain why.

" 8. Dearly-bought experience in the Crimea taught us how little we could depend on this class when it came to actual service; for if punished for neglect, or offended in the slightest degree, they not only absconded, but carried off the men under them, revenging themselves by sowing the seeds of mistrust and discontent among all the muleteers, and if detached with a convoy of mules on any duty (no matter how few in number) it was necessary to send a soldier in charge.

" 9. I would here notice that from ten to fifteen men, with a non-commissioned officer, were detached from each regiment in a division, and placed under the order of the Captain of a division of the Land Transport in charge of squads, and right well they worked; they answered admirably. Proud of being selected from the regiment for this work, they seemed to vie one with the other as to whose animals should be in the best order; and this is the reason why I would now so strongly urge the employment of Native soldiers for the charge of squads instead of muccadums. You will observe that in my distribution I have placed Native officers in charge of 'troops.'

" 10. I attached so much importance to having Sepoys, non-commissioned officers, and Native officers in charge of 'squads,' 'sections,' and 'troops' respectively, that I have taken them up first; for the whole effectual working of the corps depends on the state of efficiency in which each squad of mules and their equipment are kept up.

" 11. Before leaving this subject I would add that I propose filling up the vacancies in non-commissioned officers of sections by promoting the best men in charge of squads, and filling up vacancies in the latter by calling for volunteers from the Native branches of the Army.

" 12. I now pass on to the officers. No one will deny that their work will be most arduous, and to be performed efficiently will require bodily health, energy, and ability of no common order. Even subalterns will have great individual responsibility, for their charge consists of 1,000 mules with their equipments, and 1,200 men of all ranks and classes.

" 13. Moreover, they are likely to be frequently detached with their brigades as convoys.

" 14. The Captain of a division will have, of course, the command of two brigades (*vide* Statement marked A), and to the usual responsibility of such a charge the pay of all classes under his command will devolve, and he in his turn will be responsible for the correctness of his accounts to the Paymaster of the corps, of whom I have treated separately.

" 15. The Second in Command should, I think, be a Field Officer; and in the absence of the Commandant (or Director-General) on duty to any distant point, the whole responsibility will devolve on him.

" 16. At other times he would be required to visit the different divisions, and see personally that everything was in good working order.

" 17. A Staff Officer of ability, method, and knowledge of duty in all its details, is necessary; for whatever efforts may be made to reduce correspondence and paper work to the smallest proportion possible (and certainly, if this rests with me, it shall be the case), yet registers of men, animals, equipments, and stores must be kept.

" 18. The next officer is a Paymaster to the corps. I propose that the Captain of division should be his own Paymaster, and he submits his accounts to the Paymaster of the corps, who must at starting have a good establishment, so that after the campaign little or no difficulty should be found in closing the accounts of the corps if necessary; for it is well known that the real difficulty of this department only commences with its adjustments; and I purpose, in consultation with Colonel Barr and Major Chitty, to give the subject my most serious consideration, and to devise a concise and clear method of keeping the accounts.

" 19. No complication should be allowed in the accounts required from the Captain of a division. It should be a simple matter of debit and credit, the voucher in its simplest forms, and some degree of trust placed in this officer.

" 20. As regards the pay and position of officers. The officers of the Land Transport Corps in the Crimea (I speak of myself and other Captains of division) held the same position as the Assistant Quartermaster-General of the division of the Army, and were paid accordingly. Colonel W. Napier was the second in command, and Colonel McMurdo the Director-General, whose position was the same as Deputy Adjutant-General or Deputy Quartermaster-General of the Army; and I would respectfully suggest that this corps be placed on the same footing.

" 21. In closing this section, I ask permission most respectfully to point out how careful should be the selection of officers, European and Native; for the work of a Land Transport Corps to be done at all must be done well.

" 22. There must be no delays, no shortcomings; for in a country like Abyssinia there will be no remedy or help to fall back on. If it fails, it fails; on the efficiency and success of the Transport the very existence of the Army depends."

Section II.—Mule Equipment.

" I would divide this section under two heads: the first for the ordinary baggage and camp equipage of the Army; the second, and most important, for the conveyance of ammunition.

" The first is easily disposed of, for the ordinary pack-saddle, or khogeer, will meet every requirement, only it must be made of the best material and workmanship.

" The second, for the conveyance of ammunition, requires as much lightness as is compatible with strength; and Captain Swanson, Commissary of Ordnance, Poona, has been good enough to undertake the preparation of a pattern one, for the inspection of his Excellency the Commander-in-Chief, as soon as possible, and which I will proceed to describe.

" It is a strong pack-saddle with trees; hooks are fixed on each side where the front and back trees cross.

" An open cradle made of flat iron bands, with a ring at each end of one side, which is hung on the hooks.

" This cradle is open at the top, and its dimensions are sufficient for containing either a box of ammunition or a barrel of powder, which are simply placed in the cradle without any further trouble, a tarpaulin cover being thrown over the whole if

"necessary. The bottoms of the cradle are attached to each other by a broad leather band or girth passing under the belly of the mule, and keeps them from swinging about.

"I should wish to know as soon as possible whether I may enter into contracts for the supply of khogeers, other mule equipments and gear, and if so for what number of mules.

"Contracts will also require to be entered into for mule saddles for the animals employed in draught.

"I purpose laying every article before a Committee for approval prior to its being received into the corps."

STATEMENT showing the Monthly Expense of one Division, No. 1, and Head Quarters of the proposed Land Transport Corps for Abyssinia.
Strength 2,140 Mules.

Number.		Staff Corps Pay.	Batta.	Horse Money.	Ration Money.	Staff Money.	Total.	Grand Total.
		R. A. P.	R.	R.	R.	R.	R. A. P.	R. A. P.
1	Director or Commandant—Major ..	640 14 6	228	60	60	800*	1,788 14 6	..
1	2nd in command—Major ..	640 14 6	228	60	60	400†	1,388 14 6	..
1	Staff Officer—Lieutenant ..	225 12 0	30	60	60	200‡	575 12 0	3,752 9 0
1	Veterinary Surgeon—if above 10 years.	414 0 4	..	..	60	..	474 0 4	474 0 4
	<i>Each Division.</i>							
1	Captain in command—Paymaster.	374 1 0	41	60	60	{300\$}	935 1 0	935 1 0
2	Subalterns	225 12 0	30	60	60	{100 }	575 12 0	1,151 8 0
						200‡		6,313 2 4

* Assistant Commissary-General.

† As Deputy Assistant Commissary-General 2nd Class.

‡ As Sub-Assistant Commissary-General, 2nd Class.

\$ As Sub-Assistant Commissary-General, 1st Class.

|| As Paymaster.

Number.		Pay.	Batta.	Total of each.	Total.	Grand Total.
		R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.
						6,313 2 4
4	Subedars { 2 1st Class ..	100 0 0	15 0 0	115 0 0	230 0 0	
	{ 2 2nd	80 0 0	15 0 0	95 0 0	190 0 0	
4	Jemedars { 2 1st	35 0 0	7 8 0	42 8 0	85 0 0	
	{ 2 2nd	30 0 0	7 8 0	37 8 0	75 0 0	
16	Havildars	*17 0 0	5 0 0	22 0 0	352 0 0	
16	Naiques	*13 0 0	5 0 0	18 8 0	296 0 0	
100	Privates	*12 0 0	†3 0 0	15 0 0	1,500 0 0	
1,040	Syces	*10 0 0	‡3 0 0	13 0 0	13,520 0 0	
						16,248 0 0

* Special rates: the pay of these ranks in a Regiment of Native Infantry being—Havildar, Rs. 14; Naiques, Rs. 12; Privates, Rs. 7; Syces, Rs. 6.

† The extra batta of a private is Rs. 1½.

‡ The extra batta of a sycee is Rs. 2.

Statement showing the Monthly Expense of one Division—continued.

Number.		Pay.	Batta.	Total of each.	Total.	Grand Total.
		R. A. P.	R. A. P.	R. A. P.	R. A. P.	R. A. P.
	<i>Veterinary Establishment.</i>					22,561 2 4
1	Farrier Major, European ..	*60 0 0	..	..	60 0 0	
1	Native Farrier ..	40 0 0	..	..	40 0 0	
6	Cattle Doctors, 1st Class ..	30 0 0	†	30 0 0	180 0 0	
2	„ „ 2nd Class ..	12 0 0		12 0 0	24 0 0	
4	Assistant Nalbunds, 1st Class	33 0 0		33 0 0	132 0 0	
4	„ „ 2nd „	23 0 0		23 0 0	92 0 0	
						528 0 0
	<i>Native Artificers.‡</i>					
1	Head Smiths ..	40 0 0	5 0 0	45 0 0	45 0 0	
8	Smiths ..	19 8 0	3 0 0	22 8 0	180 0 0	
1	Head Carpenter ..	40 0 0	5 0 0	45 0 0	45 0 0	
8	Carpenters ..	19 8 0	3 0 0	22 8 0	180 0 0	
1	Head Mochee ..	20 0 0	5 0 0	25 0 0	25 0 0	
12	Mochees ..	19 8 0	3 0 0	22 8 0	270 0 0	
1	Head Rope Maker ..	40 0 0	5 0 0	45 0 0	45 0 0	
8	Rope Makers ..	19 8 0	3 0 0	22 8 0	180 0 0	
8	Bellows Boy ..	6 0 0	3 0 0	9 0 0	72 0 0	
8	Hammermen ..	10 0 0	3 0 0	13 0 0	104 0 0	
10	Puckaulies with Bullocks ..	21 0 0	3 0 0	24 0 0	240 0 0	
						1,386 0 0
	<i>OFFICE ESTABLISHMENT.</i>					
	<i>Director's Office.</i>					
1	Head Clerk ..	250 0 0	..	250 0 0	230 0 0	
1	Clerk ..	100 0 0	..	100 0 0	100 0 0	
2	„ ..	80 0 0	..	80 0 0	160 0 0	
1	„ ..	60 0 0	..	60 0 0	60 0 0	
1	„ ..	50 0 0	..	50 0 0	50 0 0	
1	„ ..	25 0 0	..	25 0 0	25 0 0	
						645 0 0
						25,120 2 4

* Consolidated, will be rationed by the Commissariat Department.

† Special rates.

‡ Ordinary rates of batta.

Number.		Total of each.	Total.
		R. A. P.	R. A. P.
3	Dragomans or Moonshies ..	25 0 0	75 0 0
	<i>2nd in Command Office.</i>		
1	Clerk ..	120 0 0	120 0 0
2	Moonshees ..	60 0 0	60 0 0
1	Peon ..	8 0 0	8 0 0
			188 0 0
	<i>Divisional Captain's Office.</i>		
2	Clerks ..	70 0 0	140 0 0
3	Peons ..	10 0 0	31 8 0
			171 8 0

No. 2.

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						R. A. P.			R. A. P.			R. A. P.		
<i>Natives—continued.</i>														
7	Cattle Doctors					48	11	4	200	15	4			
2	" "					11	15	5	23	14	10			
10	Puckalees with bullocks					24	0	0	240	0	0			
8	1st Class Nalbunds					32	8	0	260	0	0			
16	2nd " "					22	8	0	360	0	0			
1	Head Smith					45	0	0	45	0	0			
8	Smiths					22	8	0	180	0	0			
1	Head Carpenter					45	0	0	45	0	0			
6	Carpenters					22	8	0	135	0	0			
1	Head Moochee					25	0	0	25	0	0			
10	Moochees					22	8	0	225	0	0			
1	Head Rope Maker					45	0	0	45	0	0			
6	Rope Makers					22	8	0	135	0	0			
8	Bellows Boys					9	0	0	72	0	0			
8	Hammermen					13	0	0	104	0	0			
2	Head Muccadums					14	8	0	29	0	0			
10	Muccadums					12	8	0	125	0	0			
511	Drivers					10	8	0	5,365	0	0			
												7,150	8	0
												20,699	12	2

Average expense per 100 mules for the Persian Transport Corps .. Rs. 1,380

Average expense per 100 mules for the Abyssinian Transport Corps .. Rs. 1,277

Difference Rs. 123

A.—STRENGTH of a Division of a Land Transport.

Number.		Captain.	Subalterns.	Subedars.	Jemedars.	Havildars.	Naiques.	Privates.	Syces.	Mules.
1	Squad to consist of							1	12	25
5	Sections each						1	5	65	125
4	Troops "			1	1	4	4	20	260	500
2	Brigades "		1	2	2	8	8	40	520	1,000
1	Division "	1	2	4	4	16	16	80	1,040	2,000
	Spare Sepoys							20		
	Ditto Mules									140

B.—ESTIMATE of Pay and Allowance for one Division of Land Transport.

Number.		Total of Each.			Total.			Grand Total.
		R.	A.	P.	R.	A.	P.	
1	Commandant or Director-General							
4	Second in command (say a Major in the Staff Corps, holding a wing, which in itself is nearly Rs. 1,000 per mensem.)	1,200	0	0	1,200	0	0	
1	Staff Officer, if a Subaltern	600	0	0	600	0	0	
	" Captain	750	0	0	750	0	0	
1	Captain	800	0	0	800	0	0	
2	Lieutenants	525	0	0	1,050	0	0	
4	Subedars	100	0	0	400	0	0	
4	Jemedars	50	0	0	200	0	0	
16	Havildars	22	0	0	352	0	0	
16	Naiques	18	8	0	196	0	0	
100	Privates	15	0	0	1,500	0	0	
1,040	Syces	13	0	0	13,520	0	0	
	Waggon Drivers	12	0	0				
1	Serjeant-Major	60	0	0	60	0	0	
1	Quartermaster-Sergeant	60	0	0	60	0	0	
	<i>Veterinary Establishment for one Division of 2,140 Mules.</i>							
1	Farrier Major (European)	60	0	0	60	0	0	
1	" (Native)	40	0	0	40	0	0	
6	Cattle Doctors	28	11	4	172	4	0	
2	" 2nd class	11	15	5	23	14	10	
4	1st Assistant Nalbunds	32	8	0	130	0	0	
4	2nd " "	22	8	0	90	0	0	
	OFFICE ESTABLISHMENTS.							
	<i>Commandant or Director-General's Office.</i>							
1	Head Clerk	250	0	0	250	0	0	
1	Clerk	100	0	0	100	0	0	
2	" at Rs. 80	80	0	0	160	0	0	
1	" "	60	0	0	60	0	0	
1	" "	50	0	0	50	0	0	
1	" "	25	0	0	25	0	0	
3	Dragomen or Moonshees, at Rs. 25 ..	25	0	0	25	0	0	
	<i>Office Establishment of 2nd in Command.</i>							
1	Clerk	120	0	0	120	0	0	
2	Moonshees	30	0	0	60	0	0	
1	Peon	8	0	0	8	0	0	
	<i>Office Establishment of a Divisional Captain.</i>							
2	Clerks	70	0	0	140	0	0	
3	Peons	10	8	0	31	8	0	

<i>Artificers (Natives).</i>									
1	Head Smith ..	..	..	..	..	45	0	0	45 0 0
8	Smiths ..	..	..	..	..	22	8	0	180 0 0
1	Head Carpenter ..	..	..	..	..	45	0	0	45 0 0
8	Carpenters ..	..	..	..	..	22	8	0	180 0 0
1	Head Moochee ..	..	..	..	..	25	0	0	25 0 0
12	Moochees ..	..	..	..	..	22	8	0	270 0 0
1	Head Ropemaker ..	..	..	..	..	45	0	0	45 0 0
8	Ropemakers ..	..	..	..	..	22	8	0	180 0 0
8	Bellows Boys..	..	..	..	..	9	0	0	72 0 0
8	Hammermen ..	..	..	..	..	13	0	0	104 0 0
12	Puckaulees with Bullocks ..	..	..	..	..	24	0	0	240 0 0

With regard to the above proposed organization, the subjoined Minute was issued by the Governor of Bombay on the 31st of August :—

“ There are several questions of great importance raised by these proposals for the organization of a Land Transport Corps on the footing suggested by Major Warden. “ The first and chief question is, whether it is desirable to establish the corps on an independent basis, or subordinate to the Quartermaster-General’s Department, or to leave the Transport Department, as it has been hitherto, under the control and direction of the Commissariat. Minute by the Governor of Bombay in reply to Sir R. Napier’s proposal.

“ I have looked carefully into the proceedings of Government when a similar proposal was made by Colonel Phayre in 1859, and I have also read with attention the Report of, and the evidence given before, the Committee on the Administration of the Transport and Supply Departments of the Army, presided over by Lord Strathnairn; and the result upon my mind is the conviction that the change now proposed would be most impolitic.

“ It is true that the Committee propose that the existing system should be changed in so far as that they suggest the appointment of an officer, who shall be the Head of the Administrative Departments of the Army, and be responsible for and control all Departments of Supply, including, besides the Purveyor’s, Military Stores, and Barrack Departments (as regards fuel, light, and straw), the Commissariat and Transport Departments; but this is not the question now, nor, if it were, should I be disposed to sanction so radical a change in our Army administration at the moment of entering into the field.

“ The question now raised is the separation of the Transport Service from the Commissariat, and as to this the Committee emphatically say that army transport should be placed under one direction and control, to be vested in the officer responsible for the supply of the Army; and under existing arrangements that officer is the Commissary-General.

“ I would particularly refer his Excellency the Commander-in-Chief and my colleagues to the evidence of Commissary-General Drake, Deputy Commissaries-General Fonblanque and Bailey, the opinion of Sir J. Hope Grant, the Memorandum of Colonel M’Murdo, of Sir J. Michel, and of Commissary-General Power, and to Sir H. Rose’s (now Lord Strathnairn’s) reports on the French system of transport, referred to by Lord Elphinstone in a Minute dissenting from a similar proposal to the present, made by the Quartermaster-General in 1859. The present Commander-in-Chief in India, in another Minute written shortly after, expressed his pleasure that Colonel Phayre’s

“ proposal for a Transport Department, apart from and separate from the Commissariat, had been ‘upset by the resolution of Lord Elphinstone’s Government and the reasoning of Sir Hugh Rose.’

“ I have no difficulty, therefore, in adhering to an opinion which recommends itself to my own mind, and is supported by such a weight of authority.

“ It may be hereafter a proper subject for consideration, and I think it will be, whether a system such as that recommended by the Committee, should not be adopted in our Army. There may, on the other hand, be reasons which would make its introduction into India inadvisable, though it may be advantageous elsewhere. On this I do not now wish to express an opinion. For the present I should decline to consent to a change the merits or demerits of which will have to be immediately tested in an Expedition, the success of which will probably depend far more on the facilities of transport and supply than is ordinarily the case with an army operating in an enemy’s country.

“ A further question, however, arises as to the organization of the Land Transport Service, assuming that it is left, as I think it must, under the direction and control of the Commissariat. What the amount and character of that organization ought to be is a most difficult question, but I must confess that it appears to me that the scheme proposed by Major Warden is more elaborate and more complicated than is required, or indeed than is advisable. I believe that just such an organization, under special officers as shall suffice to secure that, for whatever service the Commissariat may require them, there shall always be forthcoming a sufficient strength of healthy animals, well cared for and well equipped, with proper attendants to drive them, feed them, take care of them and their equipments, with packers, &c., to load them, is what we want; and any more complete and elaborate organization will tend only to establish it as an independent service, which is exactly what I desire to avoid, and to remove it from the direction and control of the Commissariat.

“ I think it would be sufficient, therefore, to put the Transport Service under one officer, who should be the Director-General (in the present instance Major Warden), who would be assisted by a sufficient staff in the proportion of not less than one staff officer to every 2,000 mules, or equivalent of 2,000 mules, besides a small establishment for returns, correspondence, &c. The establishment of divisions appears to me unnecessary, and likely to produce difficulties and confusion where fractions of divisions may have to be employed. The whole Force should be divided into troops of 100 mules (or their equivalent of camels or other animals as employed) under the command of a native officer; and a superior native officer should have the inspection of every five troops or 500 mules. Under this system the Head of the Commissariat will indicate what transport he requires for any service, and the Director-General will see that the necessary transport under its proper officers is provided; but when provided, the direction and command of it will rest with the Assistant-Commissariat Officer appointed for the particular service by the Commissary-General, and who will be responsible to him for the custody, delivery, storage, or distribution of the stores or supplies entrusted to him.

“ A question is raised by Major Warden as to the employment of muccadums, in whose place he suggests that we should employ privates of the native army. He says that better experience in the Crimea has convinced him that it is desirable to substitute some other class for the muccadums. I do not know whether he refers to a failure in the service of Indian followers in the Crimea, if any such were employed, or only to men holding a similar position. Be that as it may, I fancy that the facilities for desertion in Abyssinia will not be great. A more formidable objection to Major Warden’s proposal

“ is the doubt expressed by those who have had much experience of this class of men and
 “ of Commissariat service in India, whether the syces will be found to take service
 “ willingly except under the system with which they are acquainted, which places them
 “ under muccadums whom they know and who understand them. Of the validity of this
 “ objection I am unable myself to judge; but in this particular also I am fully convinced
 “ that it is not desirable to hazard a change at the very moment of commencing a
 “ campaign, and thus staking the efficiency of our land transport, on which our whole
 “ success may depend.

“ A further question arises as to the propriety or necessity of enlisting the men
 “ employed in the Land Transport Corps; and on this subject I find Sir Wm. Mansfield
 “ expressed a strong opinion that, in case of an Anglo-Indian force being sent for opera-
 “ tion on land out of India, ‘ a military transport train, organised for the special purpose,
 “ ‘ and composed of enlisted men, under regimental officers, should be put on foot by the
 “ ‘ Commissariat.’ He adds, ‘ such an organization should be a *sine quâ non* in a foreign
 “ ‘ expedition.’

“ I am aware that an opinion is entertained by experienced officers that it would be
 “ found that the class of men required for these duties would be found unwilling to
 “ enlist; and that the proposal is therefore impracticable. But I cannot but think that
 “ the promise of an adequate and liberal pension, in case of death, or being incapacitated
 “ while on service, would be found a sufficient inducement for the men to enlist tem-
 “ porarily for the Expedition; and to enlist them longer I do not think would be desirable.
 “ A greater difficulty may perhaps be found on its being necessary to obtain the sanction
 “ of the Government of India, or of the Secretary of State, to an enlistment on such
 “ conditions. I will only add that the question whether the men are enlisted or not,
 “ is one of secondary importance.

“ As regards the equipment of the corps, this is a matter so entirely departmental,
 “ that I have only to say that, subject to the opinion of his Excellency the Commander-
 “ in-Chief, as to the best form, &c., of the equipments, no time should be lost in providing
 “ them. The Director-General should immediately obtain authorised patterns of the
 “ saddles, harness, packs, carts, &c. An estimate of the quantity required should be
 “ submitted for sanction, and tenders invited by the Commissary-General, or their con-
 “ struction commenced in the Government Departments forthwith.”

These views were replied to in the following Minute by Sir Robert Napier, dated the 9th September:—

“ I do not think the time is appropriate for any discussion as to the Department
 “ under which the Land Transport should be placed, and I accept without hesitation his
 “ Excellency’s decision to place it under the Commissariat. Minutes by
Sir R.
Napier.

“ I believe that the success of systems depends more on the men who work them
 “ than on the systems themselves.

“ But I cannot accept without protest a decision to throw such a body of men as the
 “ drivers of our transport animals will be, if we get them, on an expedition in a foreign
 “ country, without a very complete organisation, to secure order and discipline.

“ There may be Egyptians, Arabs, Persians, and Hindustanis, or Abyssinians mixed
 “ up together, and without more organisation than the ordinary one in the Commissariat
 “ Department, nothing but confusion would ensue, the people of the country would be
 “ plundered and ill-treated, and all our efforts at conciliation defeated.

“ The Commissariat Department have had but a small quantity of their own carriage

“ to manage ; the greater portion has been hired carriage, managed under a kind of social
 “ organisation peculiar to itself, which has existed from time immemorial, and which goes
 “ on somehow, one hardly knows how ; but this is very different from the large body of
 “ drivers who must now be engaged, and for whom a regular system of control must be
 “ instituted.

“ I understand the scale of establishment proposed by Major Warden and the
 “ Quartermaster-General resembles generally that which was formerly instituted in the
 “ Presidency for the Persian expedition. Admitting that the numbers are very great, I
 “ shall be prepared to try any reasonable reduction which may be proposed by a Com-
 “ mittee composed of Lieutenant-Colonel Holland, Deputy Commissary-General, Major
 “ Warden, and any other officer appointed by Government to consider the question.”

These remarks were commented on in the subjoined Minute by the Governor on the same day :—

Minute by
the Governor
of Bombay.

“ His Excellency is under a misapprehension, if he supposes that I should wish the
 “ organisation to be nothing more than the ordinary one in the Commissariat Department.
 “ I expressly said that Major Warden should have a sufficient staff of officers under him,
 “ and if the proportion of one to each 2,000 mules is not enough, I am quite willing that it
 “ should be increased. I should think that the appointment of one European officer to
 “ each 1,000 would be ample, but on this I am quite willing to waive my own opinion.
 “ There are two things only to which I feel a great objection : 1st. That the Force should
 “ be organised in a shape that shall make it an independent corps, instead of being
 “ a corps subordinate to the Commissariat; and 2nd, to devolve on a Committee the
 “ decision of a point which we can very well settle without the intervention of any such
 “ body.”

The reply to this was given in a Minute by Sir Robert Napier, dated the 11th September:—

Minute by
Sir R.
Napier.

“ As his Excellency the Governor objects to the appointment of a Committee to
 “ prepare a scale of establishment for the land transport, I conclude that his Excellency
 “ will appoint some officer or other person to do so.

“ I have, therefore, only to request that, when any definite form of establishment is
 “ resolved on, I may be favoured with an opportunity of offering an opinion upon it,
 “ which, considering how large a share I shall have in the use of it, and how much the
 “ credit of this Government will be affected by its success or failure, his Excellency in
 “ Council may think desirable.

“ It may be as well to note that I was quite unaware that the question of the
 “ Department to which the Land Transport should belong had already been discussed in
 “ this Presidency, and that the official traditions of the Government were adverse to
 “ the Quartermaster-General's Department having charge of it; had I been informed of
 “ this, I should not have permitted the proposal to be made in that form.

“ The superintendence mentioned in the Government Resolution does not appear to
 “ me to meet the requirements of the case, as far as I can judge of it.”

Resolution
of the
Government
of Bombay on
the organiza-
tion of Land
Transport.

The result was the following Resolution of the Bombay Government, dated the 12th September :—

“ There are several questions of great importance raised by these proposals for the
 “ organisation of the Land Transport for the Abyssinian Expedition.

“ The first and chief question is, whether it is desirable to establish the corps on an independent basis, or subordinate to the Quartermaster-General's Department, or to leave the Transport Department, as it has been hitherto, under the control and direction of the Commissariat.

“ His Excellency in Council has reviewed carefully the proceedings connected with a similar proposal made by the Quartermaster-General in 1859, and the opinion of this Government was expressed in Resolutions of 30th September, 1859, and 9th June, 1860. His Excellency in Council has also had the advantage of perusing the evidence given before the Committee on the Administration of the Transport and Supply Departments of the Army, presided over by Lord Strathnairn. That evidence is uniformly confirmation of the previous decision of this Government on the question now again raised of the separation of the Transport Service from the Commissariat. The Committee emphatically say that army transport should be placed under one direction and control, to be vested in the officer responsible for the supply of the Army; and under existing arrangements that officer is the Commissary-General.

“ Sir William Mansfield, in 1860, expressed his pleasure that the proposal for a Transport Department apart from and separate from the Commissariat had been ‘upset by the resolution of Lord Elphinstone's Government, and the reasoning of Sir Hugh Rose.’

“ His Excellency in Council has therefore no hesitation in deciding that the transport shall be under the same general direction as the Department of Supply.

“ The 5th to the 12th paragraphs of the Quartermaster-General's letter treat of the internal organization of the Transport Corps, and his Excellency in Council thinks that the scheme proposed by Major Warden is more elaborate and complicated than is desirable. He conceives that it would suffice to place the transport under one officer as director (in the present instance Major Warden), who would be assisted by a sufficient staff, with a suitable establishment of clerks. A proportion of one European commissioned officer to 1,000 mules (or their equivalent) will probably be sufficient at first. The whole Transport Force might perhaps be advantageously divided from the first into troops of 100 mules (or their equivalent), under the command of a native officer; and a superior native officer should have the inspection of, say, five troops, or 500 mules; but at present the more complicated organization in divisions appears unnecessary, and likely to produce difficulty and confusion where fractions of divisions may have to be employed; and it would seem preferable to leave the further development of internal organization to be made as circumstances and experience may indicate. Under this system the Head of the Commissariat will indicate what transport he requires for any service, and the Director-General will see that the necessary transport, under its proper officers, is provided; but when provided, the direction and command of it will rest with the Assistant-Commissariat Officer appointed for the particular service by the Commissary-General, and who will be responsible to him for the custody, delivery, storage, or distribution of the stores or supplies entrusted to him.

“ A question is raised by Major Warden as to the employment of muccadums, in whose place he suggests the employment of privates of the Native Army. He says that experience in the Crimea has convinced him that it is desirable to substitute some other class for the muccadums. Major Warden particularly mentions that the muccadums in the Crimea, on small provocation, deserted with the men under them. The facilities for desertion will not be great in Abyssinia, and the existing system seems to be approved by many who have had much experience, and his Excellency in Council thinks it unadvisable to hazard such a change at the moment of commencing a campaign.

"The 13th paragraph of the Quartermaster-General's letter relates to the entertainment of a cooly corps, which it has since been determined to obtain from Bengal.

"The 14th paragraph relates to draught transport, and the remarks on this subject have been superseded by separate action.

"The 16th paragraph refers to equipments. Subject to the opinion of his Excellency the Commander-in-Chief as to the best form, &c., of these, no time should be lost in providing them.

"The 17th to 22nd paragraphs refer to the immediate organisation of the Head-quarter Transport Establishment, which should now be undertaken without further delay by Major Warden, under the general direction of the Commissary-General, in accordance with the views above expressed. The Commissary-General will keep his Excellency the Commander-in-Chief informed of the detailed arrangements made under these orders.

"The Commissary-General should consult the Inspector-General Medical Department, on the subject of sick carriage, as noticed in the last part of the Quartermaster-General's letter."

Land Transport placed under the Commissariat Department.

The Land Transport Corps, having been, by the above resolution of the Bombay Government, placed under the Department of Supply, it was, with that department, placed under the direction of the Commissary-General when in India, and on arrival in Abyssinia under a Controller of Supply and Transport, whose duties were defined, as follows, by the Bombay Government:—

Controller of Supply and Transport appointed. His duties.

"As the duties and responsibilities of the office of Controller of Supply and Transport are in some respects new in function as well as in name, his Excellency in Council gives the following instructions:—

"The Controller will be the agent of the Commander-in-Chief in the field for all that concerns supply, transport, provisions, and clothing not supplied direct from the Clothing Department, and for communication with the Marine authorities in respect of requisitions touching sea transports.

"Regarding land transport, the Controller will arrange, under the instructions of the Commander-in-Chief and in communication with the Commander-in-Chief and the Quartermaster-General, as regards strategical considerations, and the nature of the country, the quantity and description of all transport to be maintained, apportioning it according to the wants of the various Services, and being responsible for its organisation and efficiency, as well as for its economic and judicious working. The number and material of the Transport Establishment will be constantly checked by the Controller by means of musters and inspections, of which periodical returns should be furnished to the Commander-in-Chief. The organization of local auxiliary transport and its incorporation with the regular transport will be an important duty of the Controller.

"Recommendations for promotion in the Transport Corps will be made on the same principle as in the rest of the army. The Director of the Train will submit the promotions to the Controller for the approval of the Commander-in-Chief.

"The Controller will exercise, under the authority of the Commander-in-Chief, immediate direction over the departments concerned in supplying the troops with provisions, forage, fuel, and light. The collection of supplies, the economical application of local resources, the formation of dépôts and reserves, the arrangements for custody, preparation, and distribution of food for man and beast, will be performed under the

“ general direction of the Controller, who will keep the Commander-in-Chief informed of the state of such supplies.

“ The Controller will authorize, with the sanction of the Commander-in-Chief, subject to the confirmation of Government, all expenditure, in what department soever, not provided for by Regulations.

“ The Controller will be responsible that all accounts, returns, and other documents required by the existing system be duly rendered by the officers of the departments under his control.

“ The Controller will submit to Government all demands from what department soever, for supplies from India.

“ The Controller will report to Government all extraordinary sanction of expenditure of money and stores, laying copies of his reports to Government before the Commander-in-Chief.

“ In taking up immediately the position of Controller of Supply and Transport of the Abyssinian Force, Lieutenant-Colonel Holland, Deputy-Commissary-General at Bombay, and nominated by the Government to fill the post of Controller, must not interfere with the function and authority of the Commissary-General; and his own function until departure of the Force will be restricted to organization of the field arrangements and such general cognizance of all preparations as will enable him to keep his Excellency the Commander-in-Chief perfectly informed, together with the duty of communicating to Government his Excellency the Commander-in-Chief's wishes in connection with these preparations.”

The Home Government approved of the Controller being the channel of submission for demands of supplies from England, as well as from India, on the understanding that the Commander-in-Chief of the force was to be responsible that the supplies indented for were such as were actually required for the use of the Expedition. Power was, however, reserved to the Controller to act, in case of emergency, in the absence of the Commander-in-Chief.

The Establishment engaged for the Office of the Controller of Supply and Transport was as follows:—Head clerk, rs. 250; 2nd clerk, rs. 200; 3rd clerk, rs. 150; 4th clerk, rs. 120; 5th clerk, rs. 100; Peons (4, at rs. 10 each), rs. 40.—Total per month rs. 860. Establishment.

The composition of the Land Transport Corps was now proposed by Lieutenant-Colonel Dunsterville, the Commissary-General of the Bombay Army, and the Government Bombay approved of the following plan for its organization. Composition of Land Transport proposed by the Commissary-General, and sanctioned by Government.

The establishment for every 2,000 animals, was fixed at 1 captain, 2 subalterns, 4 chief inspectors (European non-commissioned officers), 1 to every 500 animals; 8 second inspectors (native non-commissioned officers), 1 to every 500 animals; 16 head muccadums, 1 to every 100 animals; 80 second muccadums, 1 to every 25 animals; 1 driver to every two animals; 2 weighing men, and 6 beggarées.

It was calculated that if the number of animals with the force amounted to 20,000 mules or pack bullocks, and 8,000 camels, the officers required would be 14 captains and 28 subalterns.

At this time the following number of animals and followers were being collected in the Bombay Presidency:—At Poona, 1,000 ponies, 4,000 pack bullocks, 1,800 muleteers, 1,600 camel drivers, and 560 dhooly bearers. At Kurrachee, 200 dhooly bearers. At Deesa, 100 camelmén, 30 muleteers, and 200 dhooly bearers. At Belgaum, 50 muleteers, and 100 dhooly bearers. At Bombay, 300 camelmén, and 200 muleteers. From the Madras Collection of animals in the Bombay Presidency.

Presidency 500 dhooly bearers were expected. 7,600 camel equipments, 3,000 mule and tattoo equipments, 4,000 pack bullock equipments, 100 camel pucks, and 300 mule pucks, were being made up at this time in the Bombay Presidency for the Transport Corps.

Pay of
Establish-
ment fixed.

Lieutenant-Colonel Dunsterville fixed the following rate of pay, with warm clothing, free rations on leaving India, and return passage for the Land Transport establishment:—

Chief inspectors	..	..	at Rs. 120 per month
Second inspectors	..	..	" 80 "
Weighing men	..	..	" 30 "
Head muccadums*	..	..	" 15 "
Second muccadums	..	..	" 12 "
Camel drivers	..	..	} Rs. 10 each per month.
Muleteers	..	..	
Pack and draft bullock drivers	..	..	
Pony drivers	..	..	
Syces†	..	..	
Dhooly bearers	..	..	
Beggarees‡	..	..	
Peons§	..	..	

Artificers'
Establish-
ment.

The entertainment of two sets of artificers' establishments was also sanctioned, each of the following strength, one to proceed with the Force about to embark, and one to remain at Poona:—

8 First assistant nalbunds	..	..	at Rs. 33 each per month.
13 Second assistant nalbunds	..	..	" 22 "
1 Head smith	..	..	" 45 per month.
8 Smiths	..	..	" 22 each per month.
1 Head carpenter	..	..	" 45 "
6 Carpenters	..	..	" 22 "
1 Head mochee	..	..	" 25 "
10 Mochees ¶	..	..	" 22 "
1 Head rope maker	..	..	" 45 per month.
6 Rope makers	..	..	" 22 each per month.
8 Bellows boys	..	..	" 9 "
8 Hammermen	..	..	" 13 "

Office
establish-
ment for
Director.

The Director of the Transport Train was authorized to entertain the following Office Establishment:—

1 Head clerk	..	..	..	at Rs. 250 per month.
1 Second clerk	..	..	..	" 150 "
1 Third clerk	..	..	..	" 100 "
1 Fourth clerk	..	..	..	" 80 "
1 Fifth clerk	..	..	..	" 60 "
1 Moonshee	..	..	..	" 50 "
1 Naique** of peons	..	..	..	" 12 "
4 Peons	..	..	..	" 10 "

The Commissary-General was of opinion that considering the very liberal staff allowance of the officers under Major Warden, and the nature of the duties to be entrusted to them,

* Muccadums—Supervisors. † Syces—Grooms. ‡ Beggarees—Labourers. § Peons—Office servants.
|| Nalbunds—Farriers. ¶ Mochees—Workers in leather. ** Naique—Corporal.

it was not at all necessary to allow them any office establishment, as he thought that in field service the correspondence ought to be as little as possible, and whatever there might be could be conducted by the officers themselves.

The payment of the followers was to be made in the presence of officers, the acquittance rolls being prepared by their inspectors, but to be initialled by the officer before whom the payment might be made.

It was admitted that amongst such a mass of followers, collected from all parts of the world, and of various creeds and castes, some organization was indispensable, and that it was a matter of serious import, considering the peculiar service, and in a comparatively unknown country, far distant from India, how this was to be accomplished.

Lieutenant-Colonel Dunsterville stated that he was of opinion that placing this heterogeneous mass entirely under military organization, as was attempted with the Persian Land Transport Corps, would not answer; but he thought that by a careful selection of the officers and subordinates, allowing the followers (camelmen, muleteers, &c.) to choose their own second muccadums, and, above all, kind treatment combined with firmness, would in the end prove efficacious.*

Early in October, Sir Robert Napier was allowed the opportunity of inspecting the Land Transport Corps, when he wrote the following demi-official letters to the Governor of Bombay:—

“ I have inspected the Land Transport Corps, and regret to say that I am convinced that, in its present disjointed state, it would utterly fail to answer its purpose.

“ I have received the Commissary-General's demand for non-commissioned officers, European and native, and will take the best measures to procure them from the Army; but the great fault, besides the want of the principle of order and discipline, which the military element will produce, there is a great gap between the second inspectors and the head muccadums, representing 80 and 15 rupees a-month respectively. The lower grades are not of character and responsibility to be capable of fulfilling the duty of managing the mules and mule drivers that will often be detached under their charge; and there is no class that will be able to teach them and their subordinates the proper care of their animals and their equipments; nor is there sufficient guarantee that the mules' food, which will be under their care when detached, will be properly applied.

“ Intermediate grades are required to connect the chain of responsibility, on sufficient pay to secure respectable native non-commissioned officers, who can bring with them a knowledge of the care and treatment of cattle; non-commissioned, about 40 rupees, and privates of the best class about 20 rupees.

“ I shall be glad if your Excellency will sanction this proposal.

“ The men, when selected, to be conveyed here at Government expense. I have no doubt the Madras Cavalry, the Nizam, and Mysore, will give good natives; and the Cavalry regiment here; and Madras, and the Bays, will probably send us Europeans.

“ I have instituted inquiries on these points by telegraph.

“ It is of the greatest consequence to have farriers, and for them we must pay about 40 rupees, in addition to regimental pay. A veterinary surgeon is very necessary here, to inspect mules at the last moment, to prevent any glanders from getting on board.”

Sir Robert Napier's demi-official letter of the 7th October was as follows:—

“ I have now gone very carefully into the detail of the Land Transport Corps, and

Sir Robert Napier's letter of 5th October suggesting modification in the above establishment.

Sir Robert Napier's demi-official letter of the 7th October

* Letter from Lieutenant-Colonel Dunsterville dated the 20th of September, 1867, and sanctioned by Bombay Government Resolution of 28th idem.

" would propose, for your Excellency's consideration, the following modification of the establishment, which I have discussed with Colonel Dunsterville and Major Warden.

" Instead of the amended establishment of—

4 Head Inspectors,
8 Second Inspectors,
16 Head Muccadums,

" I would propose—

Mules, 2,000	.. { 4 Head Inspectors, at Rs. 120 each.
" 200	.. 4 Second Inspectors " 80 "
" 100	.. 10 Third Inspectors " 40 "
	.. 20 Head Muccadums " 20 "

" The Cavalry should be most looked to to supply these men, as they would bring with them a knowledge of tending and managing cattle; but any men found with such qualifications would be taken from any branch of the Army, and they would soon teach the others, who now must come, in many cases, quite ignorant of such duty, but, if properly taught, may make very good drivers.

" The soldiers will still remain soldiers, and return to their regiments hereafter.

" Their service and regimental character are guarantees for good behaviour, which are wanting in many cases now.

" I attach very great value to the superintendents of 200 and 100 mules, as they will have many opportunities of doing good or harm when detached, as they must often be. When on detached parties, the opportunities of appropriating the food of the mules, of overloading with their own accumulations, &c., will be very frequent, and I attach more value to these classes than to the second inspectors even.

" It is desirable to have a portion of spare men in cases of sickness; and desirable some kind of clothing should be given,—a jacket of some sort,—which should be of uniform colour, that a mistake may be distinguished at once.

" I am quite sure that Major Warden requires a second, under any name that may be considered suitable; but the extent of his charge requires that he should have some one to carry on his work in case of temporary disability.

" I give great credit to Colonel Dunsterville and Major Warden for their exertion in collecting the establishments. Their exertions have been very great and laudable. It requires that the establishment be seen, to fully appreciate the absolute need of complete supervision and organization, to render of real value the expenditure incurred."

Sir Robert Napier's views, as noted above, were also represented officially on the 11th October, by the following letter from the Controller of Supply and Transport, to the Secretary to Government:—

Sir Robert
Napier
officially
requests
modifica-
tions in esta-
blishment.

" The Commander-in-Chief, after due consideration of Colonel Dunsterville's proposal for proceeding in the formation of the Land Transport Establishment, and after a careful inspection of the portion of the establishment already embarked, begs to recommend the following establishment for a division of 2,000 mules:

" 2. Instead of that previously proposed of, viz. :—

" 4 Head Inspectors	at Rs. 120 each.
" 8 Second "	" 80 "
" 16 Head Muccadums	" 15 "

“ His Excellency recommends—

“ 4 Head Inspectors	at Rs. 120 each.
“ 4 Second „	80 „
“ 10 Third „	40 „
“ 20 Head Muccadums	20 „

“ 3. The Commander-in-Chief has stated his reasons for these proposals in his demi-official letters to his Excellency the Governor, of the 5th and 7th of October; and his Excellency desires me to say that he considers that the addition of these grades under any denomination that his Excellency the Governor may prefer, is indispensable to the efficiency of the Land Transport.

“ 4. The Commander-in-Chief begs to refer to the third Article of the decision of Lord Straithnairn's Commission, in which it says ‘the whole of the Army Transport organised by the Government should be of a military character under military subordination, but all the officers should have military command limited to their own corps, and should not be employed on any duty unconnected with transport.’

“ 5. The muccadum—regarding whom his Excellency the Governor relies on Colonel Dunsterville's long experience—a valuable person when he is procurable, is the result of the Indian patriarchal constitution of carriers of all descriptions; and by virtue of his connections or the possession of a large share in the ownership of the animals he employs, he obtains sufficient influence to ensure the fidelity and obedience of his working fellows, and often has means of giving compensation if they fail.

“ 6. But such a class of muccadums who could be relied upon to see to the care of the animals when detached, is not to be found amongst the new establishment.

“ The drivers and the head muccadums are collected from different quarters, and are disconnected with each other.

“ The guarantee for good service which is to be found with the soldier from his hopes of pension and his regimental character are wanting; as is also the principle of strict obedience to orders.

“ 7. The establishment which has been engaged will no doubt prove very valuable when instructed in their work and under proper superintendence, but without the addition which is recommended, the greatest confusion and misfortune may be anticipated.

“ 8. An officer who served in Bhotan writes as follows :—

“ ‘At the last moment—the moment when it was most necessary to strike a blow—
“ ‘we could not have moved, because our carriage transport broke down; the attendance
“ ‘with them was insufficient.’

Experience
in Bhotan.

“ On receiving the sanction of his Excellency the Governor in Council, his Excellency the Commander-in-Chief will at once cause the necessary military subordinates to be drawn from the ranks of the British and Native Army, taking them as much as possible from the Cavalry branch to secure a knowledge of the care and equipment of the transport animals, in which they will be able to instruct the untrained subordinates who must necessarily form part of the establishment raised under such an emergency.”

These requests were sanctioned on the 15th October, by the Government of Bombay, and volunteers for the Transport Train were called for accordingly from the ranks of the Army, in the latter end of October, by the following memorandum, from the Adjutant-General of the Bombay Army.

Government
sanctions
modification.

The non-commissioned officers of the Native Army selected for this service were borne as supernumeraries in their respective regiments, until return from field service; when they were to be absorbed as vacancies occurred.

Volunteers
called for
from the
Army.

This plan could not be adopted in the case of British regiments, as the War Office Regulations did not admit of an excess of non-commissioned officers being borne on the established strength of regiments; it was therefore arranged that European non-commissioned officers should resign their rank during the time they held appointments in the Transport Train.

Native regiments giving volunteers for the Transport Train were recruited up to the number of men thus withdrawn.

“ To Divisions and Brigades.—Memorandum.—The services of 40 serjeants of Royal Horse and Field Artillery and Cavalry are required for the Land Transport Corps in Abyssinia. They must be of a superior class, of good education, particularly as regards keeping accounts.

“ They will receive a consolidated salary of 120 rupees per mensem.

“ 2. The services of 40 non-commissioned officers of Garrison Artillery, European Infantry, and Native Cavalry and Infantry, are also required.

“ Of these men the Europeans should be able to keep accounts, and have a very fair knowledge of reading and writing. Natives should possess a similar knowledge in the Vernacular.

“ Salary (consolidated) 80 rupees per mensem.

“ 3. Further there are required 100 men on a consolidated salary of 40 rupees per mensem, to be selected from privates of European Artillery, Cavalry, and Infantry, and non-commissioned officers of Native Infantry.

“ Also 150 privates of Native Infantry, on 20 rupees per mensem. These men must be able to read and write sufficiently well to enable them to keep daily Rolls of their men, the Europeans in English, and natives in the Vernacular. Candidates must be of good character.

“ 4. All ranks will receive rations in addition to the consolidated pay, wear their regimental clothing, and receive warm clothing and equipment.

“ 5. Service with the Transport Train to reckon towards good conduct pay and pension, under existing Regulations.

“ 6. Promotions will be made in the Train, as vacancies occur, from grade to grade, by selection, according to character.

“ 7. As regards non-commissioned officers of British regiments they will have to resign their regimental rank, retaining the same as ‘honorary’ while with the Transport Train.

“ 8. The consolidated pay is to include all good conduct pay in possession, or to which they may become entitled, but, as privates of their respective corps while with the Train, they must claim any good conduct pay they may, while so serving, become entitled to; this will be recorded with their corps, so that when they rejoin they may at once commence to receive the full rate of good conduct pay.

“ 9. ‘Honorary’ non-commissioned officers, on returning to their batteries and corps, will be entertained as supernumeraries of their grades on gunner’s or private’s pay, and will be absorbed as vacancies occur in the rank they held on quitting, and will be placed in their proper battery or regimental position as if they had been continually present.

“ 10. Time-expired men may be permitted to prolong their service under the conditions of the 5th Clause of the Enlistment Act of 1867, and their services be made available for the Transport Train, under the conditions above stated.

“ 11. Volunteers for the Transport Train are not required to take their regimental arms or accoutrements with them.”

On the system of organization shown at page 249, the Land Transport Corps was conveyed in detachments to Abyssinia, under the following officers:—

Controller of Supply and Transport	..	Lieut.-Colonel H. W. Holland, Staff Corps.	Officers of the Land Transport Corps.
Director of Transport		Major R. P. Warden, Staff Corps.	
Second in Command		„ T. Nuttall, Staff Corps.	
		Captain G. C. Bartholomew, 10th Foot.	
		„ R. Annesley, 10th Foot.	
		„ W. L. Twentyman, 18th Hussars.*	
		„ H. Waring, 2nd Queen's Royal Regiment.	
		„ F. P. Bartholomew, Staff Corps.	
		„ E. Boyle, 96th Foot.	
14 Captains of Divisions, each Division to comprise 2,000 animals		„ C. M. Griffith, Staff Corps.*	
		„ C. W. Yonge, Staff Corps.	
		„ C. M. McInroy, Madras Staff Corps.	
		„ L. A. M. Graeme, 102nd Foot.	
		„ W. H. Beaumont, 102nd Foot.	
		„ C. M. Ducat, Staff Corps.	
		„ T. F. Bainbridge, Bengal Staff Corps.*	
		Lieutenant A. G. Ross* „ „	
		Captain J. S. Hand, 82nd Foot.†	
		„ Roddy, V. C. Bengal Army.	
		Lieutenant Chalmers, Bengal Staff Corps.	
		„ Gaselee, 93rd Regiment.	
		„ Ryves, Bengal Staff Corps.	
		Lieutenant T. T. Hodges, 76th Foot.‡	
		„ E. S. R. Carnac, 19th Hussars.	
		„ W. W. Edwards, 8th Madras Cavalry.	
		„ F. J. Mortimer, R. H. Artillery.	
		„ W. S. Daniell, 105th Foot.	
		„ H. Coghlan, 21st Hussars.	
		„ F. J. Caldecott, R. H. Artillery.	
28 Subalterns		„ C. Sturt, 6th Bombay N.I.	
		„ J. D. Clark, Madras Cavalry (Paymaster).	
		„ A. E. Pearse, 76th Foot.	
		„ F. M. Onslow, Madras Gen. List.	
		„ J. B. Hennell, Staff Corps.	
		„ W. Luckhardt, 109th Foot.	
		„ D. du M. Gunton, 96th Foot.	
		„ B. W. Faulkner, 95th Foot.	
		„ H. de P. Rennick, 21st Foot.	
		„ M. G. Gerard, Royal Artillery.	
		„ N. E. Carr, 10th Foot.	
		Cornet C. A. de N. Lucas, 2nd Queen's Bays.	
		Ensign A. D. Strettell, 109th Foot.	

* Commanded Divisions of the Highland Train in Abyssinia.

† Nominated in Abyssinia to the command of the Highland Train.

‡ Nominated afterwards Inspecting Officer Highland Train.

CHAPTER XXVIII.

LAND TRANSPORT.—OPERATIONS IN ABYSSINIA.

Shortly after his arrival at Zula, on the 27th January, Lieutenant-Colonel H. W. Holland, the Controller of Supply and Transport, made the following official Report to Sir Robert Napier :—

Report by
Controller
of Supply
and Trans-
port, on his
arrival, on
the Land
Transport in
Abyssinia.

“ Having assumed the functions of my office as Controller of Supply and Transport, Abyssinian Field Force, I have the honour to submit for your Excellency’s consideration a few remarks, which only, at the present time, I am able to offer, reserving for a future date, after I have acquired a further insight into the state of things generally in the departments over which I have control under your Excellency’s orders, any other remarks I may have to make.

“ 2. Of the Commissariat Department I have little to say ; its organization is most creditable to Lieutenant-Colonel Lucas and his officers, and it is satisfactory to know that their exertions and labours, under most unprecedented difficulties, have met with your Excellency’s approval.

“ 3. The circumstances under which so small a supply of provisions, &c., have as yet reached the front are, as your Excellency is aware, owing entirely to the shortcomings of the Transport Train, but my suggestions, which have met with your Excellency’s approval, for placing exclusively at the disposal of the Commissariat Department a certain portion of carriage, which that department will be unfettered in the use of, will, I trust, remedy the existing evil.

“ 4. Of the Land Transport Train I wish I could speak favourably ; but its organization, which was imperfect in India, has not, in my opinion, improved since its transfer to Abyssinia ; and admitting fully the difficulties under which the organization of the corps was undertaken, I respectfully submit that more favourable results than those realized might have been effected.

“ 5. Major Warden being absent, I defer till his return submitting any more detailed report on the Transport Train. There are many points on which, as yet, I have been unable to obtain reliable information, but it is hoped some correct and satisfactory return of the number of animals in possession of the train may be forthcoming on Major Warden’s return from his present tour, for I admit I am fairly startled at the deficiency between the number at present shown in the returns and what have been landed here, which leads to the conclusion that our casualties have been most extraordinary.

“ 6. With reference to the camels supplied for the use of the army under arrangements made by the political authorities, many of these animals were from the first unfit for service, as the large proportion at present sick at Kumayli proves. Of these latter, many are positively useless, and the retention of them, in the hopes of their being of service to us hereafter, is, as I submitted to your Excellency at Kumayli, on the 25th instant, altogether undesirable ; the additional care and supervision of useless cattle being a tax upon our already overworked departments and establishments, which the existing pressure will not for a moment admit of.

“ 7. Your Excellency, having found it necessary to depute Captain Willoughby to

"Egypt, on special duty, has placed me at a serious disadvantage, it having been arranged, with your Excellency's concurrence, in Bombay, that Captain Willoughby was to be my Assistant in Abyssinia. Your Excellency's permission, however, since granted, for this officer to return from Egypt, on the completion of the duty assigned to him, will relieve me of the serious anxiety which I at present feel in the supervision of the duties of my office, especially in the control of the Transport Train; but I am quite prepared, in accordance with your Excellency's lately expressed wishes, to show due consideration for the difficulties of Major Warden's position, and to give him every encouragement in carrying out the duties devolving upon him."

Correspondence connected with Land Transport devolves on Quartermaster-General's Department.

On the arrival of the Head-Quarters of the Force at Zula it was decided that the orders of the Commander-in-Chief connected with Land Transport should be issued by the Quartermaster-General's Department; and it consequently devolved on Captain Holland, Assistant Quartermaster-General, who had throughout the campaign the charge of his Department, at the Head-Quarters of the Force, to reply to the above Report, which he did in the following letter, dated Senafè, 1st February :—

"In acknowledging receipt of your memorandum, dated Zula, 27th January, 1868, I am directed by the Commander-in-Chief to make the following remarks :—

Reply to the Controller's letter.

"The deficiencies of the Land Transport Corps are the cause of delay in the advance of the Force, and the rapid melting away of the stock of camels and mules requires most serious consideration. It must be remembered, however, in justice to Major Warden, that that officer was not a free agent in the first formation of the corps, but acted in obedience to the orders of the Commissary-General, Bombay; he subsequently had no time to collect sufficient officers and non-commissioned officers, and those that were sent were not of his own choosing. Again, Major Warden had nothing to say to the difficulties occasioned by the arrival of the mules from Suez, before there were proper arrangements made to receive them, or to the misconduct of the Egyptian muleteers, and it will doubtless be in your recollection, that when his Excellency referred you to Government for information regarding mules and muleteers from Persia, the Military Secretary to Government requested you to telegraph to the Persian Gulf.

"The necessity of pushing up the first body of troops at any sacrifice, the heterogeneous materials of which the first detachments of Land Transport Corps landed at Zula consisted, the variety of languages, want of interpreters, and consequent difficulty which officers of the corps had in communicating with their subordinates, prevented any effectual attempt being made to carry out the plan of organization which had been determined on.

"For a month previous to Major Warden's arrival, Sir C. Staveley had been endeavouring to infuse some order into the corps, scattered over a line of 60 miles; and when Major Warden assumed the direction, no doubt much had been done to establish and provision the depôt, and to correct the misconduct of the muleteers. The officers, as a rule, exerted themselves beyond all praise; but, inexperienced in their duties as they doubtless were, it was not to be expected that they would be able to cope satisfactorily with the extraordinary difficulties they had to contend against.

"Considering the dates on which the first batches of mules were landed at Zula, the date on which detachments of the Land Transport Corps were despatched from Bombay (none having arrived between the landing of Colonel Field's Force and the arrival of the steam transport 'General Havelock' with Captain Twentyman's small detachment), his Excellency does not think that it was possible to expect any other result than what occurred; and he considers that Major Warden cannot be held responsible for shortcomings with which he had nothing to do.

"On assuming the direction of the Land Transport Corps, all these difficulties stared

“ him in the face ; and the disadvantages under which the corps laboured, owing to its first disorganization, were materially increased by the scarcity of water and the ravages of the epidemic.

“ Owing also to the deficiencies of the postal arrangements, information regarding the depôts at out-stations was difficult to be obtained, and mules were left for days without grain or forage.

“ The Commander-in-Chief has thought it only fair to Major Warden to place on record these difficult points, in order that that officer may be freed from all responsibilities regarding the shortcomings of the Land Transport Corps in Abyssinia previous to his arrival at Zula, and that due indulgence may be made for his not at once establishing order and organization in the corps after he assumed direction of it. It is necessary, in fact, to discriminate between the evils which Major Warden could or could not have remedied. His Excellency awaits with anxiety your next Report on the subject, and feels sure you will, as far as possible, correct the deficiencies and remedy the defects of the Land Transport Corps.

“ The magnitude of the establishment is almost beyond the power of control of a single individual, but at the same time it requires the general superintendence and executive experience of an officer of standing and authority to enable him to meet promptly all exigencies. To assist you in this onerous and responsible duty, his Excellency relinquishes the almost indispensable services of Captain Willoughby, now employed on special duty in Egypt, as Sir Robert Napier feels that the success of the campaign mainly depends upon the efficiency of the Land Transport Corps.

“ His Excellency trusts, therefore, that this object will supersede all other considerations, and he feels assured that no exertion will be wanting on your part to bring about so desirable a result.

“ Sir Robert Napier is aware that the charge of the Land Transport Corps is a very onerous one, and his Excellency is anxious to relieve Major Warden of part of it as soon as he can see his way to do so.”

Working of
the Corps in
Abyssinia.

The working of the Land Transport Corps was so intimately connected with the march of the Force through Abyssinia, that all arrangements in connection with it have been given in considerable detail, and will be found in the preceding chapters, describing the operations of the Forces from October, 1867, to June, 1868.* The Reports at the end of this chapter, framed at Sir Robert Napier's desire by Captain Holland, give other particulars on the working of the Corps, and on the different descriptions of animals, the saddles used, &c.

Egyptian
drivers sent
back.

On the arrival of Sir Charles Staveley at Zula, the drivers of the Transport Train who had been collected in Egypt, and from want of other hands necessarily retained in Abyssinia, were found to be so worthless, that as far as possible they were sent back to Egypt, and their places filled by men collected from India. There was some excuse for the Egyptian drivers, as they had been sent without warm clothing or cooking utensils, and from a dearth of interpreters were unable to understand the orders addressed to them.

Highland
Train
formed.

On the 28th January the Punjab mule trains, which had arrived at Zula during that month, were ordered up to Senafè, held distinct from the rest of the Transport Train, and formed the nucleus of a special train which worked on the highlands and accompanied the Army to Magdāla. This Highland Train was originally organized under the orders of the Commander-in-Chief by Captain Holland, Assistant Quartermaster-General, and placed under the immediate charge of Captain J. S. Hand, who carried out the organization, and had control over it till the end of the campaign. It was formed on a different principle from the Transport Train organized at Bombay, and was composed of the Rawul Pindee, and Lahore Trains, and the A and D Divisions of the Bombay Train. The establishment

* See pages 325, 332, 333, 346, 351, 359, 380, 398, 399, 401, 402, 405, 406, 412, 432, 433, 439, 440 of Vol. I, and pages 3, 6, 12, 16, 17, 19, 73, 84, 85, 86, 87, 91, 93, 107, 110 and 177 of Vol. II.

allowed for each division will be found in Captain Holland's Report at page 687. A Commissariat camel division of the Transport Train was also organized towards the end of the campaign. See Chapter XXIV.*

An inspecting Transport Train officer was appointed on the 8th March; his duties were to inspect all posts, convoys of animals, sick depôts, &c., on the line of march between Senafè and Magdala. Inspecting Transport Officer appointed.

Depôts for sick mules were formed along the line of march at Kumayli, Focada, Antalo, and Dildi. These depôts were each placed under an officer specially selected for the post, to whom a veterinary-surgeon, when available, was attached. Places were selected for depôts on account of grass and water being obtainable, and general instructions were given to keep at these depôts all mules likely to become again serviceable, while those not likely to recover within a month were sent to Zula. Sick depôts.

Besides pack animals, Maltese carts were kept working between the sea coast and Senafè, and latterly as far as Adigrat. These were each drawn by two mules. The carts supplied from Bombay also worked along the same line; they were each drawn by two Goozerat bullocks. Arrangements at different times were made for the conveyance of stores by means of the carriage belonging to the people of the country; and mules were purchased in Abyssinia, and camels in the Soudan, to supplement the casualties in the Transport Train during the autumn and winter of 1867; and deficiencies were provided for by additional animals being ordered: 1,000 camels and 1,000 mules from Egypt, 1,500 camels, 1,000 pack bullocks, 1,000 ponies, and 2,000 donkeys from Berbera. Maltese carts.

The following Statement shows the number and description of animals received into the Transport Train from the beginning to the end of the campaign †:—

From whom, and whence received.	Mules.	Ponies.	Camels.	Draught Bullocks.	Pack Bullocks.	Donkeys.	Total number of animals received into the Transport Train.
Obtained from Bombay	430	941	..	1,079	4,597	..	
" " Suez	10,045	..	†741	..	..	1,302	
" " Hodeida	..	..	446	..	..	141	
" " Berbera	..	3	..	..	2,121	149	
" " Punjab	2,627	..	..	..	..	..	
" " Calcutta	141	182	..	..	..	..	
" " Bagdad	1,188	250	..	..	..	..	
" " Bushire	400	84	..	..	..	..	
" " Muscat	..	..	..	..	..	239	
" " Hussan Ali (Camel Contractor)	..	..	7,495	..	..	..	
Total landed at Zula	14,831	1,460	8,682	1,079	6,718	1,831	
Purchased by Mons. Münzinger	..	..	707	..	..	..	
" " Mons. Otto Reil (Suakin)	..	..	408	..	..	..	
" " Mr. Hausmann	..	..	2,023	..	..	..	
" " Mr. Reade	..	..	188	..	..	..	
" " on the Highlands	2,720	..	..	..	..	..	
" " at Zula	21	12	..	..	654	..	
" " at Senafè	389	..	..	..	..	..	
Total purchased'	3,130	12	3,326	..	654	..	
Grand total received (Exclusive of 44 Elephants)	17,961	1,472	12,008	1,079	7,372	1,831	

* For particulars as to the establishment, cost, and comparative cost with a camel division of the regular Transport Train, see page 178.

† From a Return dated the 14th August, 1868, furnished by the Director, Transport Train.

‡ Taken over by the Commissariat Department.

The following Report, compiled by Captain Holland, Assistant Quartermaster-General on the 25th of May, 1868, from the Reports of officers of the Highland and Lowland Trains will show the general working and organization of the Transport Trains and the efficiency of the different description of transport animals employed.

Report by
Captain
Holland on
the working
of the Land
Transport
Train in
Abyssinia.

" The Transport Train was organized by the Bombay Government, under the authority of Bombay General Orders dated 12th September and 15th of October, 1867, on the following establishment for every 2,000 animals :—

" ESTABLISHMENT.

Establishment of each division.	Pay per Mensem.				Pay per Mensem.		
	Rs.				Rs.		
	1 Captain, with full regimental pay, and Staff pay of	500		8 Smiths	22	each.	
	2 Subalterns ditto ditto ..	300	each.	1 Head carpenter	45	"	
	4 Head Inspectors, enlisted men ..	120	"	6 Carpenters	22	"	
	4 Second ditto ditto ..	80	"	1 Head saddler	25	"	
	10 Third ditto ditto ..	40	"	10 Saddlers	22	"	
	20 Fourth ditto ditto ..	20	"	8 Bellows boys	9	"	
	80 Muccadums. . .	12	"	8 Hammermen	13	"	
	1 Driver to every 2 mules. .	10	"	1 Head ropemaker	45	"	
	2 Weighing men	30	"	6 Ropemakers	22	"	
	4 Weighing coolies	10	"	4 Chief farriers	40	"	
	1 Head smith	45	"	20 Farriers	30	"	

" In addition to these, several muleteers were sent from Aden, Persia, Suez, &c., on various rates of pay, and 17 interpreters.

" On the 13th of February, 1868, a Pay Clerk was sanctioned for each division.

Transport
Train
divided
into two
portions,
Lowland and
Highland.

" On the 14th of February, 1868, the Transport Train was divided into two portions —the Lowland and Highland Trains: the former to work from Zula to Senafè (63 miles), the latter from Senafè to Magdāla (317 miles). The working of the whole Train was also, on the above date, placed under the Quartermaster-General's Department.

" The direction of the Lowland Train was placed in the hands of Major Warden, Bombay Staff Corps, with a Second in Command, a Staff Officer, a Paymaster, and a Quartermaster; and worked under the immediate control of Lieutenant-Colonel Holland, the Controller of Supply and Transport.

" The direction of the Highland Train was given to Captain Hand, 82nd Regiment, working under the immediate control of the Assistant Quartermaster-General at Army Head-Quarters.

Organiza-
tion of
Lowland
Train.

" The organization of the Lowland Train, with the exception of increasing its strength materially in officers, was not altered in Abyssinia. It consisted of three divisions of mules, three of pack bullocks, three of camels, and one of carts, making in all ten divisions.

Organiza-
tion of
Highland
Train.

" The Highland Train was organized on an entirely different principle, and worked quite independently of the Lowland Train. It consisted of four divisions: two from the Punjab, and two from the Bombay Presidency, of 2,000 mules each; but the full number of mules to complete these divisions was never obtainable.

" The organization of each of the four divisions of the Highland Train was as follows :—

"STRENGTH OF EACH DIVISION OF 2,000 MULES.

	Pay per Mensem. Rs.	Establishment of each division.
1 Captain	120	
3 Subalterns	80 each.	
4 European Inspectors, selected from British regiments	120 "	
20 Jemedars, or troop Serjeant-Majors	25 "	
80 Duffedars, or Serjeants	15 "	
667 Muleteers (that is, 1 to every 3 mules)	12 "	
2 First-class farriers	33 "	
10 Second-class farriers, for Bombay Division only	23 "	
1 Smith	30 "	
10 Assistant smiths	25 "	
1 Saddler	45 "	
10 Assistant saddlers	18 "	
10 Bheesties, or water-carriers	12 "	
1 Salootrie, or Native veterinary surgeon	40 "	
1 Native writer	40 "	

" Each division of the Lowland and Highland Trains was divided into troops of 150 mules each. Stables, watering, and all other line duties, at fixed hours, were conducted with the same discipline, and in precisely the same routine, as in Indian Cavalry regiments. The muleteers were trained and drilled to their work, and kept in as strict a state of discipline as possible. The Jemedars kept nominal rolls of each man in their troops, and also pay accounts. Long rolls of every man were kept by the Captain of the division.

" The Highland Train was under the control of a Sub-Director, who reported direct to and received his orders from the Assistant Quartermaster-General at Army Headquarters. Its Staff consisted of a Staff Officer, who conveyed the orders of the Sub-Director to Captains of Divisions, and carried on the general office duties of the Train; and an Inspecting Officer, whose duty it was to ride up and down the line over which the Train worked, and to report to the Assistant Quartermaster-General at Headquarters on all convoys, mules with regiments, and Transport Train stations.

" On the above system the Highland Train worked well. It accompanied the Army, conveying its baggage, ammunition, and hospital stores, tents, &c., from Senafè to Magdāla; and all Commissariat supplies for the Force from Atsala to Magdāla. It also brought back to its original starting-point all the above-mentioned stores, the mules having arrived, as a rule, in fair condition.

" During the long and difficult march the Army had to Magdāla and back again, opportunities occurred of testing the relative value of the different descriptions of transport, and more especially of mules brought from Spain, Egypt, India, Persia, and those purchased in Abyssinia.

" The Spanish mules with the Force were large, and generally ill-bred. They appeared naturally of a weak constitution, and seemed more fit for draught work than the duty on which they were employed on the Highlands. They also appeared unable to bear great changes in climate, and suffered more than any other mules from want of a sufficiency of food. They required a great deal of grass, and the dry and coarse forage generally obtainable did not appear to afford them sufficient nourishment. When once in low condition it was very difficult to bring them round again, even with

Stabling,
watering,
and line
duties.

Highland
Train.

Efficiency of
Highland
Train.

Relative
value of
different
descriptions
of transport.
Spanish
mules.

"rest and grazing. There were in the Highland Train a few well-bred Spanish mules. These thrived and worked well, but generally they were of the worst description of mules in the Force for loads. They, however, answered admirably for draught purposes on the made road between Senafè and Adigrat, when well fed and looked after. With irregular feeding, however, they did not answer even for this purpose.

"Between Senafè and Adigrat there was little or no difficulty in providing proper food for these animals, and consequently in draught on this line they did excellent service in conveying heavy weights.

Persian,
Indian, and
Egyptian
mules.

"The Persian, Indian, and Egyptian mules were more enduring than those from Spain. They required less grain, ate every description of grass, and thrived upon it. When the Army was encamped before Magdāla, all the Transport Train animals had for some days to work hard, with water at a distance of six miles, and forage and grain very scarce. The Spanish mules fell off in condition rapidly; whereas the Persian, Indian, and Egyptian showed comparatively little change. The difficulties of the road crossing and recrossing the Bashilo and Jedda rivers, however, were most trying to all, enervated as they then were, and many succumbed. The Abyssinian mules were not enduring; they were in good condition and fresh when purchased, but they broke down under hard work in larger numbers than any others.

Abyssinian
mules.

Causes of
sickness
amongst
mules and
ponies.

"The Veterinary Officers who marched with the Force to Magdāla considered the chief causes of sickness and casualties amongst the mules and ponies were hard work at great altitudes, constant exposure with want of rest, insufficiency of food, bad quality of grass, irregularity in feeding, as well as galls owing to bad saddles, want of time and means for repairing the same, and, in several cases, carelessness in saddling and loading. The mules and ponies of the Transport Train had moreover scarcely a fair start, for they were generally put to work the day after disembarkation, when they had been for some weeks in a ship, between decks, in a tropical climate.

Sick depôts.

"Sick depôts for animals, under the charge of specially selected officers, were kept up on the line of march, and were found to answer well.

Pack ponies.

"Pack ponies were very useful; in some cases as good as mules. With Otago saddles, they proved well adapted for carrying loads in a country like Abyssinia. The mortality among them was not very great. The best pack ponies received were the hill ponies from India.

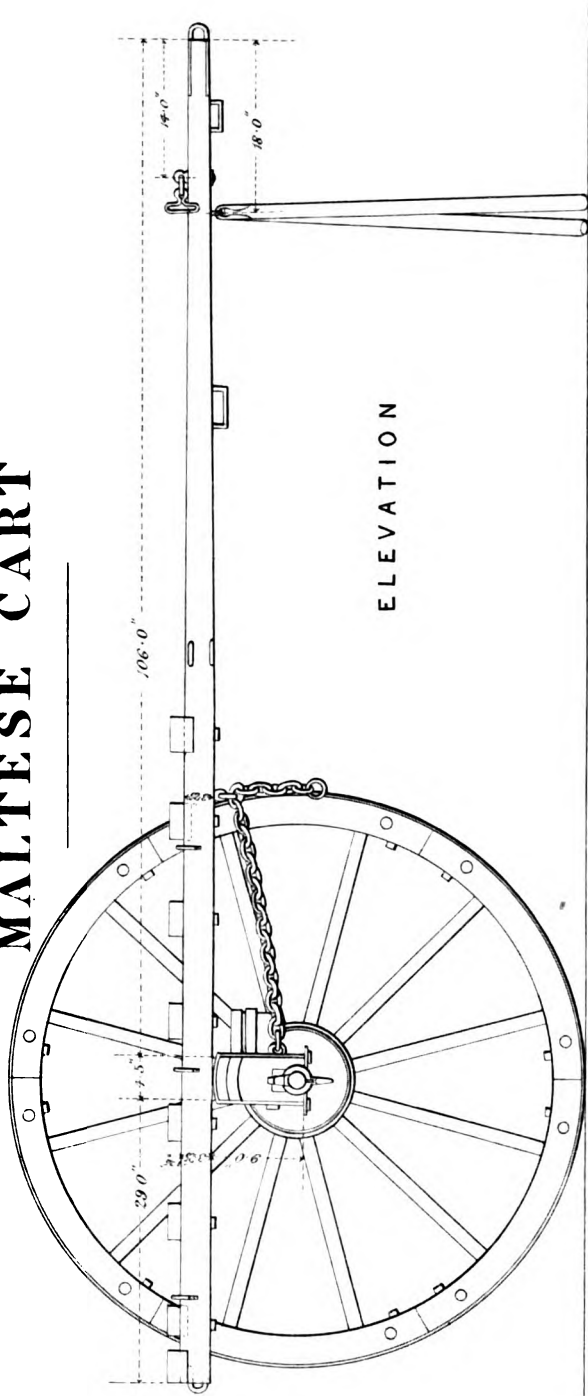
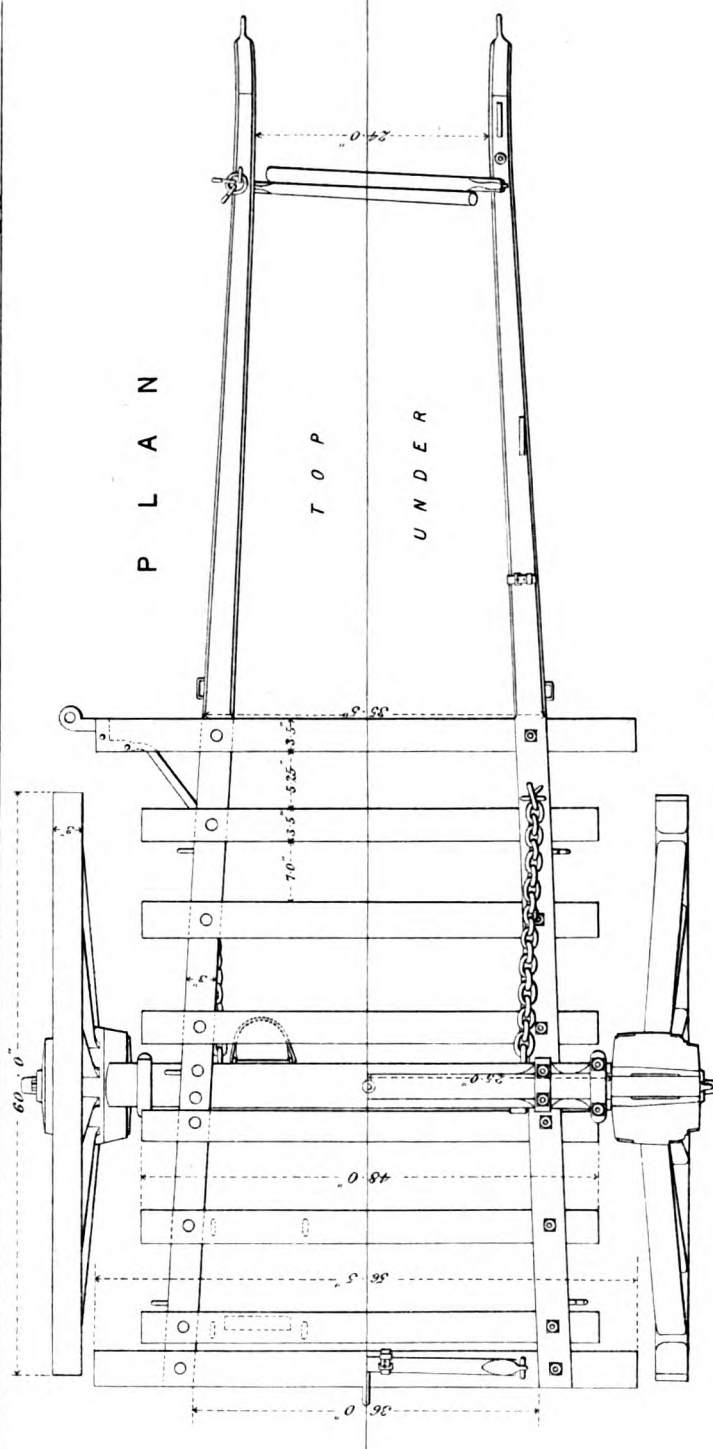
Leading or
driving pack
animals.

"Opinions differ regarding the advisability of leading or driving pack animals. From our experience in this campaign, the driving system answered best; and if mules and ponies were taught to follow each other, which they might be without difficulty by tying a bell to the neck of the leading animals, they would proceed more freely and better than when three or more are tied together and led, especially over mountainous zigzag tracks. The system of tying animals to one another proved injurious to themselves, their saddles, and loads. If, however, mules are driven, a mounted man should accompany every four or five mules to keep them together.

Donkeys.

"The donkeys imported for use in the Transport Train were mostly young, and inferior in size and breed. Many of them were knocked up. The good ones, however, did very well in carrying with ease loads equal to those of mules. If loads not exceeding 100 lbs. were put on donkeys, they worked well, and proved most enduring and valuable animals. They do not require much food or care, and one driver can easily take charge of five or more. No donkeys under four years of age should be used for pack purposes. One or two thousand additional donkeys, with drivers accustomed to them, would doubtless have been useful, and would have proved a valuable acquisition to the Transport Train.

MALTESE CART



Scale of Inches



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“ Pack bullocks did not answer well, and were the worst description of transport in Abyssinia. They were apt to run wild and go off the road in search of forage, and endless delay occurred in bringing them back into the right track again. They were incapable of making a long march under a hot sun, and suffered much from want of water. They were liable to sore backs, which did not easily heal, and soon fell off in condition, if a sufficiency of food was not always obtainable for them. Experienced drivers are essentially necessary with pack bullocks, and these were not easily procurable.

Pack bullocks.

“ The camels bought for the Transport Train were not generally of the quality necessary for a long and wearisome journey. Many were young and weakly animals, hardly fit to carry loads of 100 lbs. The Aden camels were the worst, and died in great numbers. Egyptian camels, and the picked animals from Berbera, were the best; but all had apparently been underfed, and the casualties among them were consequently great. Camels are most valuable as carriage, but are delicate, and means of doctoring them should always be at hand. Young camels should never be selected for pack purposes, and one driver is essential to every two camels on a campaign.

Camels.

“ The draught bullocks imported from India did their work efficiently. They, however, required abundant food and great care, and did not thrive well in cold or wet climates.

Draught bullocks.

“ Two descriptions of carts were sent to Abyssinia—one for bullock and the other for mule draught. The former answered well, and were very useful on the made road between Zula and Adigrat. They were not, however, equal to the Maltese carts drawn by mules, which were peculiarly well adapted for Abyssinia, and travelled over almost any road a little broader than their axles. The cart division of the Transport Train was invaluable from the beginning of February, when the road between Zula and Senafè was practicable for cart traffic.

Carts.

“ Forty-four elephants were landed in Zula from Bombay, and did good and efficient service.* They were at first employed in carrying Commissariat stores from Zula to Kumayli, and afterwards sent up to the front for the purpose of conveying the Armstrong battery, 8-inch mortars and equipments. They carried the mortar battery complete from Zula to Magdāla, and the Armstrong guns, carriages, limbers, ammunition, &c., from Antalo to Magdāla, over an extremely difficult and mountainous country.† It was often no easy matter to provide them with suitable forage; and to this deprivation, as well as owing to the distance they had to go for water at Magdāla, may be attributed the death of five of these animals. The remaining thirty-nine carried the Armstrong and mortar batteries over the same difficult road, from Magdāla to Antalo, and the mortar battery to Zula. Elephants are slow movers over a mountainous country, and are apt to get foot-sore. It is, moreover, not always easy to obtain for them their proper forage in such a country as Abyssinia. They, however, did their work well in carrying, as they did, loads varying from 8 to 16 cwt. each; and without them it would have been impossible to have taken the heavy guns and mortars to Magdāla, unless very considerable delay had taken place in making roads fit for wheel carriage.‡

Elephants.

“ The strength of the Transport Train employed in Abyssinia was as follows:—

Strength of the Transport Train.

* For information regarding the general health, ailments, treatment, care, and diet of elephants, see pages 226 to 230.

† For elephant equipment, see Chapter X., page 360.

‡ For detailed information of the difficulties overcome by the elephants in Abyssinia, see pages 13, 40 and 98, Chapters XIV., XVIII. and XIX.

LOWLAND TRAIN.

	1st January.	1st February.	1st March.	1st April.	1st May.
Officers	14	41	36	69	83
Veterinary Surgeons	4	7	8	11	11
Inspectors	111	338	437	473	486
Interpreters	5	7	10	17	14
Muccadums	272	562	366	651	706
Drivers	2,355	6,601	5,838	7,532	7,728
Artificers	145	391	458	393	431
Water Bullocks	3	208	224	219	227
Camels	1,739	2,355	4,427	5,797	5,936
Mules	4,280	8,848	3,154	4,034	2,348
Ponies	376	556	1,223	1,896	1,666
Donkeys	..	..	..	752	1,791
Draught Bullocks	257	463	584	1,048	1,282
Pack Bullocks	619	976	3,874	6,102	5,943
Mule Carts	14	191	249	305	305
Bullock Carts	100	176	222	345	396

Aggregate
number of
Animals.

“ The aggregate number of animals was as follows, in the whole Train :—

1st January	7,274
1st February	13,406
1st March	18,898
1st April	26,509
1st May	26,883

Casualties.

“ The total casualties, up to the 1st May, were 6,920 animals.

“ The strength of the Highland Train was as follows ;—

	14th February.	1st March.	1st April.	1st May.
Officers	10	18	20	20
Veterinary Surgeons	1	3	4	4
Inspectors	20	14	14	14
Jemedars and Duffedars	240	400	433	473
Drivers	2,000	2,668	3,028	3,308
Artificers	112	112	115	115
Mules and Ponies	4,507	5,412	6,661	7,690

Casualties.

“ The casualties in the Transport Train were as follows :—

LOWLAND TRAIN.

Lowland
Train.

	Camels.	Mules.	Bullocks.	Donkeys.
January	102	520	15	..
February	725	394	221	..
March	599	325	261	6
April	804	803	553	17

HIGHLAND TRAIN.

February and March	..	..	..	500 mules.
April	..	..	..	675 „

Casualties to
Highland
Train.

“ In addition to these, 400 mules were given as presents to native chiefs, many of which were in comparatively good condition ; but owing to galls, sore backs, &c., were disabled, and unfit for further service with the Force.

“ The drivers sent to Abyssinia for the Train were not as a rule men at all qualified for the work. Untrained Egyptians, Persians, Turks, and the off-scourings of the Indian bazaars, formed the principal portion of the drivers of the Train. The only exceptions were in the cases of the Punjab Train, and the muleteers who had been working with the mules of the Field Column Carriage Establishment in the Bombay Presidency. These men were generally well equipped, and accustomed to saddling, grooming, and looking after their mules both in camp and on the line of march. It is impossible to overrate the necessity of thoroughly training muleteers to a rigid system in the care of the animals under their charge on the march, as well as in the lines previous to their being sent on service. A marked difference was apparent in the working of the men who were sent without the advantage of any such training, and of those who had marched with their mules from Rawul Pindee to Kurrachee, a distance of one thousand miles, prior to embarkation, or those who had been accustomed to march with the Field Column Carriage in the Bombay Presidency. There was little or no difficulty in disciplining the muleteers sent from India. They were generally cheerful and willing, and if those under whose command they served took the trouble to teach them their duty, and though strict were not over harsh with them, they soon became good drivers. Drivers.

“ For an efficient mule-train in a campaign such as this, men should, I think, be enlisted, and thoroughly trained as muleteers prior to embarkation. A Transport Corps composed of such men, lightly equipped and armed, so that it might travel independent of escorts from the regular army, would, I believe, be a most useful corps in a campaign.

“ It would perhaps be worthy of consideration whether a Transport Train Depot might not be formed in India, regularly organized and officered on any principle considered best, from which, in case of war, the nucleus of an efficient Train might be drawn.

“ I believe also that a Transport Train would be more efficient if it did not consist of separate divisions. It has proved in this campaign impossible to keep either officers, muleteers, or mules exclusively with the divisions to which they originally belonged ; and as a rule officers or their subordinates do not take the same interest in transport establishments of other divisions as they do in those belonging to their own.

“ On the long line of march traversed by the Army in this campaign, Transport Train depôts, at stations about 75 miles distant from each other, with officers to receive charge of and issue mules, were established. This plan answered well, but would, I consider, have succeeded even better if the officers and muleteers of the Train had all been considered as one corps, without being separated into divisions.”

Report by
Captain
Holland on
mule
saddles.

The following Report dated Zula, 10th June, by Captain T. J. Holland, Assistant Quartermaster-General, on the different descriptions of mule saddles and pads used by

the Force during the march to and from Magdāla, with sketches, shows the relative merits of each.

“ The following saddles and pads have been used by the Force for mules :—

Description
of saddles.

“ *Saddles.*

- “ The Otago.
- “ The MacMahon.
- “ The Hungarian.

“ *Pads.*

- “ Punjab.
- “ Bombay Ordnance.
- “ Bombay Commissariat.
- “ Egyptian.
- “ Persian.

The Otago
saddle.

“ The Otago saddle weighs 43 lbs., and is admirably adapted for general pack purposes, when used by properly instructed muleteers; it, however, requires to be carefully fitted on the animal, and every attention given to adjusting the stuffing of the pads, so as to prevent any chance of galling.

“ The Otago saddles sent to Abyssinia have, as a rule, been too large for the mules in use with the Force. The breeching, breastplates, buckles, and straps might be reduced and simplified. Muleteers, unless trained and accustomed to these saddles, are apt to make mistakes in fastening the straps, &c.

“ With very slight modifications, and in proper hands, these saddles ought not to gall when fitted on the large Spanish mules, but the smaller animals with the force, as well as those in poor condition, have been frequently laid up with sore shoulders and hips, on account of these saddles being too large for them.

“ Three sizes of Otago saddles have been sent to Abyssinia, of which those of the smallest pattern have answered best, and saddles of a still smaller pattern would probably answer better for Indian mules.

Alterations
suggested.

“ From the experience we have had, the following alterations would appear advisable in the Otago saddle :—

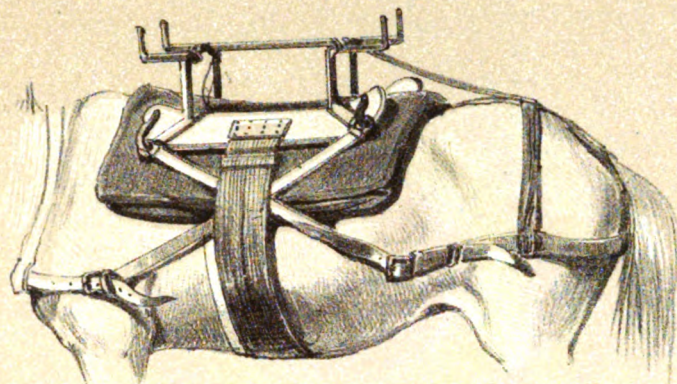
“ 1. Strong loops of leather might with advantage be substituted for the hooks from which the loads are suspended and fastened; these loops should be 2 inches higher on the tree of the saddle on each side than the hooks now are, so as to distribute the weight of the load more on the animal's back and less on his sides. Nothing fatigues and distresses a mule more than a badly-packed and loosely hung load, knocking against his flanks and legs.

“ 2. A netting, or saleeta, should be furnished to 25 out of every 100 saddles, to carry miscellaneous articles, small packages, &c.

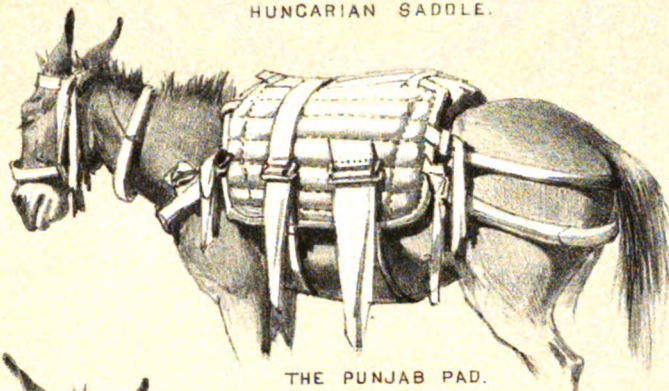
“ 3. Breeching and breastplates should be made more simple, buckles and straps reduced in number, and all constructed so as to fit any sized animal; the present breastplate and breeching are too long for even the largest mules we have had, and in most cases cannot be sufficiently shortened.

“ 4. That part of the pad of the saddle which rests on the animal's shoulder should be cut out, so as to lessen the chance of galling, and give the shoulders fair play to work clear of the pads. The same arrangement might with advantage be made in the hinder part, to prevent the hips from being rubbed. The stuffing of the pad should also be of softer material, and should project on all sides beyond the leather, the edges of which are liable to turn in, harden, and injure the mule.

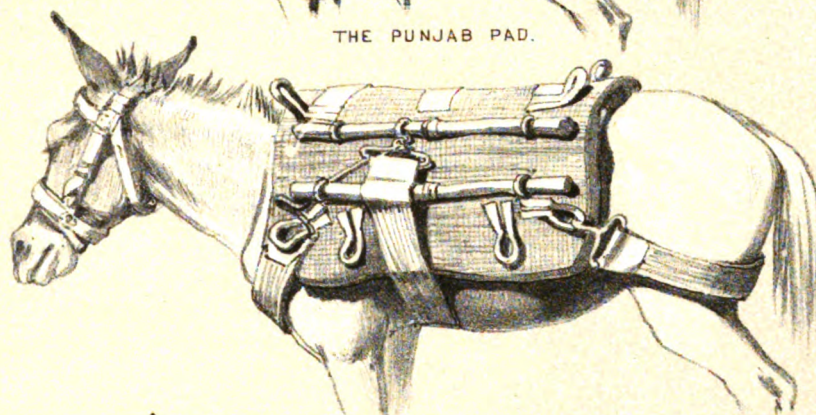
SADDLES & PADS USED BY THE ABYSSINIAN FIELD FORCE.



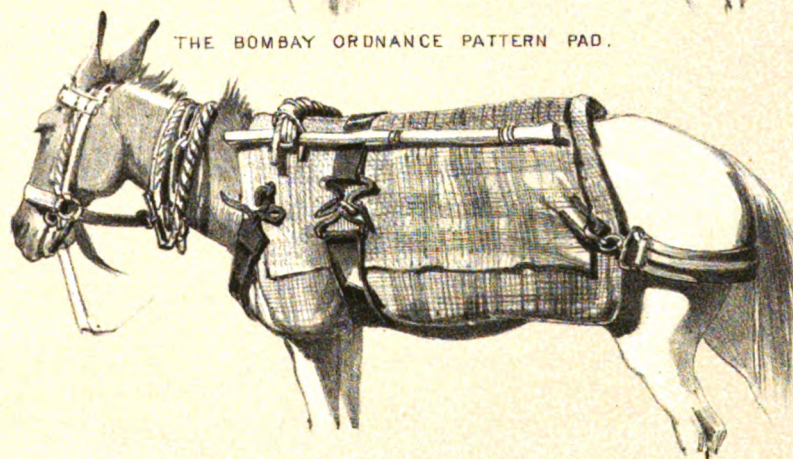
HUNGARIAN SADDLE.



THE PUNJAB PAD.



THE BOMBAY ORDNANCE PATTERN PAD.



THE BOMBAY COMMISSARIAT PATTERN PAD.

THE BOMBAY ORDNANCE PATTERN PAD.
 THE BOMBAY COMMISSARIAT PATTERN PAD.



" 5. A horse blanket, carefully fitted in the fork of each saddle, is required to protect the mule from the cold at night, but is not required in saddles provided with saleetas, as the saleetas can, if made of canvas, be used as horse-cloths.

" The Otago saddles sent to Abyssinia have been very well made, of the best material, and would, with the modifications above suggested, be the best pack-saddles for mules yet invented.

" For riding purposes these saddles are not very well suited; the hooks on them are very much in the way, and, in the event of a fall, are liable to catch the rider's clothes and, as has occasionally happened in this campaign, cause a bad wound in the leg.

" The MacMahon saddle weighs 66 lbs. with its waterproof sheet, or 56 lbs. without the sheet. It has many of the advantages of the Otago. The MacMahon saddle.

" Its weight, however, is so considerable that it renders it an inconvenient description of pack-saddle, especially where, in order to economize the number of mules, it is a matter of great importance to place as much baggage on each as the mule can carry with facility.

" A Hungarian saddle, brought to Zula by Count Kodolitsch, one of the Austrian officers attached to this Force, has also been tested on the march to and from Magdala. It is a simple light framework of wood and iron, weighing 17 lbs. only, and is placed on a folded horse-cloth on the back of the mule. It has the advantage of being very light, and so constructed as not to be likely to cause galls. The Hungarian saddle.

" It is perhaps as good a description of pack-saddle as there is for carrying two boxes of an equal weight, but it is not suited for bundles or packages.

" The ordinary Punjab pad is covered with leather, and weighs 34 lbs.; it is in two pieces, with bands over the back to connect the two portions together. The breeching and breastplates are of broad leather. The Punjab pad.

" This pad has been found by long experience to be very serviceable, and does not generally gall mules. In a mountainous country, however, like Abyssinia, it has not altogether answered well, as there are no means to prevent loads slipping backwards or forwards when going up or down hill.

" This defect might be remedied by having bamboos lashed on each side, or by passing straps through eyelet holes in the upper part of the pad. Alterations suggested.

" The Punjab pad is simple and light in construction. Muleteers soon learn how to fasten it on, and it has on the whole caused less galls than any other pad or saddle in use with the force. I would recommend it for use all over India, as the lightest, most serviceable, and economical pad obtainable.

" The following alterations are, however, suggested :—

" 1. The felt pads which rest on the mule's back to be covered with some soft cloth.

" 2. As it is impossible that the bands connecting the two pads can be made strong enough for very rough work, it would be advisable to join the pads strongly together by one band, running the whole length of the saddle.

" 3. Eyelet holes to be added to the front and back part of the pad, with a view of preventing the loads from slipping; a strong piece of double rope sewn on to the sides of the saddle, with loops left at either end, would answer all requirements.

" The Bombay Ordnance pad is covered with strong sacking, and weighs 26 lbs. It has not proved at all a good pad; it is too thin to be any protection to the animal's sides or back, and totally unsuited for hard loads, such as shot and shell, or other articles that press on one spot. Long marches try it greatly, and more sores and galls have been caused in this campaign by this pad than by any other. The Bombay Ordnance pad.

" The Bombay Commissariat pad is also covered with sacking, weighs 40 lbs., and is The Bombay Commissariat pad.

"commendable for its simplicity, durability, and the protection it affords to the animal's back, but it is objectionable on account of its great weight.

"It is, moreover, clumsy and unwieldy, and gets very heavy when saturated with rain. It, however, has not been found to cause many sore backs in this campaign. The Bombay Commissariat pads sent to this country have, as a rule, been badly made, the breeching, breastplates, and girths deficient in strength, and the pads generally requiring constant repair.

The Persian
pad.

"The Persian pad is covered with hair sacking; it is thick and rather clumsy, but it has not been found to gall animals much, and weighs 25 lbs.

"The flap of carpet cloth attached to this pad, and which covers the loins and hind quarters of the mules, effectually protecting them from the wet and cold at night, is of great advantage. The Persian pads sent to this country have generally been made of very flimsy material, and have not stood the constant wear and tear they have had.

The
Egyptian
pad.

"The Egyptian is a high, hard, uncomfortable, and heavy pad, quite unsuited to the requirements of a campaign. It was found necessary at the commencement of the operations in this country to condemn all the Egyptian pads sent to Zula.

"From the experience we have had in this campaign, the Otago has proved the most serviceable of all mule saddles, and the Punjab the best pad.

"I believe that a pad is better than a saddle, as a general rule, for pack purposes, being more easily repairable, better capable of being fitted to mules of any size, carried with greater facility to the post from which it is to be used, lighter in weight, and is simpler, and far more economical in construction; it also affords protection to the mule at night, which the saddle does not.

"When saddles get out of order they are difficult to repair; the leather which covers them is liable soon to get damaged when in the hands of muleteers, who, tired with their long marches, content themselves with simply taking them off their animals, and never give any attention to keeping them in good order. It would, however, probably be advisable in a mule train for service in a mountainous country to have a proportion of saddles as well as pads.

"Sketches of each description of pack saddle and pad reported on are attached."

"Having thus reported on all the saddles and pads sent to Africa for the use of the Force, I would, as a suggestion on this most important subject, offer an opinion that it appears highly desirable that a better description of pack saddle than any we have had in use should be introduced into our Transport Trains. All our pack-saddles have defects which might be remedied, but I cannot help thinking that if we adopted another description altogether, we might not only save considerable outlay in original cost, but also be able to reduce the number of muleteers, and at the same time place heavier loads on our mules. A pad made of leather, of the shape of a large pair of saddle-bags, filled with straw and girded on the mule with a broad girth, would, I believe, prove a far better pack-saddle than any we have had on trial in Abyssinia.

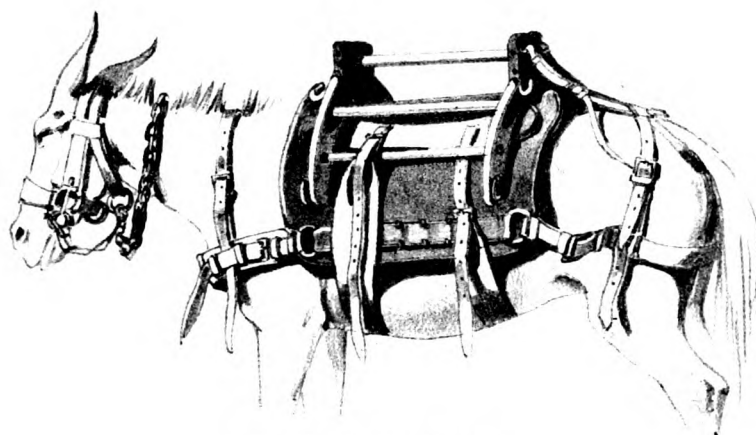
"Count Kodolitsch, one of the Austrian officers attached to the Force, who has served in Mexico, has informed me that such a description of pack-saddle is used by the Mexicans, and styled an 'apparejo,' each side of it being sufficiently deep to keep the girth from chafing the belly, and the crupper, attached by wide side pieces, renders it difficult for the saddle to turn when the load is on.

Apparejo
recom-
mended.

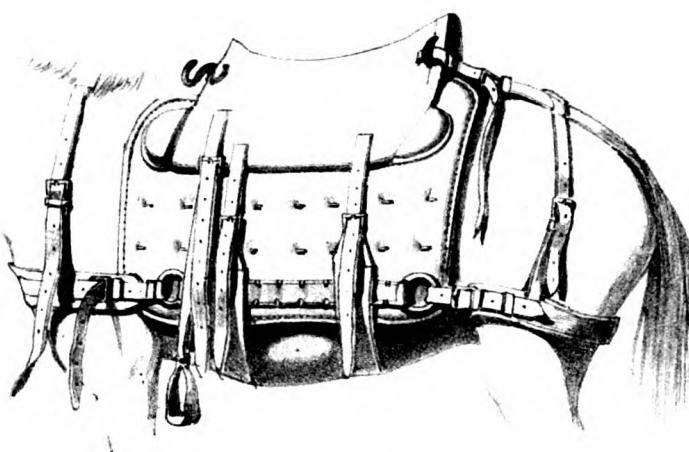
"In Mexico, loading is, I believe, very simply managed. A sling rope is thrown across the 'apparejo,' and the loads placed on the mule's back, the sling rope being tied on the top. In Mexico one muleteer is able to attend on the march to eight mules thus laden.

"The advantages of a pack-saddle of the above description are that, its cost is but

SADDLES & PADS USED BY THE ABYSSINIAN FIELD FORCE.



THE MR MAHON SADDLE.



THE OTACO SADDLE.



THE PERSIAN PAD.

James Ferguson lith.

Lith at the TOPS DÉPÔT of the WAR OFFICE
COLL^d SIR H JAMES RE DIRECTOR



"little, large numbers can be packed in a comparatively small compass, and sent to the port of debarkation; each mule can carry a spare pack-saddle unstuffed. Repairs can with facility be effected. Its size distributes the weight of the load over the whole of the animal's back. It is not liable to turn. It serves as a covering at night for the mule, and by care and attention in arranging the straw stuffing ought never to cause galls or sore backs."

On the 21st March, Sir Robert Napier asked the Government of India for information regarding the number of transport animals required in India to complete establishments in the Bengal, Madras, or Bombay Presidencies, in order that arrangements might be made for their embarkation in transports for Bombay or Kurrachee, as soon as the campaign was concluded. To this a reply was received to the effect that Government left the question of what transport animals should be brought back to India to Sir Robert Napier's discretion, elephants and serviceable mules being brought to India, if possible.

Disposal of
Transport
animals.

The final arrangements for the disposal of transport animals were, that all bullocks for whose conveyance Government transports were available should be sent to Aden.

The bullock and mule carts, which could be taken to pieces, and were in fair order, were sent to Bombay.

Final
arrange-
ments.

All the good draught bullocks were also sent to Bombay, as well as all the elephants and serviceable mules for which tonnage was available.

The 5th battery 25th brigade, Royal Artillery, the 10th and 12th Bengal Cavalry, and the 21st and 23rd Punjab Infantry, which had arrived on the shores of the Red Sea with transport establishments, and had lost animals from different causes, and transferred others to the Land Transport Train on the occasions of reduction of baggage, &c., had their establishments completed from the most efficient animals available.

In regard to all animals not considered worth conveyance to Bombay, or those for whom tonnage was not available, an offer made by M. Münzinger, French Consul (also acting English Consul), was accepted. M. Münzinger's offer was to receive charge of any number of animals, and to arrange for their care till he was able to dispose of them at fair prices, charging for watchmen only to look after them and 5 per cent. commission on all he sold.*

* The numbers of animals handed over to Mr. Münzinger will be found in Captain Holland's Report, page 107, Chapter XXI.

CHAPTER XXIX.

CAMP EQUIPAGE, SICK CARRIAGE, TRANSPORT, AND FOLLOWERS.

WHEN the Expedition was determined upon, it was considered necessary that the Force should move with fewer impediments in the shape of camp equipage and baggage, than those allowed by the Indian scale of regulations. The number of tents to which the same number of troops would have been entitled in India was considerably reduced, and those issued were of a lighter description, and the amount of carriage for camp equipage consequently proportionately diminished.

Transport
allowed for
baggage of
troops in
India.

In India a Sulleetah,* 6 feet by 4, is supplied at the public expense, to each European soldier, to contain his entire kit on the line of march.

The kit of the European soldier, for which this Sulleetah is allowed, is considered to include his canvas bag, bedding, and necessaries—in short, every article which he is not required by the Regulations to carry on his back when marching; and the weight of such kit, including that of the Sulleetah, is estimated at 75 lbs. for the Infantry, 54 lbs. for the Cavalry, and 50 lbs. for the Artillery soldier.

Camels are supplied in India by the Commissariat Department, at the public expense, for the conveyance of the men's kits on all ordinary movements of troops, in the proportion of one camel to every five infantry or every seven cavalry or artillery soldiers. Married soldiers requiring additional carriage have to make their own arrangements. When troops take the field in India, or proceed on active service, free carriage is allowed for 40 lbs. of baggage to each non-commissioned officer and soldier. Regimental Schoolmasters, and Assistant Schoolmasters, Serjeant-Majors, and Quartermaster-Serjeants of European and Native Regiments, Troop Serjeant-Majors, Brigade Serjeants, and Battery Staff Serjeants with Batteries of Artillery, European and Native, on all occasions of movement, on duty or sick certificate, draw carriage for 164 lbs. of baggage each, or one camel between two men.

Carriage for
officers and
native troops
in India.

When any body of native troops, exceeding 100 men, is moving in India, and difficulty is experienced in procuring private carriage for hire, the civil authorities nearest to the military station whence the troops have to march, provide it on indents countersigned by the Commanding Officer. The subjoined Table shows the weight of baggage considered sufficient for each class. That for European Officers is exclusive of their camp equipage, the carriage for which they are expected to keep complete.

* "Sulleetah," a piece of canvas or net-work, looped at the ends, to form a bag.

					Weight of Baggage.	Baggage allowed in India.
General of Division	..	..	..	..	2,880 lbs.	
Brigadier	..	..	..	..	1,920 "	
Field Officer	..	..	..	..	1,440 "	
Captain, Surgeon, &c.	..	..	..	..	960 "	
Subaltern, Assistant Surgeon	..	..	..	..	480 "	
Native Commissioned Officer	..	..	..	..	160 "	
Warrant Officer	..	..	..	..	320 "	
Havildar and Hospital Assistant	..	..	..	..	60 "	
Native Rank and File, Bheestees, and Lascars	..	..	..	..	40 "	
Mess for each Officer present	..	..	..	..	320 "	

During the Abyssinian campaign this scale of baggage was gradually reduced, until ultimately all ranks of the army marched from Lat to Magdāla without any baggage, except what the officers could carry on their chargers, and what the men carried themselves. Reduction of baggage in Abyssinia.

In regard to sick carriage, the Force left India under Indian regulations, with dhoolies at the rate of five per cent. of strength for European troops, and one per cent. of strength for native troops. This proportion of sick carriage was maintained as long as possible, but was eventually reduced to an uniform rate of one per cent. of strength. Sick carriage.

In India troops on the march are provided with ambulances, in addition to the regulated number of dhoolies, at the rate of 1 to every 100 Europeans, and 1 to every 500 Natives. These carts convey four sitting or two lying. Seven per cent. of hammocks, slung on poles, for Europeans, and one and a half per cent. for natives, were also taken to Abyssinia, as dhoolies were intended only to be used on the plains. Also two per cent. of cacolets for European troops, and four per cent. for natives. Ambulances at the rate of one per cent. for European troops, and one per 500 native troops; and camel saddles (double-seated) at a uniform rate of three seats per cent. for Europeans and natives were also taken, but none of these descriptions of sick carriage were used in the advance on Magdāla, on account of the hilly nature of the road and scarcity of forage: they were, however, of some advantage on the return route between Antalo and the coast. Foot-sore and fatigued men were allowed to be conveyed on spare mules at the recommendation of the medical officers. Stretchers were also taken at a uniform rate of two per regiment or one per detached company.* Ambulances.

The carriage for entrenching tools allowed by Indian Regulations, as also the scale adopted for Abyssinia, is as follows:— Entrenching tools.

				India.	Abyssinia.
Regiment of European Cavalry	..	..	4	bullocks.	4 mules.
" Native	..	..	2	"	2 "
" European Infantry	..	..	3	"	8 "
" Native	..	..	2	"	8 "

Each Regiment of Cavalry was supplied on embarkation with 16 pickaxes, 16 mamooties† with helvcs, and also with jungle knives.

Each Regiment of Infantry with 50 pickaxes, 100 mamooties with helvcs, 12 axes, (felling), 2 crowbars, and jungle knives.

The 23rd Regiment of Pioneers carried the tools laid down for a Regiment of Pioneers.

Troop stores in India are allowed carriage according to actual wants, not however Troop stores.

* For a description of each article of sick carriage and camp equipage, see the Report at the end of this chapter.

† Mamooties are hoes.

exceeding on field service, per troop, 3 camels, and on ordinary marches, per troop, 1 camel or 1 cart. In Abyssinia the European cavalry were allowed 6 mules per troop for troop stores.

Tents.

Troops from India took with them, for use in the lowlands, the tents authorized by Regulation for marching in India, as well as a supply of Native soldiers' tents, for the highlands. English bell tents were also sent from England for the whole Force.

Officers' tents.

Officers, Regimental and Staff, were allowed to take their own tents for use on the march from Annesley Bay to Senafè, there to be made over to the Ordnance Department for safe custody until again required. European soldiers' tents were, as far as possible, issued as day tents, *on loan*, to those officers who were not able to provide their own camp equipage. All officers were also supplied, *on loan*, with Native soldiers', single-poled, tents.

It was arranged in Bombay that at Senafè the final distribution of tents to officers and troops, British and Native, was to be made as circumstances might dictate; and payment was to be recovered for the tents then issued to officers.*

Public and private followers.

According to the Indian Regulations ten per cent. of private followers are allowed to European troops when embarking in the course of duty, and the same proportion to natives. These were reduced at Bombay to two per cent. of strength for artillery and cavalry, one per company of British infantry; and no private followers were allowed for Native infantry. The Native irregular cavalry, however, were permitted to take to Abyssinia their syces, grass-cutters, barbers, washermen, water-carriers, &c. Conservancy establishments were not taken with corps from India. The followers of officers proceeding to Abyssinia were reduced at Bombay to the following scale.

Staff and Departments.

				Servants.
General of Division	..	..	..	each 8, including Syces.
General of Brigade	..	..	..	" 6 "
Head of Department	..	..	..	" 6 "
Field Officer	..	..	..	" 4 "
Captain	..	..	..	" 3 "
Subalterns	..	..	..	" 2 "

The following private followers were allowed on embarkation for the non-commissioned rank and file :—

Artillery	..	..	..	2 per cent of strength.
Cavalry	..	..	..	" "
British Infantry..	..	..	..	1 per Company.
Native Troops	..	..	..	None.

Reduction of followers in each Corps in Abyssinia.

On the highlands of Abyssinia all followers were reduced. For instance, the 3rd Dragoon Guards landed at Zula with 257 Native followers; this number was reduced to 78. The A and B Batteries 21st Brigade, Royal Artillery, landed with 69 followers each, and their number was reduced to 24. The 4th King's Own and 33rd Regiments landed with 438 and 347 Native followers respectively; their number was reduced to 117 and 113 for each corps, including hospital and water establishments, carriers for sick, &c. The 27th Bombay N.I., Belooch regiment, landed with 151 followers, and this number was reduced to 59. Similar reductions were made in each corps.†

The establishments with which the 5th Battery 25th Brigade Royal Artillery, the 10th and 12th Bengal Cavalry, and the 21st and 23rd Punjab Infantry, left India, and the actual number of followers permitted to embark with officers and men will be found in the Embarkation Returns at the end of Chapter VII.

* For the rates of payment see Chapter V, page 128.

† See pages 62 to 72, Chapter XIX.

The annexed Statement exhibits, in a tabular form, the proportion of public tents, sick carriage, and tent and flag-staff Lascars, which Corps Officers and Departments were permitted to take with them to the coast of Africa from Bombay.

ALLOTMENT OF TENTS, Sick Carriage, and Tent Lascars, sanctioned in Bombay, for Corps and Departments proceeding to Abyssinia.

TENTS.		Tent, European Soldiers', Double-poled, No.	Tent, European Soldiers', Single-poled, No.
For use on the lowlands.	Regimental Officers		
	Battery of Royal Artillery ..	{ For personal use ..	1
	Wing of Dragoons ..	{ For office and orderly-room ..	1
	Regiment of British Infantry ..	{ For personal use ..	1
	Company of Native Artillery ..	{ For office and orderly-room ..	2
	Regiment of Native Cavalry ..	{ For personal use ..	1 (A)
	3 Companies Sappers ..	{ For office and orderly-room ..	1
	Company of Sappers ..	{ For personal use ..	1
	Regiment of Native Infantry ..	{ For office and orderly-room ..	1 (A)
	Head of Department ..	{ For personal use ..	1
For use after leaving Sena.	Staff Officers		
	Other Staff Officers ..	{ For personal use ..	1 (B)
	Warrant Officers and Staff Sergeants of Departments. 1 Staff Sergeant's tent between 4.	{ Department. No. of Men to each.	10
	European Non-Commissioned Rank and File	{ Horse Artillery ..	12
		{ Field Artillery and Cavalry ..	14
		{ Garrison Artillery, Sappers, and Infantry ..	16
	Regimental Officers		
	Commanding Officers ..	..	1
	Other Officers ..	..	1 to 2
	Head of Department ..	..	1
For use after leaving Sena.	Staff Officers		
	Other Staff Officers ..	{ 1 to each } at the option of Officers	..
	For office use ..	{ 1 to 2 } According to actual requirements	..
	Warrant and Staff Non-Commissioned Officers of Departments ..	..	1 to 2
	European Non-Commissioned Rank and File of all arms ..	..	13
	Native Non-Commissioned Rank and File of all arms (exclusive of Cavalry, who had to provide their own tents) ..	..	30
	A. And 1 Staff Sergeant's tent for office and orderly-room.	..	..
	B. For native clerks, native soldiers' tents were allowed according to actual requirements.	..	..

SICK CARRIAGE.

European Troops.	Dhoolies, 5 per cent.
	Ambulances, 1 per cent.
	Cacolet Knjawaals, 2 seats per cent.
	Camel Saddles (double-seated), 3 seats per cent.
	Mule pads .. 1 per cent.
	Stretchers .. { 2 per Regiment. 1 per Wing. 1 per Battery.
Native Troops.	Dhoolies, .. 1 per cent.
	Ambulances, 1 per 500.
	Cacolet Knjawaals, 4 seats per cent.
	Camel saddles (double-seated), 3 seats per cent.
	Mule pads .. 1 per cent.
	Stretchers .. { 2 per Regiment. 1 per Company of Sappers. 1 per Company Native Artillery.

TENT AND FLAG-STAFF LASCARS.

Horse Artillery and British Cavalry ..	4 Lascars to 100 N. O.
Field and Garrison Artillery and British Infantry ..	Rank and File.
Native Cavalry ..	4 " 112 "
Native ..	{ Artillery .. 2 Lascars per Regiment. Sappers .. 2 Lascars to 112 N. O. Infantry .. Rank and File.
General Officer Commanding the Force ..	1 2nd Tindal & 10 Lascars.
General of Division ..	1 " 6 "
Brigadier ..	1 " 5 "
Camp Equipage Department, and Reserve ..	{ 1 First Tindal. 2 2nd Tindals. 50 Lascars.