MEMORANDA ON ARTILLERIES
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MEMORANDUM

- Br Captain A. F. Oakes, Madras Horse Artillery, and Director of the Madras Artillery DEPÔT OF INSTRUCTION, on the subject of the three different systems of Field Exercise and Evolutions of the Horse Artillery of Bengal, Hadras, and Bombay, submitted for the consideration of His Excel-LENCY GENERAL SIR CHARLES NAPIER, G. C. B., &c. &c. &c.
- I. The strength of the Artillery in India consists of three Regiments, Officered by 552 Officers, and comprising 107 Troops and Companies of Artillery, of which, 23 are Troops of Horse Artillery.
- II. In the year 1835, General Sir Henry Fane, Commander-in-Chief of India, on his way to Calcutta, reviewed the Madras Horse Artillery, and was pleased to express his high approbation of its excellence, at the same time making the following observation, 'I do not see why the Royal Horse Artillery system of coming into action should not be conformed to.' At that time, the Horse Artillery of Madras brought their Guns into action, in the same way as the Horse Artillery of Bengal now do, viz., with the Limbers facing to the rear.
- Minutes by His Excellency the Com-mander in Chief, dated 15th Janu-ary, and 1st of Feb-ruary, 1836.

III. After General Sir Henry Fane's arrival in Bengal, His Excellency caused the Supreme Government to order a Special Board of Artillery Officers from the three Presidencies to assemble at Calcutta, with the view of establishing uniformity of system throughout the Indian Artilleries; observing, that as the Artillery of Bengal, Madras, and Bombay were all liable to serve together in active warfare, a very great benefit would accrue to the Indian Artillery service by having fixed Regulations and clearly defined Instructions for their general guidance.

PRESIDENT. Col. Whish, Bongal Arty. Lt.Col. Stevenson, By. ,, Major Tennant, Ben. "
Major Conran, Mad. "
Capt. Seaton, "
Capt. Whittle, By. "
Capt. Cartwright, Bn. "

IV. The Special Board accordingly assembled in 1836, under the orders of the Supreme Government, (constituted of Officers from each of the Presidencies of upwards of 20 years' standing in the service); and the result of their deliberations, on the question of Field Exercise and systems of Drill was, that the whole of the Artillery in India ought to adopt a modification of the Royal Artillery system; this was promulgated officially in 1838, in the following extract:

"The majority of the Board are of opinion that the Detachment system (or that, where the "Artillerymen for working the Guns are mounted on Horses, distinct from those used for the draught " of the Carriages,) is the most efficient."

V. The Bengal Members of the Special Board having dissented from the above opinion, Colonels Whish and Tennant, of the Bengal Artillery, entered a Minute in favor of the Bengal system, in reply to which, General Sir H. Fane, and Colonel Morrison recorded as follows:

According to the reasoning in this Minute, if it is admitted, without controversy, the advan-"tages of the Bengal system are so striking on the score of economy as well as diminished exposure "of men and horses, that it would be most strange that the Bengal Artillery should be the only "Corps of Horse Artillery either in India or Europe so organized! But in fact there are several im-"portant points for consideration, on which Colonel Whish has not touched. The most important " is efficiency when called into action. Economy must be a secondary consideration, for when a "Government deems it expedient to equip so costly an arm as Horse Artillery, they must not swal-"low a Camel, and strain at a Gnat!!! Let us then consider what a soldier must deem the main " point,-Efficiency when brought into Action. All experienced Officers know that it rarely hap-" pens that assailants (which I hope our Horse Artillery will always be) bring their Troops fresh into "action. Affairs are generally brought on after a long or rapid march. It is at the end of such, "that the active exertions of Horse Artillery are required. Let us then suppose six Horses in a " six Pounder, each with a weight of fifteen or sixteen stone on his back, and having drawn the Gun "over ten miles of bad road; take another Gun with riders on the near horses only, and the off"horse free to exert his energies without any pressure on his back or loins; which Gun, I ask, will be the most capable of the active exertion I require from it? I cannot doubt the answer. It is the Guns now unlimber for action—Two Bengal Gunners take to the rear six horses and the "Limber;—a casualty happens to one man, and thus the six unruly horses which are supposed to "require six men on their backs to manage them, are to be taken back to the Gun, with its Limber under fire; and on such an arrangement depends perhaps your getting off your Guns and working Gunners. Practically I cannot say how the management answers, but theoretically I think it bad. "Your Gunners when mounted as a detachment, are available as Dragoons, to save their Guns on any sudden or unexpected attack; they cover their Gun from individual assault of daring pursuers, whereas a retiring Gun with the Gunners on its draught horses is entirely dependent on others for such aid; moreover your Gunners mounted as detachments, enables you to select your lightest and least efficient Artillerymen, as drivers, on your Gun Horses; and so to spare the exertions of your best, until the critical time at which they are wanted."

"These and some other reasons unnecessary to mention, form sufficient grounds in my mind "for preferring the organization in which the Gunners are mounted as Detachments."

(Signed) H. F.

"I entirely concur with His Excellency the Commander-in-Chief; in every Horse Artillery in "Europe, and in India, (Bengal excepted,) the system of Detachments is now in use."

(Signed) W. M.

VI. In 1838, I published a Code of Drill for the Horse Artillery, strictly in accordance with the decision of the Special Board; it was tested throughout the Madras Horse Artillery for two years, and finally established in 1841, by the late Major General Sir Robert Dick, in Command of the Madras Army, in the following copy of Letter No. 4980, dated 5th October, 1811, to the Brigadier Commandant of Artillery.

"Major General Sir Robert Dick instructs me to convey his approbation of Captain Oakes'
"Book of Instruction for the Exercise and Field Movements of Horse Artillery, and directs me to
"authorize the system as it is now completed, being established for the use of the Horse Brigade of
"Artillery."

"All former Rules and Regulations differing from those now laid down are abrogated, and the practice of them is to cease."

"The Officer Commanding the Army in Chief in passing final orders on this subject, directs me to request that you will express to Captain Oakes, the high sense which the Major General entertains of the zeal and professional ability evinced in the compilation of a work so useful to the Lieut Colonel Conran was one of the members of the members of the professional ability evinced in the compilation of a work so useful to the "Army and which, having been strictly tested, is so favourably reported upon by "Lieutenant Colonel Conran and other experienced Officers of that branch of the action of Artillery Officers."

VII. In 1844, taking the Horse Artillery system as my groundwork, I compiled the Exercise and Field Movements for the Madras Foot Artillery, also the Heavy Ordnance Exercise, both of which the Marquis of Tweeddale did me the honor to notice in the following General Order, 30th April, 1844.

"The Regulations for the Exercise and Field Movements of the Foot Artillery and Heavy "Ordnance, compiled by Captain A. F. Oakes, having been finally revised and approved, the Commander-in-Chief directs the same to be established for the Artillery of the Madras Army."

"The Regulations for the Horse Brigade also compiled by Captain Oakes having been already introduced, the system of Exercise for the Madras Artillery is now complete, and the Commander-in-Chief considers it due to Captain Oakes to record in General Orders, His Lordship's approbation of the zeal and ability evinced by that Officer in the preparation of these useful works."

The following Artillery works compiled by me have, since that period, become the established Codes of Instruction in the Regiment of the Madras Artillery, under the sauction of the Commanders-in-Chief of the Madras Army.

Artillery Repository Exercise and Laboratory Course of Instructions, in 1847-Young Artillery Officers' Assistant, in 1848-Horse Battery Drill, in 1848, (this has been under experiment in

the Madras Horse Batterics since Jung, 1848, and is about to be reported upon.)—Artillery Drill for the use of the Madras Infantry, in \$\frac{15}{2}\$ T—Regimental Ordnance Regulations for the Madras Artillery, in 1849.

VIII. I have taken the liberty of thus far digressing from the main question under consideration, believing that the approval with which my labors have been honored, may be considered by your Excellency to be a fair guarantee, that the system of Drill and Exercise which I am now about to advocate so strongly, is based on sound principles, and will be found to have been so executed, as to be in keeping with the advanced state of Tactics of the British Army.

IX. I will now submit for your Excellency's consideration, the present state of the Artillery of the three Presidencies with reference to the several systems of Drill in force, restricting my observations to those points of difference which present themselves most prominently to notice.

X. The Artillery of the three Presidencies at present follow three separate systems of Drill, cach so widely differing from the other, that an Artillery Officer of one Presidency, if placed on service in Command of a Battery in another, would be unable to manœuvre such Battery in the The system of Drill now followed in the Bengal Horse Artillery, owing to the unmanageable race of Horses they formerly had, were obliged to tell off a driver to each Horse in draught; and although the care bestowed of late years, in breeding the Stud Horses, has provided a better tempered animal, there has been, as yet, no corresponding improvement in the Bengal system, inasmuch as they still have six Drivers to an equal number of Horses, and are without detachments. From the sample of one hundred and fifteen Bengal Horses which were sent to the Madras Horse Artillery for trial in 1835 and 1836, there can be no doubt whatever that the Bengal Horses can be broken in to the Detachment system.

The system of Drill in Bombay. XI. In 1844, a printed Code was compiled by an Officer in the Bombay Artillery, which was intended to be according to the views of the Special Calcutta Board, it was however disapproved of by the Artillery Officers of that Presidency, and has fallen into disuse. Since then, in the Bombay Artillery, the Officers have been generally guided by the Royal Artillery Drill Book, each Officer in Command of a Battery applying it, according to his own judgment, (as far as local circumstances will admit,) to Indian Artillery; but separated from each other, as Batteries of Artillery always are in India, such a system cannot but be attended with great want of uniformity.

The system of Drill and Madras. XII. In the preparation of the Horse Artillery Drill and Field Exercise, in use at Madras, the object of the Special Board of Artillery Officers has been steadily kept in view—with reference to the working of the Ordnance, and the mode of coming into action; this Code will be found to be a simple modification of the Royal system, and as regards the Field Movements, to harmonize with the Cavalry and Infantry systems of the present day; the words of Command being, as nearly as possible, the same as those of the British Cavalry. The following is a Copy of an Official Report, No. 175, 18th Nov. 1839, upon my Horse Artillery Code, from Lieut. Colonel Graham, Commanding 1st Brigade of Bengal Horse Artillery (who was a Member of the Special Artillery Board in 1836,) to the Adjutant General of the Bengal Army.

"I have the honor to state that during my recent March, I carefully perused Lieutenant and Adjutant Oakes' suggestions for the Exercise and Field Movements of Horse Artillery in India, which I consider admirably adapted to meet the ends proposed, and the wants of the service; the Movements are based on sound principles, and the executive directions so full and explicit, as to ensure uniformity if established by authority. In fact, Lieutenant Oakes appears to me to have, in this particular, effected the object of the Special Board of Artillery Officers (of which I was a Member,) in an able and satisfactory manner, and for my part I shall be glad to see this Exercise adopted on the introduction of the Detachment system into Bengal; but familiar as the Mad"ras and Bombay Horse Artillery Officers already are, with the Detachment system, they are better qualified to appreciate the merits of Lieutenant Oakes' work, than those of Bengal, where that system is still practically unknown." I would particularly invite your Excellency's attention to the concluding part of Lieut. Colonel Graham's letter, where that Officer so justly remarks, upon the De-

tachment system being practically unknown in Bengal, for it is an underiable fact, that the Bengal Artillery have never had an opportunity of obtaining a practical knowledge of the Royal Detachment system; of which the following is an outline:—the limbers in action front as the men do, at the guns, with the detachments in their rear, every man and horse facing the same tay; the detachment which may consist of any number (not less than eight) is told off from right to left, the right files number off to work the gun, thus:—No. 1, the Non-Commissioned Officer, is the right file of the front rank. (Nos. 2 and 3 sit on the limber, unless mounted.) No. 4 covers No. 1. No. 5 is the next but one, on the left of the Non-Commissioned Officer. No. 6 covers No. 5 and so on, the left files remain mounted, and hold the horses of the right files. In movement, the usual position of the Detachment is on the left of the leading Horses; each gun conforms to the movement of its own Detachment, which is the directing body. In the Royal Artillery, one man holds a horse on each side of him, this cannot be accomplished with entire horses, which renders a modification of that system necessary in adapting it to the Horse Artillery of India.

XIII. It is very questionable, whether the Bengal Horse Artillery can properly be looked upon, organized as they now are, in any other light than as Horse Batteries? In drawing a comparison between a Bengal Troop and a Horse Battery, supposing them to be equally well horsed, I would ask, in what does the superiority of a Bengal Horse Artillery Sub-division consist, over a Horse Battery Sub-division? Exclusive of drivers on the near horses, the Bengal Horse Artillery Gun and Limber carries 7 men—the Horse Battery Gun and Limber only carries 2 men—to be efficient, both must be accompanied by their Waggons; the Bengal H. A. Waggon carries No. 3, the loadsman, on the off-leader—the Waggon of the Horse Battery carries 6 men on the limber and body—so that the Bengal Gun and limber carries 5 men more than the Horse Battery Gun and Limber—and the Bengal Waggon carries 5 men less than the Horse Battery Waggon—the Bengal Gun and Waggon have available 7 men including 2 Natives to work the Gun—the Horse Battery Gun and Waggon have 8 Europeans! I will leave it to your Excellency to decide, which of the two Sub-divisions is the more efficient, and if either can, bonâ fide, be called Horse Artillery!

XIV. In the Bengal Horse Artillery Code will be found in Pages 2 and 3—" each Sub-division is served by 13 men, of which, 2 are Non-Commissioned Officers, &c. &c."—now 13 men to a single Gun appears, at first sight, to be a very efficient allotment, but a closer examination into details will show, that out of these 13 men, there are found but 5 Artillerymen available, including the Non-Commissioned Officer in charge, to work the Gun!!! No. 1, is the Non-Commissioned Officer who commands—No. 2, Spunges—No. 3, Loads—No. 4, serves the vent—No. 5, fires—Nos. 6 and 7 are Gun Lascars, not Artillerymen! Nos. 8, 9 and 10 are Gun drivers and Horse holders, and Nos. 11, 12 and 13 are Waggon drivers and Horse holders—No. 3 rides the off Waggon leader, thus the Waggon, if horsed with its regular team, must always be kept under fire, otherwise, the services of No. 3 will be lost—two horse-keepers ride on the Gun axle, one of them to hold the Non-Commissioned Officer's Horse, the other, to hold the centre Horses of the Gun, in the event of No. 9 being wanted to assist No. 3 as loadsman; so that the two centre Gun Horses, in such cases, would be left without any rider; and yet, one of the objections advanced to adopting the Detachment system in Bengal has been, 'the viciousness of their Horses.'

XV. It is unnecessary to say more upon the inefficiency of a system where 13 men are told off nominally to a Gun; out of which, only 5 Europeans are properly available: where Europeans and Natives are thus mixed up, as a makeshift, to enable them to come into action: where Horse Artillery are obliged to carry Horse-keepers on their Gun axles, as the only mode in which the Non-Commissioned Officer can dismount to attend to his duty, or a single spare European Artilleryman can be made available to assist the 5 working Gunners before alluded to.

XVI. I have annexed two drawings showing a Sub-division of Bengal Horse Artillery, and a Sub-division of Madras Horse Artillery in juxta-position, before coming into action; and also, when in action, with explanatory notes; I have also annexed drawings of the Bengal Gun Axle, of the Royal Axle, and of the Axle ordered by the Special Board; it will be perceived that the grand object of the Special Board which was to establish uniformity of Drill and equipment, has been prevented by the Bengal Horse Artillery ad-

hering to a system which necessitates a particular kind of carriage with a long axle and seats, both of which are unsuited to the other Presidencies; they add moreover very considerably to the dead weight, especially to the weight in draught, and to which neither the Madras nor the Bombay Horses are equal, the Military Board in Bengal probably not considering the question in all its bearings recommended to the Supreme Government that all the Artilleries should adopt the Bengal pattern Carriage, or in other words 'to enable the 13 Troops of Bengal Horse Artillery to continue their own system 'of Drill, the efficiency of the 10 Troops of the Madras and Bombay Horse Artillery were to be sacrificed!!!' I would earnestly request your Excellency to peruse the accompanying Pamphlet, wherein the Madras Artillery have lately appealed to Government for protection upon this subject.

XVII. The Madras Artillery have no desire to bring forward for general adoption, any particular system of Drill of ear own, we had one, previous to the assembly of the Special Board of Artillery Officers in 1836, which had been in use upwards of 30 years and which we were proud of, and partial to; but surrendering all such feelings to the good of the general service, we have now adopted that system of Drill, which was considered by the Special Board of Artillery Officers of the three Presidencies, the best suited for the Artillery of India, and which having now been so extensively known and practised, we anxiously desire to invite our brethren of the other two Regiments, to meet us in a similar feeling, and either unreservedly to adopt the Madras Code, as now established, drawn up, as it has been, according to a system decided upon by an authority, which ought to be considered by us all, as paramount in competence to judge, (viz., by a selected Board of Artillery Officers from the three Presidencies,) and executed in a manner which has met with the approval of the following General Officers, Commanders-in-Chief at Madras:

The late Major General Sir Jasper Nicholls, &c. &c. &c.

The late Major General Dick, &c. &c. &c.

Lord Gough, (when in command of the Madras Army,) &c. &c. &c.

Major General the Marquis of Tweeddale, &c. &c. &c.

Major General Sir George Berkeley, &c. &c. &c.

Should our brethren in Bengal however bring forward any objection to the immediate adoption of the Drill in use at Madras which your Excellency may consider valid, I would respectfully submit for consideration, whether it would not be better to allow a certain number of the Officers of the three. Indian Artilleries again to assemble, if necessary at Calcutta, (or at Madras where we have a more extensive Depôt of Models, &c.) calmly to discuss how assimilation may best be effected.

XVIII. In 1847, having heard that a Bengal experimental Detachment Troop was to be tried, I volunteered my services to Lord Gough; his Lordship's answer is annexed:—on receiving it, I immediately wrote to Colonel Graham, C. B., of the Bengal Horse Artillery, (whom I have never seen, nor am I personally acquainted with him,) and forwarded copies of my letters to Lord Gough and his Lordship's reply, stating, that as I had failed in my wish to be employed in Bengal as an Instructor in this Drill, my great object now would be, to give every assistance in my power, in any way, by books or by writing, if I could be useful to the Officer of the Bengal Artillery who had been entrusted with the experimental Troop. Colonel Graham replied to me as follows in June, 1847.

"I have forwarded the whole of the highly interesting correspondence between you and Lord "Gough to Lieutenant Colonel Brooke, C. B., Commanding the Bengal Horse Artillery, with a re"quest that the packet might be shown to "Lieutenant Colonel Alexander, C. B., Commanding the
"Experimental Royal Horse Artillery System Troop in Bengal, with a suggestion to him from me,
"that he should readily, cordially, and thankfully avail himself of the information and assistance so
"kindly tendered by you, by a direct application to you from himself." I will merely add that
from that time to the present, all that I have heard of the Experimental Troop is, that Lieut. Colonel Alexander, long since, obtained a Staff appointment, and was succeeded in his charge by another Officer, who was killed in Action in the Punjaub, and the Troop has dwindled down, I am informed, by an eye witness during the late war, to a Bengal Troop on the old plan, by the following

means:—whenever an Artillery Horse was wanted, immediate recourse was had, to taking the Detach-'ment Horses of the Experimental Troop!

XIX. It is clear that the Bengal Officers never having seen the working of the Royal Detachment system do not understand its value and superiority over every other system in the world, but which has been acknowledged at Madras and Bombay for many years past.

XX. Lord Gough in his letter informed me on the 9th of April, 1847, that a Troop was advancing to "a high state of training under Lieut. Colonel Alexander, &c." and up to the year 1849, no satisfactory results have proceeded therefrom. I hope your Excellency will pardon my apparent presumption when I say it, but the good name and efficiency of the Artillery of Madras and Bombay are at stake, and it is no time for an Artillery Officer who has his profession at heart, to be silent. I am holding an excellent appointment at Madras and am perfectly satisfied with my situation, I therefore can have but one object in view in addressing your Excellency on this subject, viz., the good of the Artillery Service. I will engage to break in any Troop of Horse Artillery into the Detachment system, in as many weeks as years have clapsed since the Bengal Artillery have commenced it! Let me but have a Troop, and the aid of one Serjeant, I Corporal, and 6 Drivers, and a set of Harness from the Madras Horse Artillery, and I will engage to turn out a Bengal Troop for your Excellency's inspection, perfect, on the Detachment system, in a month; and able to perform any movements you may please to order, at any pace, within two months; should your Excellency be detained in Calcutta for ten days, in that time, I will, unaided by any men from Madras, break in two guns on the Detachment system, taking the first Horses I meet with at Dum Dum; and if there should be no Horse Artillery Horses there, the Detachment Horses can be taken, temporarily, from the Cavalry: I propose this, merely to show your Excellency, that the Bengal Horses can be broken in, to the Detachment system, just as well as any other Horses in the world; all that is wanted being, a knowledge of the system of doing it, and of the mode of imparting the same to others.

XXI. With regard to the Bombay Horse Artillery, they are so accustomed to the Detachment system, that it would be sufficient to furnish them with copies of the Madras Code, should your Excellency approve of it; those Officers from their experience, being perfectly competent to modify their existing Detachment system, to a uniform one.

XXII. I will, in conclusion, recapitulate the grounds on which I earnestly appeal to your Excellency in behalf of the system which has been tried at Madras being introduced throughout the Artilleries of India. The Special Board in 1836, decided that the Detachment system should be adopted throughout India. The Madras Artillery and the Bombay Artillery compiled Codes of Drill according to that system, modified to suit the Indian service; the former has met with unquestionable success, the latter was imperfectly compiled, and was condemned by their own Officers; and with regard to the Bengal Officers, they consider themselves beyond improvement, resting satisfied with their own peculiar system of Drill.

XXIII. The Regiment of Madras Artillery were the first of the three Artilleries who were complete with printed Codes of Instruction in every branch of Artillery duty. The volume I have now the honor to present to your Excellency will show by what authority, and at what period, our several systems were established. It is worthy of remark that our Horse and Field Battery systems had been printed, and established, for a considerable time before the Bengal Artillery had a single Book on Instruction for this Arm, printed under authority. In 1842, the Bengal standing Gun Drill was established by authority and printed; in that book, will be found some valuable instructions which were taken verbating from the Madras Codes, without acknowledgment! I refer to those parts which have no where before appeared in print, excepting in the Codes in use at Madras; there can be no mistake therefore, upon this point. The Code of Drill in use in the Bengal Horse Artillery was sanctioned by Lord Gough in 1844, five years after that of the Madras Horse Artillery had been in force. In the former Book will be found, several extracts from the Madras Code, which however, have been dealy acknowledged. It would be unbecoming in a Madras Horse Artillery Officer, to assert, that we are in advance of the Bengal Artillery in every respect,—I will therefore

simply place on record, the following facts, which I am prepared to prove. We, in the Madras Artillery have a complete set of Codes of Drill and Exercise—we have a very efficient Depôt of Instruction for the Young Officers, Non-Commissioned Officers, and Men of the Regiment,—we have a Repository Exercise Establishment, and an extensive Model Room, embracing every description of Ordnance, and of Carriage in use with the Artillery. All these Establishments are in daily practical operation. In Bengal, the same Establishments are not, I have been informed, so complete—they are in want of Codes of Instruction; and their system of Field Exercise is not in keeping with the improved system of Madras and Bombay.

XXIV. I am ready, if honored with an opportunity, to give your Excellency further information with the aid of the Models of Gun Carriages, &c., which I have with me on the several systems of Drill, and on the construction of the different patterns of Gun Carriages, &c., in the hope that I may be able to make your Excellency aware of the effect of the existing system in Bengal, of placing the whole of the controlling power on Artillery matters, under the Bengal Officers, without any interchange of opinions with the Artillery Officers of the other Presidencies, being allowed to have its beneficial effect, in producing correctness of judgment, and unity of purpose.

XXV. If uniformity did but prevail in the Artilleries of India, what a powerful Battery of Horse Artillery Guns could, on an emergency, be united for any specific purpose!—and of what vital importance it would be, on such an occasion, that all should be organized, equipped and drilled, alike. There are in Bengal 13 Troops—in Madras 6 Troops—in Bombay 4 Troops—each Troop has 6 Pieces of Ordnance, making in all, 138 field pieces of Horse Artillery Guns! what could withstand such an overwhelming mass, if all possessed the wonderful powers of rapid mobility of the Detachment system?

XXVI. In 1829, the last new system of Cavalry Equitation was introduced in India, the plan adopted in teaching it was, by the formation of Depôts of Riding Establishments at the three Presidencies, to form a nucleus, whence, the system afterwards branched forth, under competent Officers instructed at the Depôt, to the several Regiments of Cavalry—this plan was perfectly successful. A similar arrangement might now be made for the instruction of the Horse Artillery of India in the Detachment system, should it be approved by your Excellency; by forming a Depôt of 3 Troops for Instruction at some convenient station; which Troops might, when perfect in the Detachment system, be divided into separate Depôts at convenient localities, under Horse Artillery Officers of the several Presidencies who had previously been drilled, at the original establishment. In this manner, the remainder of the Troops might learn the Detachment system in the course of a very short period, indeed I see no obstacle to the system being generally known, throughout the Bengal Horse Artillery, within a twelvementh. With regard to assimilation of Equipment, the difficulties in its attainment are much overrated; if the Officers of Artillery at the three Presidencies be really desirous to effect it, (and who will not be so, should your Excellency decide in its favor?) the assembly of the three Troops will aid in accomplishing this in an incredibly short period, sufficient, at least, for all practical purposes; and with the certainty of creating that uniformity and simplicity in the Arsenal Stores, so essential to perfect efficiency in the three Artifleries of India, and to the reduction of expense to the State.

SAINT THOMAS' MOUNT, 30th April, 1849.

Captain, Horse Artillery, Director of the Madras Artillery Depôt of Instruction.

MEMORANDUM.

Captain A. F. Oakes, Madras H. A., Director Artillery Depót of Instruction, explains the peculiarity of the three different systems of Drill, now in force in the Horse Artillery of India, consisting of 138 Field Pieces; remarks upon the vital importance of assimilation in the Field Exercise and equipment of the three Artilleries; adverts to the measures adopted by General Sir H. Fane, Commander-in-Chief of India in 1835, and the cause of failure in His Excellency's attempt to carry them out; proposes a plan to ensure immediate and efficient uniformity throughout the three Regiments of Artillery in India.

MEETING 155.

EXTRACT FROM THE PROCEEDINGS OF THE PERMANENT ARTILLERY SELECT COMMITTEE, ASSEMBLED BY ORDER OF BRIGADIER FREDERICK DERVILLE, COMMANDANT OF ARTILLERY.

Artillery Depôt, Saint Thomas' Mount, 27th June, 1849.

Present.

LIEUT. COLONEL H. S. FOORD, Commanding 4th Battalion Artillery.

MAJOR P. J. BEGBIE, Commanding 5th Battalion Artillery.

CAPTAIN AND MAJOR P. ANSTRUTHER, c. E., Supt. Gunpowder Manufactory.

CAPTAIN J. MAITLAND, Superintendent Gun Carriage Manufactory.

CAPTAIN A. P. OAKES, Director Artillery Depot.

CAPTAIN AND MAJOR G. BALFOUR, Commanding 2d Battalion Artillery.

CAPTAIN B. W. BLACK, Assistant Adjutant General of Artillery.

ARTICLE 521.

ON THE ORGANIZATION, EQUIPMENT AND PROPORTION OF ORDNANCE FOR THE MADRAS ARTILLERY RELATIVELY WITH THE ARTILLERIES OF BENGAL AND BOMBAY.

By order of the Military Board, the following papers (on the allotment of ordnance and equipment fixed for the Bengal artillery), forwarded by the Bengal Military Board to be submitted to the Madras government, with a view "to assist in the final settlement of the question of ordnance equipment for the Madras artillery," are laid before the Permanent Artillery Select Committee.

No. 74, From the Officiating Secretary to the Government of India Military Department, Fort William, to the Secretary to Government Military Department, Fort St. George, dated 5th May 1849.

Fort St. George, dated in May 1849.

*Letter No. 5768, From the Bengal Military Board, to Major General the Honorable Sir J. H. Littler, G. C. B., President of the Council of India, dated 21st April 1819.

*Letter No. 35, From the Madras Military Board, to the Madras Government, dated 19th January 1947. 1st.—A letter from the Government of India^a directing that the report on the allotment of ordnance, &c., fixed in 1848 for the Bengal artillery, by the Bengal Military Board, be transmitted to the Madras Government and by them communicated to His Excellency the Commander-in-Chief and to the Military Board at Madras, in answer to the reference made to the Supreme Government in 1847, respecting the Madras Artillery equipment.

2d.—No. 358 of 1848.—Copy of G. O. G., dated Fort William, 23d September 1848.

—See Appendix.

- 1. The Select Committee proceed to the consideration of the very important questions involved in the Despatch* of the Officiating Secretary (Military Department) to the government of India, relative to the allotment of ordnance, &c. for the Presidency of Fort St. George; and in letter No. 6768, from the Military Board of Fort William, which gives the force of artillery recently fixed for that Presidency, and states that "the proportions of ordnance equipments for Bengal being now settled,—these proportions would form a good precedent for the Madras proportions, and the General Orders laying down the proportions of waggons, ammunition, and other important points of ordnance equipments, are forwarded for the information of the Madras government, with a view to assist in a final settlement of the question."
- 2. In the consideration of this important subject, the Select Committee have had to contend with great difficulties arising from the existing dissimilarity of organization in the artilleries of the several Presidencies, attributable to the reductions and augmentations so unequally made during the last twenty years; whereby the Madras artillery has been reduced to an establish-

ment'so disproportionate, and so incompletely equipped, in comparison with that of Bengal and Bombay, as to render a system, however well suited to those two artilleries, totally inapplicable to that of Madras. In submitting the following Report, the Scleet Committee have endeavoured to keep clear of all Presidency interests, and prejudices, looking on the forces of the three Presidencies as one united army, and suggesting what they consider necessary to render the Madras artillery sufficient for the public service; taking, as recommended from Bengal, the establishment of the artillery personnel and materiel, (recently fixed for the Bengal army as shown in the letter from the Military Board,) as the basis of their calculations.

- 3. Before proceeding to details, the Select Committee would observe, that the difficulties mentioned above are shown to be considerable, by the fact that the Bengal Military Board were unable to report on a suitable allotment of ordnance for this Presidency, a question referred to the Supreme government by that of Madras as far back as the 1st April 1817, to which no reply was given until the 5th May 1849; and even then, the only information transmitted from Bengal

for the guidance of the Madras government, was a General* Order of Septem-*See para. 49 for observations of the ber 1848, and a Report of the Bengal Military Board on the organization of . the artillery of Bengal, which proves to be quite inapplicable to the artillery of this Presidency; the Board having fallen into a misconception, and being un-

able to offer a definite opinion as to the expediency of equipping each Madras troop and company with a battery, owing to their not having adverted to the great difference in the organizations of the Bengal and Madras artilleries: the number of troops and companies in the former, being so far greater than in the latter, that after fully equipping sufficient pieces of ordnance for their army, they have nearly half of their whole establishment in Reserve; whereas the Reserve of the Madras artillery only amounts to one-seventh of the whole establishment, after supplying the necessary field artillery allotment.

- 4. Another misunderstanding appears to exist as to the meaning of the word "Battery;" for, in Madras, we have not "a battery to each company" if the term "battery" be used in its legitimate sense, as comprising not only the guns, limbers, and waggons, but also the cattle for its transport; which latter are not kept up for each troop and company. These guns therefore, are more properly a park of reserve, than a battery; and the companies to which they are attached, are equally reserve companies.
- 5. Para. 6 of the Military Board's letter remarks upon the saving of expense that would be attained, by keeping these reserve batteries in store, instead of attaching them to companies; but this is at present applicable only to the Bengal and Bombay Presidencies, where Government grants (vide G. O. G. 24th October 1828,) a contingent gun allowance to the officer commanding a battery for keeping his charge in repair; a practice which does not obtain at Madras; the consequence of which is, that when the artilleries of the several Presidencies meet on Service, they cannot with propriety be expected to afford mutual assistance in the repair of carriages. The Select Committee however see no valid reason, why a system which has been found to work well in the two other Presidencies, both for the interests of government and the efficiency of the artillery service, should not be introduced here, (under the same system of check as obtains for the saddle and other contracts,) in order that the principle of assimilation may be fully and completely carried out; and the Select Committee conceive it to be of the highest importance that each reserve company should have its ordnance with it, as this measure ensures uniformity of organization and equipment; and in case of sudden demand or emergency, the materiel of the battery would be all at hand and in good order, instead of being in the nearest arsenal.
- 6. Having thus cleared the subject of what appeared capable of misconception, the Committee proceed to state their views of what the equipment of the Madras artillery should consist; and this may be considered in three ways-

First. What the equipment of the Madras artillery would be at this moment, if the original relative proportions for Bengal, Madras and Bombay, (as fixed in the year 1796, viz.:

15 companies of artillery for Bengal.
10 do. do. Madras.
6 do. do. Bombay.

Total 31 companies of artillery for India,)

had been adhered to, in all subsequent augmentations and reductions. There appears the less reason for departing from these proportions, because, the officers being drawn from one common nursery, the artillery of the several Presidencies, instead of being considered as three distinct bodies having separate interests, should be looked upon as one body, who (the European portion at least) are, like the Queen's troops, available for service in any part of the East, without reference to Presidency. Many instances of this may be adduced, such as the employment of the Bengal artillery in the Madras campaigns of 1780-84, 90-92, and again in 97-99; and of the Bombay artillery, in the Bengal Presidency during the recent campaigns in the Punjaub-also, during the war in Ava, where, although the Native portion of the force under Sir Archibald Campbell was exclusively Madras (with the solitary exception of the Governor General's body guard), both Bengal and Bombay furnished detachments both of horse and foot artillery. But our records, if searched for corresponding employment of the Madras artillery. in the sister Presidencies, present a melancholy blank; although it is true, we are permitted to garrison stations in both Presidencies from which their artillery has been withdrawn for service in the field; while, in some instances their artillery have been sent down in anticipation of active operations, to stations held by the Madras army.

- 7. The second way of viewing the question is, by taking the proportion which the Bengal artillery bears to its own army, and applying that proportion to the Madras artillery and the Madras army.
- 8. The third way is, by taking the strength of the three armies as one general whole; and assuming the proportionate force of artillery to be 4 guns per 1000 men, (sabres and bayonets,) the proportion laid down by Napoleon, and proved when tested to be the true one; 2 or even 3 pieces having been found insufficient.
- 9. In whichever of these three ways the question is viewed, the Committee hope to make it apparent, how inadequate the allotment of artillery for Madras now is, and has always been, (in comparison with that of the other Presidencies) since 1831, when the relative proportions, as fixed in 1796 and 1824, were first completely changed.

Taking the first view of the case, we find by the Abstract Statement in the 4th and 5th paras, of the Military Board's letter that "the establishment of artillery recently sanc-"tioned for the Bengal Presidency is as follows:

13 \begin{cases}
9 European troops of horse artillery,
4 Native do. do.
42 \begin{cases}
24 Companies of European foot artillery,
18 do. of Native do.

Total 55 troops and companies;

and the number of batteries:

13 Troops,19 Light field batteries,

Total 32 Batteries, with 192 pieces of ordnance fully equipped.

"Thus leaving 23 reserve companies (nearly one half) available for siege train purposes

"or other duties of artillery." Following the 1796 proportions of 15 to 10 for Bengal and Madras, this would give the latter:

```
6 European troops.
3 Native troops.
                           9 troops of horse artillery
                                                           { 16 European companies. c 12 Native companies.
                          28 companies of foot artillery
                    Total 37 troops and companies.
                   Thus 15: 13:: 10: 8\frac{1}{3} = 9 Troops.
                                15 : 42 :: 10 : 28 = 28 Companies.
                                15 : 32 :: 10 : 21 fs = 22 Batteries.
At present we have
                             6 troops of horse artillery { 4 European. 2 Native.
22 companies of foot artillery { 16 European. 6 Native.
                       Total 28 troops and companies.
                     And 20 batteries 6 of horse.
14 of light field.
```

Our Madras establishment is therefore deficient in

3 Troops, 6 Companies, 9 troops and companies, and 2 batteries.

In the event of three extra troops being given to the horse artillery, there would be one field battery extra, as 9 troops + 14 light field batteries, (the present number,) would give 23 batteries, horse and foot; the proper complement being 22.

10. These proportions of 1796, were adhered to in the army organization of 1824, as fixed* by the Court's Despatch of 23d November 1823, and were first altered in 1831 when a great reduction (vide margin) was made, by the Madras government disbanding (contrary to the principle of the Supreme go-Total.. 18 vernment) one horse brigade command and two troops of horse artillery, and re-

ABSTRACT OF REDUCTIONS. 180 European Warrant foot ducing each of the remaining 6 troops, from 8 to an average of 5 guns per troop; thus diminishing this arm from 64 to 30 guns, subsequently raised to 36 guns. At the same time the golundauze were reduced from 10 to 6 companies, thus leaving in all only 18 companies of foot artillery; -- (in all of which, however, the full number of guns (8) was retained:) making with the horse artillery, nominally 180 guns for the Madras artillery establishment; which was thus at one stroke decreased from 30 to 24 companies, and from 240 to 180 guns, and deprived of the command of one brigade of horse artillery, and of 6 troops and companies: whilst, in Bengal and Bombay,

the full number of troops and companies and of brigade and battalion commands was kept up; the only reduction, being that of 2 guns per battery, viz., from 8 to 6 guns cach. The different effects and important results of these two modes of reduction, (pointed out in para. 20 of this report) are sufficient evidence that the changes made in the Madras artillery in 1831, are not only detrimental to the corps at large, by their tendency to disorganize it, but have in particular, borne hard upon the officers up to this time, by causing the number of commands and regimental staff appointments to be reduced below that of any other corps in any branch of the Company's regular army; and by preventing the Madras artillery from obtaining in 1844, an increase equivalent to that given to the other artilleries—thereby retarding the advancement of the officers and the efficiency of the corps. Previous to these changes, the organization of the Madras artillery allowed of its manning 240 pieces; whilst in the year 1849,—with more widely extended calls—it is only capable of manning 168; the present establishment thus being less than that of 1824, by 72 guns.

	ARTILLERY.					
* Since May 1824, the following is the increase of officers.	Bengal.	Madras.	Bombay.	Total.		
Colonels,	3	1	2 2	6		
LieutenantColonels,	3	ī		6		
Majors,	3	1 5	2	$ \epsilon $		
Captains,	15		10			
1st Lieutenants,	30					
2d Lieutenants,	15	5	10	30		
Total	69	23	46	138		
Fixed by Hon. Court's Letter of Nov. 1823,	207	138	69	414		
Fixed by Hon. Court's Letter, No. 22, of July 1844,	276	161	115	552		
Number of officers if the relative propor- tions between Bengal and Madras of 1796 & 1823 had been kept,	276	185	110	571		
Deficiency,		24				

11. Since 1824,* the Bengal artillery has received an increase of 69 officers (the complement for 3 corps, and onethird of the establishment as fixed in 1824): and has been raised from 9 to 12 brigades and battalions, and from 47 to 55 troops and companies. Since the same date, the Bombay artillery has received an increase of 46 officers (the complement for 2 corps, and two-thirds of the establishment of 1824:) and has been raised from 3 to 5 brigades and battalions, and from 12 to 24 troops and companies. During the same period however, the Madras artillery has only received an increase of 23 officers (the complement for one corps, and only one-sixth of the establishment of 1824;) and no increase in the number of brigades and battalions, which are, as in 1824, only 6 in number; and instead of the number of troops and companies, being raised, they have actually been reduced since 1824—viz., from 30 to 28; so that the Madras artillery,

with heavier demands upon it, is at this moment actually below the strength fixed twenty-five years ago, by two troops and companies! and below that of 1830 by 1674 men and 72 guns! Had the augmentations and reductions in the Madras artillery kept pace with those of Bengal, the former would now have 24 officers (or the number for one corps) more than at present, and 37 troops and companies, instead of 28; and, if in proportion to those of Bombay, the existing establishment would be augmented by 31 officers and 12 troops and companies; and thus raised to 192 officers and 40 troops and companies.

12. Again, taking as a standard the proportion the Bengal artillery bears to its army, we shall obtain the following result.

The Bengal army, by the 8th para. of Military Board's letter, amounts to 104,149 of regulars, including H. M. regiments; but whether all ranks be calculated in this number, or merely rank and file, does not appear.

For this strength however there are

 $25 \left\{ egin{array}{ll} 13 \ {
m Troops} \ {
m of horse artillery.} \\ 12 \ {
m Horsed batteries.} \end{array}
ight\} {
m Total 150 guns in horse draught.}$

The Madras army of regulars, including H. M. regiments, amounts on its present reduced establishment, to 60,000 men; and for this strength there are only

8 \{ 6 Troops of horse artillery. \} Total 48 guns in horse draught.

To place the two armies on a par, with efficiently equipped artillery in due proportion to their strength, Madras should have 87 guns horsed, or 39 more than at present:

Thus—

 Men.
 Horse draughted guns of Bengul.
 Men.
 Horse draughted guns of Madras.

 104,149
 : 150
 : 60,000
 : 86.41 = 87.

Again, the Bengal artillery having only 42 guns in bullock and camel draught, and Madras 72; to make it equally efficient with the former, it should have but 24.2 of this inferior description of draught:

Thus—

Men.Bullock draught guns.Men.Bullock draught guns.104,149: 42 : : 60,000 : 24·2 for Madras.

Again, the Bengal artillery having 23 reserve companies, the Madras artillery, which has only 8, should have in due proportion 13.2, or 5 more than at present:

 Men.
 Reserve companies.
 Men.
 Reserve companies.

 104,149
 : 23 : 60,000 : 13:12
 :

And determining the reserve force of artillerymen according to the number of guns to be manned (at 6 per company,) it will be seen that the Madras artillery is extremely deficient in that respect:

The Bengal reserve (23 companies) can man - 138 guns.
The Madras reserve 13·2 should ,, - - 79·5 ,,
It can at present only ,, - 48 ,,
It is therefore deficient in reserve artillerymen for 32 ,,

On the above showing, the following is the recapitulation:

	Bengal has	Madras according to existing strength of armies ought to be in proportion.
	Number of guns. Number of batteries & troops and companies.	Number of guns. Number of batteries & troops and companies.
Horse artillery and guns in horse draught, Guns in bullock draught, Guns in reserve,	150 25 42 7 138 23	87 144 24 41 80 134
Madras now has - Total Deficiency	330 55,	191 32 168 28 23 4

But according to the original proportions for Madras and Bengal, of 10 to 15 (as fixed in 1796,) or of 6 to 9 (as in 1824,) Madras should have 220 guns and $36\frac{3}{3}$ companies; and is therefore deficient of 52 guns and $8\frac{3}{3}$ companies.

13. These results have been deduced from the premises set forth by the Military Board of Bengal; who, by assuming as their basis the existing strength of the regular army of Bengal, (necessarily greatly increased by late exigencies,) virtually argue, that the temporary transfer of 2 or more of H. M. regiments from Madras, for service in the upper provinces, and raising the regiments of one Presidency to a war strength, are valid reasons for reducing the artillery of Madras, and increasing that of Bengal at the expense of the former; and here the sound principle, which will have weight with the government and with which we started, comes in complete bar of a line of argument which would open the door to an ever varying proportionate force of artillery, entailing great and unnecessary charges on the government, and on the officers undue favor or great injustice, -according to the Presidency to which they belonged. The Committee however submit, that the proper way of viewing the question is, to look on the forces of the three Presidencies as one army kept up for the public benefit, and to consider the force of artillery requisite for its strength as a general whole, available for service in any part of the East; the true way of ascertaining the proper distribution of the Artillery force being with reference to the strength, (whether on a war or peace establishment), of the armies of each Presidency; the regiments of which, being all in their respective branches on the same footing with regard to officers, are equally adapted to be increased or diminished according to the exigencies of the service.

Establishment of H. M.'s and H. C.'s Troops in India.

·		
Regiments II. M.'s Dragoons,		24
" II.C. Native Cavalry	21 155	168
Corps European Infantry,	12	24
Artillery Engineers,		4 Corps
	Total., 2	A I ATP

Table Λ .

Distribution of H. C. Regiments of Cavaley and Infantity,										
	Regiments of Ca- valry.			Regiments of In- fantry.			lry and Sers. Iry and iments.			
	Europeans.	Natives.	Total.	Establisht of officers.	Europeans.	Natives.	Total.	Estublisht. of officers.	Total of cavalry infantry officer	Total of cavalry infantry regime
Bengal,	0	10	10	210	4	74	78	1872	2082	88
Madras,	o	8	8	168	4	52	5 6	1344	1512	.64
Bombay,	0	3	3	63	4	29	3 3	792	855	36
Total	0	21	21	441	12	155	167	4008	4449	188

The two European regiments of each of the three Presidencies, being both provided with an establishment of officers, double that given to a regiment of native infantry, are reckoned as equivalent to 4 instead of 2 regiments, in the same way as the Bengal regiment of artillery, whose establishment of officers is 12 times that of a native regiment, is reckoned as 12 corps.

14. The cavalry and infantry regiments of the Honorable Company's service, being 188 in number, distributed as below:

TABLE B.

	Bengal.	Madras.	Bombay.	Total.
H. C.'s regiments, cavalry and infantry,	88	64	36	183

and H. M.'s forces in India being fixed (by Parliamentary Returns 1848-49) at 24 regiments (5 cavalry 19 infantry)—the latter, if allotted to the several Presidencies in due proportion to the H. C.'s regiments,—would be distributed as follows:

TABLE C.

		Bengal.	Madras.	Bombay.	Total.
H. M.'s regiments, cavalry a infantry,	ınd	11-2	8.2	4 ·6	24

which being severally added to the H. C.'s regiments as above, makes the total for the respective Presidencies:

TABLE D.

	Bengal.	Madras.	Bombay.	Total.		
,	['					
Regiments, infantry and cavalry, of H. M. and H. C. Service,	99.2	72.2	40.6	212		
of II. Mr. and II. C. Bervice,	99.2	1 720 1	4.00	Zii		

Again—the numerical strength of H. M.'s regiments being fixed at

5 Regiments cavalry, 3,230 rank and file.

19 ,, infantry, 18,905 ,, ,,

Total...22,135 ,, ,,

(average 646 per cavalry regiment and 995½ per infantry regiment,) the above distribution would give

TABLE E.

	H. M. Cavalry	H. M. Infantry	Total	
	Rank and File.	Rank and File.	Rank and File.	
Bengal,	(1 ,,) 646	(7.2 ,,) 6,965	(8·2 ,,)7,611 (4·6 ,,)4,626	

Then, deducting from the total strength of the Bengal army (104,149, as shown in para. 12,) the allotment of H. M.'s troops, (9,898), there remain 94,251 men (for the 88 regiments) of the H. C.'s service; and although this gives for each, a large regimental establishment, (average 1,071)—still—the number and efficiency of the officers of the Madras and Bomhay regiments being equal to those of Bengal, their numerical strength should be equal, making the H. C.'s forces in the several Presidencies amount to

		TA	BLE F.			No. of Men.
Vide Ta- (Bengal bles A. (Madras and B. (Bombay	64	 . cavy.	and infy. I	I. C.'s	s service	00 = 11
					Total	201,351

which, being severally added to the strength of H. M.'s infantry and cavalry will make

TABLE G.						
	Bengal.	Madras.	Bombay.	Total.	벼	
Cavy. and Infy. H. M.'s		7,611 68,544	4,626 38,556		T d	
Total numerical strength	104,149	76,155	43,182	223,486	Vido	

Allotting the ordnance according to the number of regiments in the proportion given to the Bengal army, we shall have

	Bengal.	Madras	Bombay.	Total.
No. of regiments	99.2	72.2	40.6	212
No. of pieces fully equipped No. of pieces in reserve with	192	139.7	80.31	412
reserve artillerymen	138	100.4	56.57	295
Total Existing establishment ,, deficiency ,, excess	*330 330	240 168 72	137 144 7	707 642 · 65

Again, allotting the ordnance according to the numerical strength—it is stated, in the 8th para. of the Bengal Military Board's letter, that the proportion given to the Bengal army is only 2 guns per 1000 men of all ranks, but it has in reality

Total 330 Field pieces for 104,149 regulars, which gives 3·16, or 31 pieces per 1000 men of all ranks.

And taking the same proportion for the other Presidencies, we shall have

	Bengal.	Madras.	Bombay.	Total.
Numerical strength,	104,149	76,155	43,182	223,486
Pieces of ordnance at 31 per	*330	240	136	706
Of these fully equipped, -	192	139,7	79 3 5 5	410,5
Of these drafted with horses, ,, ,, bullock and camels, In reserve,	150 42 138	100 A 30 A 100 A	62 [‡] 17·3 56·3	33213 89733 294377
Total number of pieces, - Existing establishment, - deficiency, - ,, excess,	330 330	210 168 72	$\frac{136}{144}$	706 642 64

which gives as nearly as possible the same result as when calculated (as above) according to the number of regiments.

^{• 55 × 6 = 330} guns, wide page 3, pars. 9.

15. The third way of considering the question of the proportionate force of artillery for the efficiency of the army, is by throwing every sabre and bayonet of the regular troops employed in the British service in the east, into one general whole; and fixing the number of guns required for the maximum war strength of cavalry and infantry; either adopting the proportion fixed by Napoleon (who defined it more clearly and comprehensively than any other commander,) viz., 4 pieces to every 1000 sabres and bayonets, and for working and manning and all duties connected with these pieces, when on a war establishment, an average of 35 men and 30 cattle per pieceor, adhering to the Bengal Military Board's proportion of 32 pieces per 1000 of the entire army strength, which will be nearly 33 pieces per 1000 sabres and rank and file of cavalry and infantry; which latter is the correct mode of calculating artillery, rather than on the full strength, which is uncertain and ill defined. The result of the calculation is thus shown to be nearly the same in both cases; but, as the Select Committee have from the first, taken the Bengal allotment as their guide, they recommend a strict adherence to its proportions. According to this calculation, the aggregate of the existing force of artillery is far below what it should be, and its distribution very unequal; seeing, that although the number of regiments of cavalry and infantry of the united armies of Madras and Bombay, exceeds the number of regiments of the Bengal army, by one-seventh, yet the artilleries of Madras and Bombay when combined are, as shown below, weaker both in troops and companies and numerical strength, than the artillery of Bengal:the strength of the Madras artillery being, especially disproportionate.

Existing Establishment of Troops and Companies of three Indian Artilleries.

	Bengal.	Madras.	Bombay	Total.
Troops Horse Artillery	13	6	4	23
Companies of Foot Artiflery	42	22	20	81
Belonging to Bengal Artillery	53		24	107 55
Remaining for Madras and Bombay Artilleries Wanting to raise Madras and Bombay Artilleries comb				52
Wanting to raise Madras and Bombay Artilleries comb that of Bengal	ined, to a	ın equalit	y with }	3
Wanting to raise Madras and Bombay to 3 more th	-			.8
Total required for Madras and Bombay				63
" Bombay alone		• • • • • • • • •	••••••	21
Madras	• • • • • • • • •	• • • • • • • • • • • • • • • • • • • •		39 28
Existing Establishment of Madras. Existing Deficiency.				

Numerical Abstract of the existing Artillery Establishments of India.

· · · · · · · · · · · · · · · · · · ·				
	Bengal.	Madras.	Bom- bay.	Total No. of all ranks.
European commissioned officers, European effective non-commissioned	276	161	115	552
staff	208	90	71	369
Native ,, ,, ,, European non-commissioned rank and	61	20	18	99
file artillerymen,	2,922	1,761	1,274	5,957
sioned rank and file artillerymen, Gun lascars commissioned and non-		887	1,044	4,245
commissioned rank and file,	1,161		564	2,389
Quarter Master's establishment,	79	30	68	
Total		3,613		
Deduct strength o				7,021
United numerical strength of Madra	s and I	Bombay,		6,691
Wanting to raise the above ,, to an equality with Bengal, To ! more than Bengal in proportion t		umber	of regi-	330
ments,				1,003
Total strength required for Madras ar	d Bom	oav,		8.024
Proportion for Madras according to n	umber o	of regim	ents	5,110
Madras artillery is at present,			•••••	3,613
Existing deficien Reduced in 1831, horse and foo	cy men	and offic	ers,,.	1,497
and Native, artillerymen, vide	page 4,		796 } 878 }	1,674
Still required to make up the reduc	tions 3	viz. M	en	177
in page 4, in 1831,		H	orses	947

16. But, although the number of guns must be kept up to a war establishment in time of peace, the personnel of the artillery may be reduced to a peace establishment proportionate to that of the cavalry and infantry. Assuming then, that the 26 cavalry and 186 infantry regiments—total 212 of these two branches, are diminished in time of peace to 550 sabres and 740 bayonets per regiment (making in all 150,000 infantry and cavalry,)—the artillery may be kept at 14 of this strength, in lieu of 1, thus amounting only to 13,000 men; and in this force, the number of lascars, drivers, and artificers, should be only as many as are requisite for a peace service, or to form the nucleus of a war establishment; for these classes of the artillery, (although necessarily very numerous in time of war), may with perfect safety be greatly reduced in time of peace; whilst, on the other hand, care should be taken to keep up the full strength of the trained artillerymen, whose number should vary but little from that required in time of war; because their instruction occupies at least double the time required to train an infantry soldier.

17. Taking the allotment of ordnance for the army in India—not in Napoleon's proportion of 4 pieces per 1000 sabres and bayonets,—but in the Board's modified proportion of 33 per 1000, of which 23 will be fully equipped; and calculating the numerical strength of the

(when placed on a war establishment,) at about 20,000 cavalry and 180,000 infantry—
Total—about 200,000 sabres and bayonets—(the cavalry at 750 sabres and the infantry at 960 bayonets per regiment)—then, the number of guns required (at 3½ per 1000) will be 750, of which 2½ per 1000 or 466 (say 450) pieces will be fully equipped and the remainder 284 (say 300) in reserve. The former, manned and provided with 35 men and 30 cattle per piece, will require for the 450 pieces 15,750 men and 13,500 cattle, and half the number of men for the 300 reserve pieces; Total—about 23,000 men—as nearly as possible ½ of the war establishment of sabres and bayonets; which should be reduced in time of peace, as above proposed, to ½ of the peace strength: which reduction however could not take place under the system of the Board, which requires so large a number of reserve companies.

18. The most cursory inspection of the distribution of the Madras artillery, will suffice to show, that owing to its numerical weakness, and the necessity of garrisoning out-stations, it is frittered away in detachments to such an extent, that with the exception of the head quarter companies, there is only one complete battery of foot artillery at any station, within the frontier. At Bangalore and Trichinopoly, the head quarters of the Mysore and Southern Divisions of the army,-both very important stations,-the companies attached to light field batteries are reduced one-third, by detachments being taken for Mercara, and Palamcottah; thus rendering them insufficient for the force to which they are attached; as must be felt, in any case of emergency. It is true, that at Bangalore there are 2 troops of horse artillery, but these require at least 8 additional guns to give the proportion of 33 per 1000 sabres and bayonets; and there, as at Trichinopoly, two divisions of guns only, remain. From Cannanore to Cuttack, the whole line of coast is defenceless, with the exception of four guns at Cannanore, two at Mangalore, and two at Cuttack. The reserve at artillery head quarters is barely sufficient for the garrison of Fort Saint George, in the event, (by no means improbable) of an European war; and to reinforce the settlements of Aden, the Straits of Malacca, and the Tenasserim Provinces, the artillery head quarters would be totally drained of men, and left unprovided with any reserve to meet the emergencies which in this country are so sudden and unforeseen. Should a force be required to proceed to Egypt or other countries beyond Sea, it is clear, that according to the existing distribution (which, in that case, must not only be maintained, but also reinforced) the present establishment of the Madras artillery is insufficient to allow of our furnishing the force

of artillery, either materièl, or personnél, required for that purpose; whilst it is far from probable, that either Bengal or Bombay should be able to afford any assistance.

Distribution Return of the Madras Artillery.

Corps.	Station.	Remarks.
A Troop, Serioli Serioli Compy. A Compy. A Compy. A Compy. A Compy.	Mount, Kamptee, Jaulnah, Bangalore, Secunderabad, Bangalore, Secunderabad, Mount, Secunderabad, Trichinopoly, Palamcottah, Secunderabad, Mount, Secunderabad, Mount, Penangalore, Mercara, Mount, Penang Moulnein, Kamptee, Bellary, Saugor, Mount, Mount,	No. of Detachments, 2
134 C	Mount,	No. of Detachments, 3.
A Compy. B " C " D " E "	Aden, Malacca, Singapore,, Penang, Mount, { Cuttack,, Vizianagrum, { Mangalore, French Rocks, Cannanore, Mount,	No. of Detachments,19.

19. The Committee would now call attention to the bearing and results of the various augmentations and reductions above referred to, by showing the changes effected in the three artilleries by the organization of July 1845, consequent on the Honorable Court's Despatch, No. 22, of July 1844. The principle laid down by the Court in their despatch, is unquestionably the true and correct one upon which artillery should be officered; viz., that of giving one officer to every 2 guns fully equipped, and one to every 3 guns in reserve; or rather, 3 officers to every company in reserve, and 4 officers to every battery of 6 guns. Had the number of batteries and reserve companies for the Madras artillery been determined in due proportion to its army, (as in the artilleries of Bengal and Bombay,) the number of officers, would necessarily have been augmented in the same proportion as in the two other Presidencies; or, at all events, sufficiently for the wants of the Madras army. But the Court having in 1844 taken the existing numher of batteries, and reserve companies, in the several Presidencies, as the basis of their calculation for allotting officers, -without regard to the previous changes in these establishments and to the number of guns manned by each battery—the increase given to the Madras artillery in the following year was of course fatally affected by the heavy reductions made in 1831 of whole troops and companies; whilst, the Bengal and Bombay artilleries in reality benefitted by their reductions in the years 1828-1831, being made wholly in guns: because in Bengal, the establishment,—which in 1828—31 was reckoned sufficient for 20 companies manning 120 gunswas, in 1841, formed into 25 companies manning 150 guns; and, in 1844 officers were allotted accordingly for 25 troops and companies.

20. It will be seen by the despatch of 1844, that the deficiency in the Madras artillery was only calculated by the Honorable Court, at 4 companies and 14 officers; but noticing some disproportion between the foot artillery of Bengal and Madras, the Court were pleased to grant to the latter an increase of 23 officers (the complement for one battalion,) with 4 companies formed by diminishing the strength of those then existing; there being no increase in men, and an actual decrease in the number of guns, viz., from 180 to 168, as at present. The above mentioned miscalculation arose from the Court's estimating the Madras artillery at only 10 foot batteries, whilst there were actually 14: and the number of guns at 6 per battery (as in Bengal) instead of 8, as fixed for each Madras battery in 1831, when the reductions were made; so that the number of guns attached to the Madras batteries was calculated at 60, instead of 112: and consequently only 40 officers allowed: whereas, according to the scale above laid down (viz., 4 officers to every 6 guns,) 75 officers was the correct number; which, added to the 24 officers for the 6 troops of horse artillery, (as in the Court's despatch,) would have raised the complement of officers for the horse and foot batteries of Madras to 99; and as only 64 were calculated for, there was a deficiency of 35. The Court by calculating the number of the foot batteries of the Madras artillery at 10, instead of 14, necessarily augmented the number of the companies in reserve, which instead of being 8 were then only 4 in number. For these 8 reserve companies 3 officers each were calculated = 24, on the supposition of each of the 8 companies as in Bengal manning 6 guns,-Total 48 guns-whereas, each of the 4 Madras reserve companies was sufficient for 8 guns-Total 32: which, in the proportion allowed for Bengal (of 3 officers per reserve company of 6 guns,) would have required only 16 officers-being 8 less than the number, viz. 24. Arranging the above as in the Court's despatch the following would be the comparative statement for officers:

6 Troops horse artillery at 4 officers, $\frac{1}{12}$ $\frac{1}{12}$ $\frac{1}{12}$ Foot batteries (112 guns) at 4 officers per 6 guns, $\frac{1}{12}$ $\frac{1}{12}$	number.	instead	Court's Desputch
4 Reserve companies (32 guns) at 3 officers per 6 guns,	16	>>	24
Total	115	1)	SS
Staff of the corps and officers withdrawn for detached duty, - 42 } Absent on furlough in England, 16 }	58	>>	58
Total Deduct establishment		instead	146 132
Real deficiency.	41		
Deficiency as per Court's despatch Increase granted by the Court	23		11
Existing deficiency	18		

21. Again, if in calculating the number of officers for the Madras artillery in 1841, the Court had, instead of estimating it at

16 Batteries, { 6 Horse artillery, 10 Light field,

not only allowed for the then existing establishment, viz.:

20 Batteries, 6 Horse artillery, 14 Light field,

but also for the 2 troops and 4 companies reduced in 1831, and for 4 reserve companies-

there would have been 30 troops and companies capable of manning 8 guns each—instead of 6 guns as in Bengal,—and the number of officers would have been as follows:

```
Divided into 30 troops and companies and 6 brigades and 5 brigades and 6 brigades and 6 brigades and 6 brigades and 6 brigades and 5 brigades
```

22. In 1844, the existing strength of the Madras artillery was correctly estimated by the Court thus:

Existing Deficiency.... 55

```
Formed into 24 troops and companies and 5 brigades and battalion commands.

1800—Europeans, including brigade and battalion N. C. Staff.

914—Native golundauze and Native horse artillery.

2,714—Total artillerymen.

532—Gun lascars.

3,246—Total of all ranks.
```

And a reference to the margin of para. 10 will show, that if the strength of artillery, reduced in 1831, had, in the calculation for officers made by the Honorable Court, been taken into consideration as in the other two artilleries, the Madras artillery would have been raised to the following establishment:

```
Formed into 30 troops and companies and 6 brigade and battalion Native golundauze and Native horse artillery.

| 1530—Native golundauze and Native horse artillery. | 3510—Total artillerymen. | 1410—Gun lascars. | 1410—Gun lascars. | 1420—Total of all ranks.
```

Again, the actual strength (in 1844) of the Madras artillery, as shown above, was sufficient—independently of the 1831 diminution—to admit of an increased number of troops and companies being formed on the plan adopted in Bengal in 1841; of lowering the establishment of each troop and company and adding new ones: whereby the Madras artillery might have formed 29 troops and companies (on the same establishment as in Bengal) out of the existing 24 troops and companies. The formation would have been as follows:

```
Forming 29 troops and companies and 7 brigades and bat-
panies and 7 brigades and bat-
talions.

4 European troops at 116 each, = 464
16 ,, comps. at 83 each, = 1328
1792
3 Native troops at 104 each, = 312
6 ,, comps. at 116 each, = 696
1008

Gun lascars for European companies at 25 each, = 400 400

Total of all ranks....3200
Establishment of 1844....3246
Still available.... 46
```

The officers for the above would have been as follows:

7 Troops of horse artillery at 4 officers, = 28 \\ 14 Light field batteries at 4 officers, = 56 \\ 8 Reserve companies at 3 officers, Staff of the corps and detached duty, 42 \\ Furlough in England,	84 24 58
Additional for 2 brigades and battalion commands and staff,	6
77-4-131.3	$172 \\ 132$
Deficiency Granted by the Court	40 23
Existing deficiency	17

23. Again, if the whole strength of the Madras artillery as it existed in 1831 (as shown above) had, in 1844, been admitted by the Court as the proper war establishment of the corps—as that of the Bengal artillery was admitted;—this would have allowed (according to the above plan) of the formation of 40 troops and companies on the same establishment as in Bengal; thus:

```
Forming 40 troops and 17 , companies of foot ,, at 83 each = 1411 191 troops and 8 brigades and battalions.

4 Native troops of horse artillery, at 104 each = 416 14 11 191 troops of horse artillery, at 116 each = 1624 14 11 191 troops of horse artillery, at 116 each = 1624 14 11 116 each = 1624 15 116 each = 1624 1
```

The 3 additional troops of horse artillery would have absorbed 407 of the 947 horses reduced in 1831, (as shown in the margin of para. 10,) leaving 540 horses, with which to form 6 additional light field batteries, thus raising the Madras artillery to

```
Batteries 29... 

9 Troops of horse artillery.

20 Light field batteries.

11 Reserve companies.
```

Total 40 troops and companies.

thereby placing the Madras artillery on an establishment of

- 9 Troops of horse artillery.
- 31 Companies of foot artillery.

Total...40 troops and companies divided into 8 brigades and battalions.

24. But owing to its weakness our artillery is, as before observed, so scattered and broken into detachments by the demands of the service, that we have no less than 18 companies, either attached to light field batteries, or forming part of the garrisons of Aden and the Straits of Malacca; so that there are actually only 4 companies, in lieu of 16, available for reserve; which shows that the different circumstances of Bengal and Madras require the proportionate force of artillery for the latter to stand in a higher ratio than that of 2 to 3; for, in order to have an adequate reserve, and to keep the troops and light field batteries, (none of which can bear reduction), complete, we require

8 Batteries of horse artillery.

18 Light field batteries.

16 Reserve companies.

Total. . 42 troops and companies, instead of 28, as at present.

One of the above calculations gives 11 reserve companies, another 13.2, and the other 16. But taking the medium we have

- 9 Troops of horse artillery.
- 18 Light field batteries, including Aden and the Straits.
- 13 Reserve companies.

Total..40 being just two companies more than would have been actually the strength of the

Madras artillery, had the original proportions been preserved at the last augmentation.

25. The Committee would earnestly impress upon the Government, the great advantage of making the Madras artillery a corps of troops and companies, and not of brigades and battalions—the benefit resulting therefrom would be a diminution of correspondence, a simplification of detail, and a more ready availment of the services of officers; in every respect, a more efficient and economical organization would be obtained, and the only difficulty which presents itself—that of providing for the just claims and interests of the senior officers—might be duly disposed of, by placing divisional commands of artillery on a footing that would compensate for the losses consequent upon the partial cessation of brigade and battalion command allowances.

Under such an organization there would be for the Madras artillery,

One horse artillery brigade.

One regiment of European artillery.

One regiment of golundauze, or Native artillery.

One regiment of gun lascars and artillery drivers.

The field officers would command the artillery in divisions and subsidiary forces (including one command at artillery head quarters) without being, as is now generally the case, restricted to presence with the few details that constitute battalion head quarters, where their duties are confined chiefly to the promotion of serjeants and corporals, of whose qualifications and characters they can personally know nothing;—signing returns compiled by others, over which they can have no possible check—deprived of any direct or definite command—their authority limited to trifling matters of detail—and having actually no duties to perform that can afford them suitable employment.

26. We have now to consider what would be the regimental staff under this new organization of artillery. The four proposed regiments should each have an adjutant and quarter master

combined in one appointment. To each division of artillery forming a field officer's command, there should be a similar staff officer, designated as "staff officer of artillery of the division, or subsidiary force," as the case might be; each divisional command of artillery being made as complete in itself, as possible.

27. This quality of self-completeness, is a most important one for artillery, and should be carried out in all its ramifications. It should descend, as a vital principle, to troops and companies, which should be as complete in themselves, and as fully furnished for every contingency, as a regiment of infantry. Self-completeness is essential for every field battery, and this cannot be attained without each having its full complement of officers, and a troop or battery adjutant to assist in the different duties connected with drill and artillery discipline. A foot artillery battery, whether horsed, or in bullock draught, ought at all times to be complete in waggons and cattle, in order that the officers and men may be accustomed to manœuvre guns with waggons attached, (which is a distinct drill of itself), and to practice the same system in peace as in war; so as not run the risk of being thrown into inextricable confusion by attempting any thing new for the first time in the face of an enemy.

28. Another important subject is the management of recruits; the present system of attaching them to the head quarters of the battalions being in every respect most objectionable. Raw lads from the mother country are lodged indiscriminately in the same barrack room with old hands, before their characters are properly formed; and it depends greatly upon the disposition of the men on either side of his berth, whether the recruit turns out well or ill. Besides, this system throws an immense deal of extra and unremunerated labor on the commanding officer and his staff; whereby the interests of the battalion are sacrificed to the instruction of the recruits. For, in consequence of there being—with the exception of the drill serjeants and drill corporals of battalions—no non-commissioned officers allowed for carrying on the proper

* No. of recruits for the artillery arrived from England and enlisted in India. 1833 — 5

 $\begin{array}{c} 1834 - 442 \\ 1835 - 150 \\ 1836 - 152 \\ 1837 - 161 \\ 1838 - 180 \\ 1839 - 101 \\ 1840 - 221 \\ 1841 - 127 \\ 1842 - 215 \\ 1843 - 199 \\ 1844 - 110 \\ 1845 - 179 \\ \end{array}$

system of instruction amongst a body of nearly 200 men* (the number annually required for the artillery service) fresh from Europe, and requiring fully 18 months instruction—that duty necessarily falls upon the adjutant; who, at times when he ought to be assisting on his own regimental parade, is forced to be on another part of the ground employed in recruit drill, and this is the case for about nine months out of the twelve, although the adjutant's regular duties are already quite onerous enough in themselves, without any thing extraneous being added to them. When all these things are taken into consideration, the expediency of having a separate depôt under the undivided control of a commandant and staff officer, with officers and non-commissioned officers to drill and discipline the Artillery recruits, cannot fail to be apparent.

29. The following tables will afford clear and precise information concerning the strength of the European portion of the Madras artillery, and the number and nature of the casualties among the different ranks. Since the 1st January 1834 we have had, in each year,—on an average of 1,784 effectives of all ranks of European artillerymen—an average of 177 casualties, being exactly 9.9—say 10 per cent. of the effectives;—but out of these, the average of deaths is only 754 being 4.2 per cent.; which leaves 1013 casualties, or 6 per cent. of the whole number of effectives to be accounted for; which casualties, excepting those invalided, pensioned and discharged, are occasioned by public demands. Whilst therefore our artillery requires only 76 recruits to replace losses by death, the additional number of 102 is required to supply the other casualties occasioned by calls for the general service, and those pensioned, invalided, and discharged.

Table I.—Effectives of the European ranks:

					E	PPECT	IVE.				
Дате.	Riding Masters.	Troop Quarter Masters.	Serjeants.	Corporals.	Bombardiers.	Farriers.	Trumpeters.	Buglers.	Half Pay Bu-glers.	Gunners,	Total.
1st Jan. 1834	.l o	6	142	107	164	12	8	. 0	0	1105	1544
,, 1835	. 0		142		164	11	9	. O	0	1387	1830
,, 1836	. 0		144	111	166	12	9	G	0		1855
,, 1837,	1	5	138			12			0		1801
,, 1838	. 1	6	143	110	166	11	9	0	0		1798
,, 1839	. 1	6	141	111	167	13		0	0		1849
,, 1840	. 1	6	141	109		13			0		
,, 1841	. 1	6			163	13	9	G	0	T	1757
,, 1842	. 1		136		162	13			0		1725
,, 1843	. 1	6	138	110		13	9		0	1310	1750
,, 1844	1	6	140	108		12	y		0		
,, 1845	1	6	140	107	166	13	9	8	0		1753
,, 1846	1	6	173	118	146	13	9 9	20	24		
,, 1847	1	6	174	120	143 142	13 13		21	32		1656 1863
,, 1848		6	174	124	143	13	9		32	1503	2018
,, 1849	1	6	170	123	149	19	1 B	20	32	T909	2010
Total for 16 yrs	13	95	2375	1796	2547	200	143	104	120	21165	28542

Table II.—Casualties by death amongst the European ranks:

	<u></u>			
	Casualties by Death.			
DATE.	Troop Quarter Masters. Serjeents. Corporals. Bombardiers. Furriers. Trumpeters. Buglers. Gumers. Gumers.	Total Number Effective. No. P.C.		
1st January 1834 , 1835 , 1836 , 1837 , 1838 , 1839 , 1840 , 1841 , 1842 , 1843 , 1844 , 1845 , 1846 , 1846 , 1847	1 11 7 8 1 6 0 0 69 97 0 6 4 6 0 0 0 0 58 74 0 2 4 5 0 0 0 0 43 54 1 7 4 7 0 0 0 0 39 58 0 4 5 0 0 0 0 0 73 88 0 1 5 1 4 0 0 0 0 68 90 0 0 1 7 0 0 0 0 61 69 0 3 4 9 0 0 0 0 74 90 2 3 3 9 1 0 0 0 79 97 0 5 4 6 0 1 0 58 74 0 10 1 3 0 0 0 0 59 72 0 9 4 5 0 0 0 1 70 89	1544 6·28 1830 4·04 1855 2·91 1801 3·88 1798 4·89 1849 3·08 1735 5·18 1757 3·92 1725 5·21 1750 5·54 1810 4·08 1753 3·99 1798 4·0 1656 5·34		
", 1848 ", 1849 Total for 16 years	1 4 5 4 0 0 0 1 64 79 0 5 4 2 0 0 0 0 37 48 5 8 7 6 4 8 7 6 0 1 2 9 5 4 1 2 0 6	1863 4·24 2018 2·36 28542 4·22		

Table III.—Casualties—by withdrawals for the public service—by pensioning, invaliding, and discharging amongst the different ranks:

Date.	Troop Quar- ter Masters,	Scricants.	Corporals.	Bombardiers.	Farriers.	Trumpeters.	Buglers,	Half Pay Bu-	Gunners.	Total.	Total 1 Effec	umber tive. P.C.
1st Jan. 1834	0	15	7	11	0	0	0	0	85	118	1544	8.29
,, 1835	0	6	4	6	0	0	0	U	48	64	1830	3.49
,, 1836	0	13	8	12	0	1	0	0	74	108		5.82
, 1837 , 1838	9	23 23	11 11	15	0	0	0	0	68	118		6.55
1000	$\frac{2}{1}$	11	10	15 5	0	0	0	.0	79 37	130		
" 1840	1	17	16	15	0	0	0	0	101	64 150		3·46 8·64
,, 1841	ō	12	ő	11	0	ŏ	o	ő	78	110		6.26
,, 1842	1	13	- 6		1	.1	0	ŏ	63	94		5.44
,, 1843	0	26	10		0	0	0	0	55	105	1750	6. 0
, 1814	0	12	9 5 7	13	1	0	1	0	62	98		5.41
,, 1845	0	18	5	2	0	1	0	0		91	1753	5·1 9
,, 1846 ,, 1847	0	10 20		12	1	0	0	0	61 52	86		4.78
,, 1847 ,, 1848	ō	13	9 3 5	13		0	2	$\frac{1}{0}$	55	96 86		5·76 4·61
,, 1849	ì	21	5	15	0	0	2	1	66	111		
Total for 16 yrs.	8	253	130	175	4	3	5	$\overline{}_2$	1049	1629	28542	5.70

Table IV.—Total of casualties from all causes amongst the different ranks:

		1										
				Cas	TA!	LTI	83.				ĺ	
Date.	Troop Quitr-	Serjeants.	Corporals.	Bombardiers.	Farriore.	Trumpeters.	Buglers.	Half Pay Bu-	Gunners.	Total.	Total P Effect No.	Sumber tive. P. C.
, 18: , 18:	35 36 37 38 39 10 11 12 14 14 14 14 14 14	1 26 12 15 2 30 2 27 1 12 1 29 1 16 2 17 2 17 2 17 2 17 3 17 3 17 3 17 3 17 3 17 3 17 3 17 3	10	20 18 18 23 19 5 12	4 0 0 1 1 1 0	001000000000000000000000000000000000000	0000010		83 169 139 137 134 120 121 120	162 176 218 121 240 179 184 202 172 161 158	1830 1855 1801 1798 1849 1735 1757 1759 1810 1753 1798	7:54 8:73 9:77 12:12 6:54 10:18 10:66 11:54 9:5 9:18 8:78
,, 18		1 29 1 17 1 26 3 340	9	17 17 17	0 0	0	2 2	1	119 103	165 159	1863	8·85 7·84

	of all ties,	2. C.										
	Fotal of all casualties,	022282233222222222										
·- ·	202	<u> </u>										
		4	.									
47.		N										
24	Discharg- ug, Inva- uling and Pension- ing.	2.000000000000000000000000000000000000										
Total	Discharging, Inva- ing, Inva- liding and Pension- ing.	0 	-									
	\$# 10238ERRS-85ER8											
	Fotal by Deaths.	No. 12. 12. 12. 12. 12. 12. 12. 12. 12. 12	•									
•.	Total Men Effective	####################################										
	Total.	. 9250-232225-702-6	310									
	Road Serjeants.		1									
-	Signal Sements.		.									
-	Line Serjeants.											
-	Barrack Serjeants.	1 0000000000000000000000000000000000000	-1									
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	Intorted Troinfuctal	1 0000000000000000000000000000000000000	-									
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999	Cantonnal, Sergt, Alg	2-0000000000000										
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8 1 2 10	Son-Commd, Stail o Gar, Ft. St. Georg	00000000	£									
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1 1 1-	Sapra		-									
	Riding Masters of Ca		1.									
narr	Pensioned.		1									
By Discharging, Invalid	hearing hearin											
d) at	Jeceared, By D.	[15									
	Years.	ESSESSED SESSESSES										

Table V.—Number and Nature of Casualties amongst the Serjeants.

- 30. From the foregoing accurate and detailed tables, it will be seen that the general average of casualties amongst all ranks of the artillery is 9.93 per cent.; -1.22 per cent. by death, and 5.70 per cent. from all other causes. It is however worthy of remark, that the average of casualties among the useful rank of serjeant is 14.31 per cent. nearly double the general average,the rate of mortality is 3.60 per cent. (a high rate for this rank,) leaving 10.65 per cent. for all other causes; of which 5.81 per cent. are occasioned by calls for the general duties of the army. And although doubtless great encouragement is afforded the non-commissioned officers of the Company's army by such openings,-by which 6 per 100 of the grade is annually advanced to situations of trust and importance—still, it must not be overlooked, that there is one-seventh of the serjeants annually renewed, and that many are withdrawn not only to act in situations for a time, but also for the purpose of filling them permanently; thus throwing upon companies a number of reacting non-commissioned officers, whose authority over their men cannot be so great, as if they were permanently appointed. The number of these acting appointments is still further increased by the heavy calls on the artillery for non-commissioned officers to drill recruits, and for the general duties of the regiment; all which calls, though easily borne by a regiment in a collected state, press severely and injuriously on detached troops and companies of artillery, where it is essential that every department and duty be carefully and strictly provided for. Including those acting in various situations—always a considerable number,—and those required for the general duties of the corps, it may be calculated that each troop and company has at least 2 serieants constantly non-effective-it would therefore be far better, after providing for all contingencies which experience shows to occasion the withdrawal of non-commissioned officers, to diminish the establishment of each troop and company, and then to keep that establishment at its fixed numbers always complete and effective, by making permanent promotions in room of all non-commissioned officers withdrawn.
 - 31. The Committee now proceed to show the establishment which appears to them requisite to place the Madras artillery on an equal footing with the other Presidencies, both with respect to officers and men; requesting that it may be borne in mind, that the Madras artillery has, in addition to the duty common to the other Presidencies, of repressing internal revolt, others peculiarly its own; viz., the protection of the whole Coast of the Peninsula, (the only part vulnerable to an European foe,) and the furnishing of the transmarine garrisons of India; which latter calls especially require to be carefully provided for.

Establishment Proposed for the Madras Artillery.

8	Troops of horse artillery of 6 guns each,	.		• •			-	48
16	Light field batteries horsed of 6 guns each,			· .		, •		96
8	Light field batteries in bullock draught of 6 gur	ıs each	ι,	-, -	-		-	48
8	Reserve companies capable of manning, -	-	•	-		-	· - · · -	48
-							4 No. 25 .	-
Total 40	troops and companies.	Total	l of p	ièces.	equippe	l and in	reserve,	240

The Committee propose to complete this establishment by restoring all that was struck off in 1831 (as shown in para. 10,) and forming it into 2 troops, and one battalion of 6 companies and 6 horse batteries, with a proper complement of officers; thus returning to the original proportions of 15:10:6, as fixed in 1796 and confirmed in 1824 for Bengal, Madras, and Bombay. Allowing the above allotment of ordnance for Madras, and proportionately for the two other Presidencies the establishment for all India will consist of 750 pieces of ordnance, (as detailed in para. 17;) as nearly as possible 34 pieces per 1000 men, which is the basis of the calculations made by the Bengal Military Board for the Bengal army: and if these pieces be allotted to the several Presidencies in the proportions of 12:8:5,—the artilleries of Bengal and Madras will be fixed exactly in the 1796 and 1824 proportions; giving to Bombay a slight advantage beyond what these standards allowed.

No. of Batterie	No. of Guns and Howitzers in											
and the second of the second	Hen-	Mad-	Rotes bay.	Total						Bom.	Total.	
Horse artillery batteries,	12	8	5	25	Horse artillery pieces, -	,		73	48	30	150	
Light field batteries horsed, -	24	16	10	50	Hursed pieces, -		-	144	96	60	300	
Light field batteries with bullocks,	13	8	5	25	Bullock draft pieces,	-		73	48	30	150	•
Reserve companies,	13	8	5		Reserve pieces, -						150	
Total	160	40	25	125			Total.	360	240	\$50	750	

32. An establishment of officers on the admirable principle laid down in the Honorable Court's despatch, (No. 22 of July 1844,) of 4 officers per battery of 6 guns, and 3 officers per reserve company—will give 400 officers for the 100 batteries, and 75 for the 25 reserve companies,—total 475—and, either by applying to the Indian artillery the rule recently introduced into the Royal ordnance corps, for seconding officers absent on civil employ, or, by adding 150 officers (the number absent last year on staff employ, furlough to Europe, and on leave in India East of the Cape) the whole artillery of India will have (including colonels) 651 officers; only 99 above the present complement. This excess will be considerably diminished in case of the ad-

8 regiments of	Colonels.	Lieut, Cols.	Majors.	Captains.	Licuts.	Cornets or 2d Lients	Total.
Madras Na- tive cavalry.	83	8	8	48	64	32	168
Madras arty.	7	7	7	35	70	35	161
Difference more in ca-	} <u>.</u>	1	1	13	0	0	7
Difference less in caval- ry.	}°	0	, 0	0	8	3	. 0

ditional captain, recently given to the cavalry and infantry of India, being extended to the artillery; for the number of captains for the three ordnance corps will be 24, leaving a surplus of only 75 officers, which will however suffice to place the three artilleries on a very efficient footing: allowing on an average, (absentees included,) 5 officers per battery; or for the 125 batteries 620; and these distributed into grades in the proportions fixed for the cavalry,*—viz., one lieutenant colonel, one major, six captains, and twelve subalterns,—will form the artillery establishment as follows:

The second of th								Bengal.	Madras,	Bombay.	Total.
31 Lieutenant Colonels,		-	-	-	-		-	15	10	6	31
31 Majors,	_	-	-	-	-	-	-	15	10	6	31
186 Captains,	-	-	-	•	-		-	90	60	36	186
372 Subalterns,	-		-	•	-	•	. •	180	120	72	372
Total 620,							Total	300	200	120	620
Add Colonels in proportion,	-	-	•	•	-	•	•	15	10	6	31
And the second								315	210	126	651

This distribution will give 279 officers of the superior grades of colonel, lieutenant colonel, major and captains, to 372 subalterns; or 3 superior officers to 4 subalterns.

33. The existing proportion of grades in the three artilleries is 192 superior officers to 360 subalterns, or about 1 to 2 subalterns; whereas, in the 21 cavalry corps of Bengal, Madras, and Bombay, the grades are distributed as follows:

	. 1								Lieut. Colonels.					
21	Cavalry regiment	в,	-	 -	•	-	•	21	21	21	126	252	441	
24	Artillery corps,		٠.				-	24	24	24	120	360	552	

which allows for the cavalry, 189 superior officers to 252 subalterns, or 3 to 4 subalterns; a proportion, which although affording greater facilities for rising than in any other branch of the service, has proved not to be too great, as may be seen by the standing and age of the officers of the cavalry branch. The officers of the Madras artillery however suffer much from tardiness of promotion, as may be seen by the following statement, taking the senior, junior and centre officers of each grade, and estimating the average age for entering the service at 18: and showing the number of brevet captains, who, while performing many wearing duties in the grades of both captain and subaltern, derive no personal advantage of any kind: whilst their usefulness to the state is greatly neutralized by their being denied the standing and privileges of other captains, and they are naturally discouraged by remaining so long in a subaltern grade; being frequently 21 years in the service before they get their companies.

Мемо.

Colonel Clarke, 69 years	service age	87 years.
,, Morrison, 50	,, ,,	68 "
" Derville, 41	n	59 "
Lieut. Col. Montgomeric, 39	, ,	57 "
	,,	54 "
7 77 7 99	9 	51 "
Major Alcock, 31	, , , , , , , , , , , , , , , , , , , ,	49 "
	,, -,	45 "
70.1	, ,,	44 "
	and the second of the second	
Captain Trevor, 26 ,		44 "
" Brice, 24 ,		42 "
" Gabbett, 21 ,	,	39 "
1st Lieutenant Lawford, 21	1	39 "
" Gosling, • 9 ,	·	27 ,,
" Magrath, 4 ,		22 "
-		•
2d Lieutenant Macintyre, 4	•	22 "
" Cameron, 3 ,	, ,,	21 "
" Peach, joined in June 1849, -		18 "*
The number of brevet captains may be calculat	ed as follows:	
23 Brevet captains on the 2d July		*
25 likely to be in 1850.	2020.	
00 1071		
o 26 " " m 1851.		

34. Comparing the establishments of artillery in the Royal and Indian services it will be seen, that there are 105 troops and companies of royal artillery—and 107 troops and companies of Indian artillery.

in 1852.

The respective establishments of officers are as follows:

	Royal Artillery.	Indian Artillery
Colonels commandants,	13)	0
Colonels,	- 26	24)
Lieutenant colonels, -	52 \ 91	24 { 72
Majors,	- 0)	24)
Captains,	222	120
Subalterns,	- 313	360
,	Total626	 552

In the Royal artillery there are, as above shown, 313 officers of the superior grades of captain, field officer, and colonel, to 313 subalterns, being one to one; and about 10 captains to 14 subalterns: whereas, the artilleries of India have only 1 superior officer to 2 subalterns, and 10 captains to 30 subalterns; which shows the great superiority of the scheme of gradation for promotion in the Royal artillery. If however the number of officers (552,)† at present

[•] Artillery Records page 1615-1618

[&]quot; Regimental Intelligence."

⁺ Vide Tables Pages 5 and 9.

constituting the Indian artillery, were formed into grades in the same proportions as in the Royal artillery—the following would be the establishment:

Indian Arti	llery. Total.	Present Number.
Colonels commandants, 11 46 Colonels, 22 93	{ so	72
Lieutenant colonels, 45 85 Captains, 92 59 2d Captains, 103 17	} 196	120
1st Lieutenants, 191 34 2d Lieutenants, 84 65	> 976	360
Total552	552	552

Giving, as for the Royal artillery, 1 officer of superior grade to 1 subaltern, instead of 3 to 4 subalterns, as in the Indian cavalry, or 1 to 2 as in the artilleries.

- 35. In addition to the advantages derived from the abovementioned gradation of officers in the royal artillery, that corps, as before stated, has for the last 12 years enjoyed the benefit of an excellent regulation, providing for officers employed in civil duties of a nature likely to continue as long as 2 years, being replaced or seconded, by returning them as supernumeraries; and also providing for promotions being made to fill up their vacancies. During the continuance of such "civil employ" the officer so employed retains his right to be promoted to a higher military grade; but, on the cessation of such civil service, and on the return of the officer to his military duty, no promotion takes place in the grade in which he is serving, until the number be reduced, by his being absorbed into the rank.
- 36. This regulation obtains in all ranks of the royal artillery and engineer corps; in both of which, officers in the grades of colonel, lieutenant colonel, captain, 2d captain and 1st lieutenant, are returned as *supernumeraries* while in civil employ; and promotions in regular succession are made throughout the ranks, to fill up the vacancies thus occasioned.
- 37. This system appears peculiarly well adapted to the Indian artillery seniority service, as allowing of the withdrawal of officers from their military duties for staff employ, without diminishing either in number or ranks the strength of officers essential to military discipline; and without entailing on the state the expense of those large additions consequent on the present system in the service, and the urgent call for officers in time of war, which necessitates their withdrawal from duties—of whatever importance to the Government—because the general safety requires the presence of officers with their regiment. By allowing a certain number of supernumeraries to the Indian artillery, this inconvenience would be entirely obviated; and the Government would be enabled to replace the officers absent in Europe and elsewhere who, since the 1796 regulations, have been virtually NON-EFFECTIVE like those on staff employ; whom however they exceed in number. In the 24 corps of artillery there are 88 of all ranks, (or 3; per corps,) on staff employ; and 110 (or nearly 5 per corps) on furlough, Europe, sick, or on leave East of the Cape, forming a total of 198 absentees from an establishment of 552 officers: thus leaving only 354 officers (from colonel inclusive,) present with the 107 troops and companies of the three artilleries; and the regimental commands and staff of the regiment requiring (as for the same number of infantry corps) 81 officers—there actually remain only 273 troop and company officers exactly 23 per company. But the number of captains and subalterns on the staff is only 74, less than the number so employed in the other branches, and, considerably less than the proportion fixed and allowed for by the Honorable Court; viz., 5 per corps, which would allow of 120 officers of these ranks for staff employ.

Absentees from the Artillery of India.

							Sick Eu- rope Furiough	On Leave Larope.	India on Leave.	≜t Sea and Cape.	Staff Employ	Total.	E-tablish- ment	Present for Duty,
Colonels, -	•	-			-		3	15	0	0	2	20	74	4
Lieut. Colonels,		-	_		-	-	1	6	0	0	6	13	24	11
Majors, -	-	-		-	-		3	1	O	0	6	10	24	14
Captains,		-	-		_	-	13	9	3	2	42	69	120	51
1st Lieutenants,	-	-		_	-		23	2	18	2	30	75	240	165
2d Lieutenants,		-	-		-	-	1	1	7	0	2	11	120	109
					To	tal.	.44	34	23	4	88	198	5 52	354

Required for regimental command and regimental staff. \$1

Remaining for troops and companies, 273

38. By the Honorable Court's letter, (No. 22, of 1844,) fixing 4 officers per battery of 6 guns, and 3 officers per reserve company,—the establishment for the Indian artillery as at present constituted, viz.:

32 Batteries for Bengal, 22 for Madras. for Bombay, 14 for India,

Total...68 Total .389 Present with their companies. .273 Deficiency..116

39. The additional captain recently given to each of the 167 corps of infantry and 21 corps of cavalry raises the number of that rank to 6 per regiment: but the remaining 32 corps -artillery and engineers-not having received a similar addition, have only 5 captains each: and the subalterns of these latter have sustained supersession, by those of the infantry and cavalry, gaining by this augmentation, fully 3 years immediate advance in promotion to their companies, besides the additional chances of promotion from this increase of captains, which makes the proportion of that rank in the infantry as 1 to $2\frac{1}{2}$ subalterns, and 1 to 2 subalterns in the cavalry, whilst there is only 1 to 3 in the artillery; thus changing that uniform and regular gradation hitherto so impartially preserved by the Court of Directors towards all branches • No. in the 3 Artilleries: of their service. To prevent further supersession and to provide for the bre-

Bongal,...... 7
Madras,..... 23
Bombar,...... 4

vet captains,* unfortunately so numerous in the artillery, the abovementioned regulation of the royal ordnance service might with great advantage be extended to the three Indian artilleries; so as to allow of all the civil appointments held by officers of those branches, rendering that number of captains, and superior officers, supernumerary in the whole body.

40. The succession to the vacancies thus occasioned should not be given to the corps to which the officers declared supernumerary belong; but should be filled up by the promotion of the seniors of the brevet captains, or subalterns of the three corps of artillery, without regard to the Presidency to which they belong: and these in assimilation with the royal service might be designated 2d captains. This course is recommended in preference to regimental rise, as obviating the necessity of the particular civil situations being defined by Government, and preventing all suspicion of favouritism; and also, because the restriction of promotion to that corps whose

officers happen to be in civil employ, would not only exclude the artillery of Madras (from which but few officers are selected for civil duties,) but would entirely destroy the most valuable property of this regulation; i. e. the equalization of promotion by its general application.

- 41. The promoted and supernumerary officers should continue to be borne and serce in their respective regiments: and although this might occasion a temporary superfluity of captains in some corps where promotion had been backward; still, the inequality would be trifling, and certainly not so great an evil as the present large number of brevet captains; and it would gradually be removed by the very operation of the regulation:—for, it must be clearly understood, that a vacancy in any of these promoted 2d captains would fall to the senior subaltern or brevet captain of the whole body; the regiment of such casualty only receiving the promotion from 2d lieutenant to 1st lieutenant: whereas any of the supernumeraries becoming a casualty would in due course fall to the regiment, to which that supernumerary belonged.
- 42: This regulation when generally applied, would necessarily be carried into effect under the control of the Supreme Government; whose supervision, combined with the jealous watchfulness of the three artilleries interested in the measure, would ensure impartiality.
- 43. The principle of this regulation actually obtains in the Indian army, in the present system of promoting the senior army lieutenant colonels throughout India to the rank of colonel in the army, by the standard of the Bengal infantry lieutenant colonels: which however, in no way interferes with the rights of succession of the lieutenant colonels of the respective armies and branches, to their off-reckonings and regimental colonelcies.
- 44. This regulation might be either temporary or permanent; and owing to its capability of expansion or contraction, (either as to ranks or numbers), it would serve as a safety valve, to be opened or closed as the public service might render expedient. In time of war, it might be extended to all officers on detached employ and even to those absent on furlough, or sick; so as to give the artillery the benefit of the presence and effective services of officers in the actual grades of the office holders and absentees, without involving any permanent addition to the regimental establishment; and in time of peace, it would again be contracted by absorption as explained above, gradually reducing the number of officers to the regular peace establishment.
- 45. The conversion of the rank of major into that of licutenant colonel, was in 1827, permitted to all the seniority branches of the royal service; and a similar change in the Indian artillery, together with the diminution (from 15 to 10 years) of the period of service necessary to obtain the rank of brevet captain, and the discontinuance of the designation of 2nd lieutenant,—would, by simplifying ranks, facilitate the working of the regulation above suggested: which, besides improving the position of the officers, would benefit the Government by affording a wider scope in the selection of field officers for commands, and by ensuring their permanent retention.
- 46. In former years, when military officers in civil employ received both civil and military pay, there was an obvious objection to entailing on Government double charges, such as would have been caused by this regulation; but now that civil appointments only entitle the holder to civil allowances, without any military pay, no difficulty exists, sufficient to counterbalance the great advantage of keeping the establishment of ranks complete with officers, who would only receive the mere pay of the absentces. This principle is equally applicable to officers in the employ of Native States and to those holding situations with consolidated allowances; and in part also to those absent in Europe.
- 47. The Committee have, in the preceding paragraphs, thrown out various suggestions, which they conceive might be judiciously and advantageously applied to the general service, and they now venture respectfully to repeat, that the restoration of all the troops, companies and men reduced from the Madras artillery in 1831, and the placing it on a par with the artilleries

of the sister Presidencies by giving an allotment of 240 guns, with officers, men, and ordnance equipments in a corresponding ratio—appears to be nothing more than what is required for the perfect efficiency of the Madras artillery.

- 48. The Committee will now submit a few observations upon the G. O. G. G. No. 358, dated Fort William, 23d September 1848, which has been submitted to the Madras Government, "with the view" (as the Bengal Military Board state in para. 10 of their letter under notice) "to assist in a final settlement of the question of ordnance equipment."
- 49. With reference to para. 1st of the G. O.—The ordnance of each horse artillery troop at Madras, is composed of—4 six pounder guns, and 2 twelve pounder howitzers; which equipment is in accordance with the opinion recorded by Sir A. Dickson in his report to the Honorable Court of Directors (dated 8th April 1834) upon the number and calibre of ordnance best suited for batteries, horse and foot throughout India; which opinion seems to be sanctioned by the Honorable Court in their despatch No. 18 of 1834. Comparing the Bengal horse artillery, however, with the strength of their cavalry and infantry, the proportion which obtains there,

Honorable Court's LetterNo.10,dated 3d February 1841, Lays down 5 Guns, and 1 Howitzer. of 1 howitzer to 5 guns, seems preferable to any other. But whilst the Bengal artillery have 13 troops and 42 companies to 88 cavalry and infantry regiments the Madras artillery has only 6 troops and 22 companies—less than half—to 64 cavalry and infantry regiments. The Madras horse artillery are therefore

necessarily much scattered, and excepting in the Mysore division, have not a single reserve troop available; and cannot even detach a troop, without altogether depriving the force which remains behind, of horse artillery. It has therefore been absolutely necessary to allot four 6 pounder, and two 12 pounder howitzers, to admit of a troop being divided into wings, equally composed of 1 howitzer and 2 guns. Undoubtedly considering the strength of the Bengal horse artillery, howitzers is preferable to \(\frac{1}{3}\)—the proportion fixed by Napoleon, viz. \(\frac{1}{4}\) is even better—but for Madras,—on account of the very limited allotment of troops of horse artillery,—it is the opinion of the Committee, that \(\frac{1}{4}\) howitzers is a more efficient allotment than \(\frac{1}{4}\).

With reference to para. 2d.—Shafts have not been sufficiently tried in Madras, nor can they have been so far practically tested in Bengal, as to justify their rejection, and a general adoption of poles. Shafts have been very extensively introduced in the Bombay horse artillery, and are considered superior to the pole; and are also preferred by the royal artillery. When a rider is placed on each horse, as in the Bengal artillery, the shaft cannot be used; this, however, does not apply to the Madras and Bombay horse artillery; and it would be very inexpedient to deprive them of the option of taking advantage of what the Royal and Bombay horse artillery consider to be an improvement, merely because the Bengal artillery are unable, owing, to their peculiar system, to avail themselves of it.

With reference to para. 3d.—The collar bar, now disapproved of in Bengal, has been long ago condemned in the Madras artillery; the pole bar of the old Madras pattern, (which has been in use since 1825,) never having failed, has been reverted to, and a better pattern cannot be desired.

With reference to para. 4th.—The Bengal small store boxes were condemned by the Madras artillery immediately after their receipt at head quarters; on the following grounds:

- 1st. They were inconvenient, being too short to hold a Gunter's scale.
- 2d. From projecting so much to the rear, they interfered very much with the men, when limbering up the gun.
- 3d. The purpose for which they were introduced in Bengal (viz., to serve as a counterpoise, and thus relieve the horses from the weight on the collar, &c.:)—is fully answered by the Madras short perch; which, though unknown in Bengal, has been in use in Madras for upwards of 50 years. The implement (or store) box cannot, with gun carriage axles of the Royal, Madras, or Bombay pattern, be carried in the position now ordered in Bengal, as there is not sufficient room between the boxes; and it is therefore inapplicable to the Madras artillery.

With reference to para. 5th.—The allotments of the Bengal and Madras artillery ammunition, as well as the fittings of the boxes, are at present so differently arranged, that this partial alteration would only create confusion.

With reference to paras. 6th and 7th.—The harness of the Bengal artillery is so different in pattern and nomenclature from that of the Madras artillery, that these paras, are inapplicable to the latter.

Paras. 8th, 9th, 10th, 11th and 12th accord with the Madras regulations, and might with advantage be promulgated as a General Order, for the guidance of the Madras and Bombay artilleries.

- 50. Having thus carefully considered the question of assimilation between the three Indian artilleries, the Committee feel called upon to observe, that so long as the present system obtains, of disposing of unsettled artillery questions, without any reference to the Madras, and Bombay, artillery officers,—want of uniformity must necessarily be increasing, instead of diminishing. Alterations in the artillery establishments and equipment emanating from Bengal, are, without any reference to Madras or Bombay, promulgated in General Orders at Fort William for the guidance of the Bengal artillery. After the lapse of a considerable period (in the present instance eight months) the Madras Government are furnished with a copy of the General Orders in question, and of the instructions connected therewith, "with a view" (as is stated by the Bengal Military Board) "to assist in a final settlement of the question of ordnance equipment,"—such G. O. G's. and instructions having eight months previously, been adopted and acted upon in the Bengal artillery!
- 51. The Madras Artillery Select Committee would further observe that they have long been fully alive to the importance of assimilation between the Indian artilleries, both with respect to military efficiency, and economy—having since 1832 published and laid open to their brother officers in Bengal and Bombay all their Proceedings, from the date of their first meeting in March 1824, up to the present time—and during the past two years, they have repeatedly solicited Government to establish official interchange and communication of Proceedings between the Select Committees of the three artilleries, with the view of obtaining an acquaintance with the arrangements of the other two; which, if superior to those in this Presidency, would at once be adopted; and thus accelerate that assimilation, which is admitted by all parties to be essential to the welfare of the service.
- 52. While willing and anxious to take advantage of the experience of their brother officers in Bengal, the Committee still think themselves justified in offering their own suggestions; being ready to modify them when reasons against them are shown: but they must observe that as yet, in all instances where suggestions have been submitted to Bengal from Madras, they have invariably been negatived in Bengal, and reference then made to the previous orders of the Bengal Government; although such orders may only have been sent,—as stated in the present instance in the letter from the Military Board—" with a view to assist in the final settlement " of the question of ordnance equipment."
- 53. In concluding this Report, the Committee may observe, that they have throughout kept in mind the injunctions of the Honorable Court of Directors as conveyed in their appropriate and comprehensive despatch to the Government of Bengal No. 18 of 11th July 1834, (quoted below) remarking upon the want of uniformity observable in the ordnance arrangements of the three Presidencies, and have strenuously endeavoured to avoid advocating any particular system not equally applicable to the whole artillery of India.

Paras. 23 and 24 of 18 of 1834.—Each Government recommends its own fancied "supe-"riority in ordnance improvements, and advocates the suggestions of its own artillery officers, "little or no attention being paid to what may be already in useful operation at the sister Pre-"sidencies; and comparisons which might be beneficial and lead to uniformity, are seldom made."

"We desire that you will obtain every necessary information and detail from the other Pre"sidencies, to enable you to establish one uniform system, which without advocating or uphold"ing any local one, should have reference only to the establishment of a clear and well digested
"code, for the regulation of all the ordnance of India."

(Signed) H. S. FOORD, Lieutenant Colonel,

Commanding 4th Battalion Artillery.

P. J. BEGBIE, Major,

Commanding 5th Battalion Artillery.

P. ANSTRUTHER, Captain and Major,
Superintendent Gunpowder Manufactory.

J. MAITLAND, Captain,

Superintendent Gun Carriage Manufactory.

A. F. OAKES, Captain,

Director Artillery Depôt.

G. BALFOUR, Captain and Major,

Commanding 2d Battalion Artillery.

, B. W. BLACK,

Assistant Adjutant General of Artillery.

ARTILLERY HEAD QUARTERS, SAINT THOMAS' MOUNT, ARTILLERY DEPÔT, 7th August, 1849.

(Signed) F. DERVILLE, Brigadier,

Commandant of Artillery.

APPENDIX.

Head Quarters, Simla, 5th October, 1848.

GENERAL ORDERS BY THE RIGHT HONORABLE THE GOVERNOR GENERAL OF INDIA IN COUNCIL.

Fort William, 23d September, 1848.

No. 358 of 1848.—The Right Honorable the Governor General in Council having had under consideration various unsettled questions connected with artillery equipment, together with certain alterations recommended by the Military Board in the present regulations on the subject of field ordnance proportions is pleased to issue the following orders on the several points brought to notice.

- 1st. The ordnance of the horse artillery to continue as at present, namely, five 6 pounder guns and one 12 pounder howitzer.
 - 2d. Poles in preference to shafts will be used with all troops and horse field batteries.
- 3d. A collar bar of an improved pattern to be substituted for that at present laid down, musters of the pattern approved of by Government will be furnished to each Magazine by the Military Board.
- 4th. The small implement boxes attached to the gun limber boxes will be removed, and a single box of larger dimensions placed between the limber boxes on the axle-tree bed and centre framings. A muster will be sent to each Magazine by the Military Board.
- 5th. The proportion of spherical case for 6 pounder and 9 pounder guns will be reduced to 16 rounds per gun for each equipment, the difference between that and the present proportion being made up by round shot. The tables to be altered accordingly.
- 6th. Pad and chaise saddles will be gradually abolished and postillion saddles with lengthened pannels of the same pattern as the present horse artillery staff saddle will be used on every draft and saddle horse in troops and batteries.

7th. The detail and description of harness for all horse field batteries on the establishment of 98 horses will be as follows:

DETAIL OF HARNESS FOR HORSE FIELD BATTERIES.

								L	1080	crip	tton	•												Λ0.
Long sets with p	osti	lion	sadd	lles,		-	-		-		-	-		•	-		•	-	,	-		•		- 61 28
Short sets with	97		"		-		-	-		-			-		-	-		-	-	•	-		-	
Saddles complete	for	serje	ants	and	l sta	ıff,	-		-		-	-		•	-		-	-		-		•	•	. 6
]	Des	CRII	eri() X	OF	Lox	G Sı	er o	y I	LAB	NES	s.							
										Ne	ar I	Tors	c.											
Bridle with bit a	nd b	rido	on c	ompl	lete	,	-		-		-	•		-	-		-	-		-		-		. 1
Collar complete	with	harr	1ess	and	hou	ısin	g w	th	col	lar	bar	ring	ζ,		-	-		•	-		-		•	1
Girth,		-	-	-		•	•		•		•	•			-		-	-		-		-	•	. 1
Head stall, -	_			-	-		-	-		-		•	-		-	-		•	-		•		-	ı
Coupling rein, .		_	-	-		-	•		-		-	-	-		-		-	-		-		-	•	7
Postillion saddle	com	plete	wit	h lei	agtl	ene	ed p	ann	el :	and	l ho	lster	poc	ke	ts,	-		-	-		-		-	1
Sureingle, -		-	_	-	-	-	-		-		-	•			•		•	-		-		-	•	l
Pair of long trace	ез,	-		-	-		-	-		•			-		-	-		-	-		-		•	i
Whip postillion,		•	_	-		-			-		-	•	-		-		•	•		٠		•	•	1
For off horse on	e ch	eck 1	ein	to b	e ad	lded	l and	l w	hip	pq	ostil	lion	to b	e o	mit	ted.								

DESCRIPTION OF SHORT SET OF HARNESS.

					Near	11078	<i>t</i> .					- £	
Bridle, -			-	-	•	-	-	-	•		-	. 1	•
Collar,	-	•	-	-	-	-	-	-	-			•	-
6 Girth,	•	-	-	-	-	-	-	-	•		-	-	-
≝ ≺ Head stall, -	. -	-	-	-		-	-		-		• · •	. +	-
Postillion saddle,	-	•.	-	-	-		-	-	-	- ,-	-	- ,	-
Surcingle, -	-	•	_	-	-	-	-	-	-	- ,		-	-
Surcingle, Whip postillion,	-	•	-	-	-	-	-	-	-		-	~	-
Breeching,	-	-	-	-	-	-	-	-	-	• '		•	-
Legging,	-		- .	-	-	• .	-	-	- '	• · · · · - ·	•	• '	-
Pair of short traces, -	<u></u> ·	-	-	•.	. •	•	-	-	-	-		e	-
For off horse same as	abovo	e with	excer	tion	of che	eck re	in to 1	be ad	ded a	ad leggin	g and	whip to	be be
omitted.							,						

8th. Two ammunition waggons per gun and howitzer will be considered in future as the proportion of every troop and battery proceeding on service. Of these waggons one per piece will be under charge of the officer commanding, each troop or battery at all times; the remaining 6 waggons will be kept ready loaded in the Magazine on which each troop and battery is dependent together with the harness and every necessary equipment for their immediate issue. They will be altogether under the charge of the commissary of ordnance who will be held responsible for their efficiency.

9th. It will be the duty of the officer commanding the artillery division to inspect these waggons from time to time and to satisfy himself that they correspond in number and description with the troops and batteries dependent on the Magazine.

10th. In all troops and batteries at Lahore and in the Jullunder Dooab the full service proportion of 2 waggons per piece, with their draft cattle harness and their corresponding equipments will be kept under charge of the officer commanding each battery.

11th. Exclusive of the above proportion of ammunition the Field Park on all occasions of service is to have 100 rounds per piece in reserve for every battery with the force and in the nearest Magazines (or a few days march from the army) 150 rounds more per piece are to be held in readiness for issue if required.

12th. When orders are given to hold troops in readiness for field service the officer commanding the artillery will exercise the discretionary power vested in him and bring to the notice of the officer appointed to command the force, any addition he may consider necessary to the established proportion of ammunition or stores for the particular service on which the troops may be proceeding, and if concurred in by the latter officer the Military Board are authorized to pass such emergent requisitions, reporting the circumstances for the information of Government.

13th. The necessary alterations required to carry out the above orders will be made by the Military Board in the regulations of the ordnance department, and the field ordnance drawings and tables sanctioned by Government.

(Signed) J. STUART, Colonel,

Secretary to the Government of India,

Military Department.

BY THE COMMANDER-IN-CHIEF.

In publishing to the Army the revised scale of Artillery equipment and field ordnance proportions, laid down in Government General Orders, No. 358, of the 23rd ultimo, the Right Honorable the Commander-in-Chief desires to impress upon all officers concerned, that he will hold them severally and absolutely responsible for any deficiency or failure of the prescribed arrangements; and particularly in respect of the supply of ammunition, the instructions regarding which must be observed with the utmost exactness and strictest attention.

(Signed) PAT. GRANT, Lieutenant Colonel,

Adjutant General of the Army.

Extract from the Proceedings of the Permanent Artillery Select Committee, assembled by order of Brigadier Frederick Derville, Commandant of Artillery.

MEETING 155.

ARTICLE 521.

On the Organization, Equipment and Proportion of Ordnance for the Madras Artillery relatively with the Artilleries of Bengal and Bombay.

C. K. S. Press, Madras-Reuben Twigg, Printer.

The Secretary to the

Military Board,

Fort Saint George.

SIR,

• No. 924, dated 1st June, 1849, forwarding the follow-ing documents and requesting a full report thereon. Letter No. 74, from the Of-ficiating Secretary to the Go-vernment of India, M.D., Fort

vernment of India, M.D., Fort William, to Secretary to Go-vernment, M. D., Fort Saint George, dated 5th May, 1849. Letter No. 6768, from the Bengal Military Board, to Major General the Honorable Sir J. H. Littler, G. C. B., Pre-sident of the Council of India, dated 214 April 1840. dated 21st April, 1849.

Bengal G. O. No. 358 of

Extracts Minutes of Consultation, No. 2064, dated 20th May, 1849.

I have the honor in acknowledging the receipt of your letter a and enclosures noted in the margin, to forward for the information of the Military Board the accompanying report of the officers of the Artillery Select Committee, to whom I referred the question; conceiving that the wishes of the Military Board on such an important subject as the organization and equipment of the Regiment, on the basis laid down for the Bengal Artillery, would be most effectually carried out, by obtaining from the Members of the Committee a full and detailed report after careful and patient investigation; and with this view I assembled the Select Committee, whose proceedings I now forward in a (printed) Report embodying my sentiments on the subject, which will I hope,

moreover be found to contain much valuable information on the Artilleries of India, and perhaps prove useful to the Honorable Court of Directors in establishing that uniformity in the Artillery service, which they are so desirous to effect.

- 2. I would here observe, that in such a widely extended question as the constitution of the Artillery service, there are many points, such as the composition of Batteries in personnel and materiel which cannot be fully entered into, until some more definite understanding on the subject is established, but I take this opportunity of adverting to the state of the Arsenals throughout the Madras Presidency, in proof of the necessity of fixing the number of Batteries and reserve companies to be kept up; as without this information, the allotments for Arsenals cannot be determined; and the absence of a defined establishment of Ordnance and Carriages, has hitherto been, and must continue to be attended with the greatest inconvenience, and on any emergency with great detriment to the public service; the Commissaries of Ordnance having at present no fixed allotment of Ordnance, Carriages, and Stores, and being liable to demands according to the exigencies of the service, without any properly organized system for regulating and meeting those calls.
- 3. The Committee have not had space to bring forward all the points bearing on the organization of the Madras Artillery; but its present reduced state will be apparent on an

European.	Native.
* H. A	408 = 807 $1080 = 2410$
Total in 18191729	14.8 = 3217
† H. A	182 = 690 $601 = 1757$
Total in 18491504 (

examination of the returns, which show that in 1819 there were 29½ Troops and Companies and 3,217* Rank and File whereas there were in 1848, only 28 Troops and Companies and 2,347† Rank and File showing the present Establishment to be below that of 1819 by 1½ Troops and companies, and 870 Rank and File, which with the higher

ranks gives fully 1000 Artillerymen less.

4. The whole actual strength of the Madras Army is stated (12th para. of the Report) to be 60,000, but I would observe that the Rank and File alone of the Madras Army amounted in 1812 to about 70,285, which, with other ranks must have raised the Army to fully 75,000, this greatly strengthens the argument of the Artillery Select Committee (Para. 17)

in favour of fixing some definite proportions for the allotments of Ordnance for the several Presidencies; the above strength, according to the existing number of pieces for the Bengal

* Page 33.

† In round numbers entered as 240 Guns.

Army, would require 237* pieces of Ordnance, which exactly correspond with the results of the Committee's calculation (31 and 47 Paras.+) which I briefly recapitulate below, recommending for serious consideration, the propriety of forming the Madras Artillery Establishment as follows:

of Horse and Bullock Batteries, maintained with the full complement of Drivers, but with no more cattle than the existing demands of the service may render expedient.

5. In tendering this recommendation, I venture to hope that it will not be the less favourably received, as being the last official recommendation which I may be able to give in favour of a Regiment in which I have served for so many years, to the Command of which I have looked with pride and pleasure, but which after a period of only four months, I am forced to relinquish with deep regret, my health being such as to prevent my filling it with that efficiency which I consider essential for the head of so important a branch of the service.

I have the honor to be, Sir,

Your most obedient Servant,

(Signed) F. DERVILLE, Brigadier, Commandant of Artillery.

ARTILLERY HEAD QUARTERS,

SAINT THOMAS' MOUNT,

Artillery Depôt,

18th August, 1849.

(A true copy.)

A. F. OAKES, Captain, Director Artillery Depôt.

MEMORANDUM No. 7.

Artillery Depôt, Saint Thomas' Mount, September, 1849.

NOTICE TO CORRESPONDENTS CONTINUED.

On the subject of the Pamphlet entitled "On the Equipment, &c. of the Three Regiments of Artillery in India."

DISTRIBUTION OF THE MADRAS ARMY AS IT STOOD ON THE 1ST APRIL, 1849.

Total of Troops Bank and Filh.	Proportion of G according to the Bengal Ar of all ranks, para. 15, page 1,000 of Rank	the proportions of 3\$ pieces modified as 6 15, giving 3	on fixed for es, per 1,000 explained in pieces per
	21 fully equip- ped.	1·42 in Reserve.	Total equip- ped and in Reserve.
Centre Division 6,860	16.	9.74	25.74
Northern Division, 5,311	12.39	7.54	19.93
Southern Division, 4,406	10.28	6.26	16.54
Travancore,	1.75	1.06	2.81
Mysore Division, 7,230	16.87	10.27	27 14
Malabar and Canara, 3,399	7.93	4.83	12.76
Ceded Districts, 3,743	8.73	5.32	14.05
Beyond Frontiers, 19,647	45.84	27.89	73.73
Beyond Seas, 4,253	9.92	6.04	15.96
Total 55,598	129.71	78.95	208.66
Which at 6 Guns per Battery =	Troops and	Companies	34.77

*Sec para. 12. At para. 9 of the Pamphlet we find 32 Batteries or 192 fully equipped guns for *104,149 men of all ranks for the Bengal Army, nearly 2½ guns per 1000 rank and file as explained in para. 17, thus, there are required, as above shown, 129.71 guns fully equipped for 55,598 rank and file of the Madras army.

Para. 14 (at page 14) shows, that there are 330 guns, including therein the reserve, (viz. 138 guns) for 104,149, which is 31 or 3.2 pieces per 1000 of all ranks, or 31 pieces per 1000 rank and file, vide para. 17; deducting the proportion, as above explained, of fully equipped guns per 1000, viz. 21, there will remain 1.42 guns per 1000 Rank and File in Reserve for the Bengal Army, or 138* in all: and for our Army as above shown 78.95 Reserve guns, making a Total for us of 208.66, which at 6 per Troop and Company = 34.77 Troops and Companies.

The Madras Army is now on a reduced or Peace complement of men, but in 1842 the Rank and File of the Madras Army consisted of 67,495, in 1849 of 55,598, Difference 11,897.

DISTRIBUTION OF THE MADRAS ARMY, AS IT STOOD ON THE 1ST DECEMBER, 1842.

Total of Thoops Rank and File.	Proportion of G according to the Bengal A of all ranks, para. 15, pag 1,000 of Rank Pamphlet.	the proport rmy of 33 pic modified as 3 15, giving 3	ion fixed for ecs per 1,0001 explained in 13 pieces per e para. 17 of
	21 fully equip- ped.	1·42 in Reserve.	Total equip- ped and in Reserve.
Centre Division, 12,036	28.08	17:09	45.17
Northern Division, 5,792	13.51	8.22	21.73
Southern Division, 4,749	11.08	6.74	17.82
Travancore, 1,009	2.35	1.43	3.78
Mysore Division 7,282	16.99	10.34	27.33
Malabar and Canara, 3,528	8.23	5.00	13.23
Ceded Districts 3,615	8.43	5.13	13.56
Beyond Frontiers, 19,876	46.37	28.22	74.59
Beyond Seas, 9,608	22.42	13.64	36.06
Total 67,495	157-48	95-81	253-29
Which at 6 Guns per Battery=1	roops and Co	ompanies	42.215

Para. 23 shows that had the Madras Artillery been dealt with as the Bengal Artillery were, viz. by admitting the 1831 strength for the Madras Artillery before its reduction, as the proper War establishment the Madras Artillery would now have 40 Troops and Companies, or 240 guns.

The use of Reserve Artillery is, to work and man the Heavy Field Ordnance of the several Forces. The Hyderabad Force has been fixed by Government and the Court of Directors at

Iron Guns \ \frac{18}{18} \ Pdrs	- 4 The same w	rill be required at,
Howitzers 8 inch	Nagpore, Bellary,	20
Mortars \{ 8, "	4 \ Cannanore.	· · · · · · · · · · · · · · · · · ·
14011413 \ 5\frac{1}{2} ,,	- 6 Masulipatan Mysore,	1, 20
	Total 20* Mount,	
making in all 140 pieces of Heav	Ordnance.	

Giving the Madras Artillery the establishment above shown of 40 Troops and Companies or 240 guns, the Establishment of Bengal and Bombay according to the 1796 proportions,

viz.: 15—10—6 would be

	Bengal.	Madras.	Bombay.	Total.
Troops and Companies,	60	40	25	125
	360	240	150	750

These proportions are dependent on the accuracy of the calculations set forth in Para. 17, that the strength of the Indian Army is about 200,000 Sabres and Bayonets when on a War Establishment, and that the Artillery should have some defined proportion thereto; in order that all Arms may be in perfect keeping, that Proportion has been assigned, as therein shown, at 34 Pieces per 1000 of the Army for all India, which gives as above, 750 Pieces; but, should a fewer number of Pieces of Ordnance be considered sufficient, then, to facilitate references, the following table of numbers, arranged according to the original relative proportions, as fixed for Artillery Batteries in India by the Honorable Court of Directors in the year 1796, viz.: 15—10—6 will show the relative proportions the Artilleries of each Presidency will bear to each other, viz., if 684 Pieces be the number for India, this will require 114 Batteries, viz., 55 for Bengal, 37 for Madras, and 22 for Bombay, and so on for a fewer number of Pieces.

1 - 1	*60 *40		l	,		3	39 26	ı	33 22		, ,		21 14		*15 *10		9
Bombay, -	*25	22	20	19	18	17	16	14	13	12	11	10	8	7	*6	5	4
		_	-		-			_	-	—	ļ	-	-	_	-	-	-
Troops and Companies,	125	114	105	99	93	87	81	74	68	62	5 6	50	43	37	31	25	19
Guns for India, -	 750	684	630	 594	 558	 522	 486	444	 408	 372	 336	300	258	— 222	186	 150	114

Adopting the establishment of Officers on the admirable principle laid down in the Honorable Court's despatch (No. 22 of July 1844,) of 4 Officers per battery of 6 guns, and 3 Officers per reserve company, and by adding 150 Officers (the number absent last year on Staff employ, furlough to Europe, and on leave in India East of the Cape) the whole Artillery of India will have (including Colonels) 651 Officers; 99 above the present complement: allowing on an average, (absentees included,) 5 Officers per battery; or for the 125 batteries 620; and these—distributed into grades in the proportion fixed for the cavalry, viz., one Lieutenant Colonel, one Major, six Captains, and twelve Subalterns,—will form the Artillery establishment as follows:

											Bengal.	Madras.	Bombay.	Total.
	31	Colonels, -		-		-		-		-	15	10	6	31
	31	Lieut. Colonels	,		-		-		-		15	10	6	31
	31	Majors, -		-		-		-		-	15	10	6	31
	186	Captains,	-		-		-		-		90	60	36	186
	372	Subalterns, -		-				•		-	180	120	72	372
Fotal	$\overline{651}$							To	otal		$\overline{315}$	$\overline{210}$	$\overline{126}$	$\overline{651}$

The following might be the division of the European and Native Troops and Companies.

Total Europ. Native Total Total Troops Troops. Comps. Comps. Comps. and Comps. Europ. Native Troops. Troops. 12 28 20 48 1 60 20 8 12 32 4.0 5 12 8 20 2525 10 60 40

If the Brigade and Battalion organization be adhered to, the number of the Brigades and Battalions would be as follows:

												1	Brigades.	Battalions.	Total.
Bengal, -		-		-		-		-		-		-	3	12	15
Madras,	-		-		<i>,</i> -		-		•		, -		2	8	10
Bombay, -		-		-		-		-		-		٠ 👡	1	5	6
													6	$2\overline{5}$	31

See para. 31.

And the following will show the 1796 proportion of the different descriptions of Batteries with the corresponding number of pieces of Ordnance for each Presidency.

l .									
!	N	o. of]	3attori	es.	No.	of Gw	18 & F	Iowrs.	l
THE PARTY NAMED AND ADDRESS OF	Bengal.	Madras.	Bombay.	Total.	Bengal.	Madras.	Bombay.	Total.	
Horse Artillery Batteries, - Light Fld. Batteries horsed, Light Field Batteries with	24		5 10	25 5 0		48 96	30 60	150 300	
bullocks, Reserve Companies,	12 12		5 5	25 25		48 48	30 30	150 150	
Total	60	40	25	125	360	240	150	750	

A. F. OAKES, Captain,

Director Artillery Depot.

^{*} See Table at foot of page 33.

^{*} See page 5.

EXTRACT

FROM

MADRAS ARTILLERY RECORDS.

1849.

C. K. S. PRESS, MADRAS—REUBEN TWIGG, PRINTER.

MEMORANDUM

ON THE

ESTABLISHMENTS, SYSTEMS OF PAY AND ALLOWANCES, AND NATURE OF EQUIPMENTS OF THE THREE INDIAN ARTILLERIES,

WITH

SUGGESTIONS FOR EFFECTING ASSIMILATION THEREIN;

RESPECTFULLY SUBMITTED FOR THE CONSIDERATION

OF

HIS EXCELLENCY GENERAL SIR CHARLES NAPIER, G. C. B.

&c. &c. &c.

COMMANDER-IN-CHIEF OF THE ARMY OF INDIA.

ВY

CAPTAIN A. F. OAKES, Madras Horse Artillery,

DIRECTOR OF THE ARTILLERY DEPôT OF INSTRUCTION.

MADRAS:

PRINTED BY REUBEN TWIGG, AT THE CHRISTIAN KNOWLEDGE SOCIETY'S PRESS, VEPERY.

24th December, 1849.

(NOT PUBLISHED.)

MEMORANDUM

ВY

CAPTAIN A. F. OAKES,

MADEAS HORSE ABTILLERY, AND DIBECTOR OF THE MADEAS ARTILLERY DEPOT OF INSTRUCTION,

ON THE

ESTABLISHMENTS, SYSTEMS OF PAY AND ALLOWANCES, AND NATURE OF EQUIPMENTS OF THE THREE INDIAN ARTILLERIES,

WITH SUGGESTIONS FOR EFFECTING ASSIMILATION THEREIN,

ERRATA.

TATE OF THE PROPERTY WITH WATER

- Section I., Table 1, Page 13, "Present Establishment, Madras," heads "Effective Troop Staff, European,"

 "Effective Troop Staff, Native," for 1 Staff Serjeant Rs. 40-12-4, read 1 Serjeant Major Rs. 40-12-4—1 Quarter Master Serjeant Rs. 40-12-4.
- Section I., Table 5, Page 24, "Present Establishment, Madras," head "Effective Staff," for Staff Serjeants 2
 Rs. 81-8-8, read Serjeant Major 1 Rs. 40-12-4—Quarter Master Serjeant 1
 Rs. 40-12-4.
- Section I., Table 7, Page 30, "Present Establishment, Madras," head "Effective Staff," for Staff Serjeants 2
 Rs. 94-3-4, read Serjeant Major 1 Rs. 47-1-8—Quarter Master Serjeant 1
 Rs. 47-1-8.
- Section V., Table 2, Page 88, "Present Establishment, Madras, "European Troop," Native Troop," head "Effective Staff," for Staff Serjeants, substitute "1 Serjeant Major-1 Quarter Master Serjeant."
- Section V., Table 3, Page 90, "Horse Field Battery," Present Establishment, Bengal, for 33 Havildars, read 3

 Havildars,
- ly made. At the bottom of each comparative table, is an abstract showing the difference of expense between the present and proposed Establishments; and at the end of each Section, explanatory observations have been introduced, to facilitate reference.
- 3. Before entering upon an examination of the contents of each Section, it is necessary to explain the principle on which the several tables, containing the new proposed scale of assimilated pay for the three Presidencies, have been drawn up; and to point out those ranks affected by it, and those left untouched. Assimilation of pay and allowances has been applied to all ranks of Europeans, but it has not been attempted to assimilate the pay of Natives, which has been left at each Presidency as at present, with one exception, (see General Observations to Table 6, Section I., para. 13.) And as in the following Departments in each of the three Presidencies there are duties to be performed by certain persons (hereafter specified) of castes and denominations peculiar to localities, whose rate of pay also is fixed by Local Government Regulations applicable only to the particular Presidency in which serving, no attempt at assimilation has been made either in the pay, nomenclature, or number of these individuals.

MEMORANDUM

BY

CAPTAIN A. F. OAKES,

MADBAS HORSE ARTILLERY, AND DIRECTOR OF THE MADRAS ARTILLERY DEPOT OF INSTRUCTION,

ON THE

ESTABLISHMENTS, SYSTEMS OF PAY AND ALLOWANCES, AND NATURE OF EQUIPMENTS OF THE THREE INDIAN ARTILLERIES,

WITH SUGGESTIONS FOR EFFECTING ASSIMILATION THEREIN,

SUBMITTED FOR THE CONSIDERATION

OF

HIS EXCELLENCY GENERAL SIR CHARLES NAPIER, G. C. B., &c. &c.

Commander-in-Chief.

In accordance with the instructions with which I have been honored by His Excellency General Sir Charles Napier, G. C. B., Commander-in-Chief in India, and in continuation of the two Memoranda submitted by me to His Excellency in May last, 1st. On the subject of the three different systems of Field Exercise and Evolutions of the Horse Artillery of Bengal, Madras, and Bombay, (printed), and 2nd. On the best mode of establishing thorough uniformity in the Organization, Equipment, and system of Drill of the three Regiments of Indian Artillery (in manuscript.) I have now the honor to submit for His Excellency's consideration the following Statements and Tables, in the hope that my humble endeavours may assist in bringing the question of general assimilation of the three Regiments of Indian Artillery to a practical and final issue; and tend to secure permanent uniformity, after assimilation shall have once been established.

GENERAL OBSERVATIONS.

- 2. For the convenience of reference, the tabular portion of these papers is divided into five Sections, each Section consisting of a certain number of tables, numbered from 1 upwards. In the comparative tables of each Section, the existing Establishments of the three Artilleries are placed in juxtaposition with the proposed Establishments; so that it may be seen, at a glance, whether in carrying out general assimilation, the reductions and additions in the several grades have been judiciously made. At the bottom of each comparative table, is an abstract showing the difference of expense between the present and proposed Establishments; and at the end of each Section, explanatory observations have been introduced, to facilitate reference.
- 3. Before entering upon an examination of the contents of each Section, it is necessary to explain the principle on which the several tables, containing the new proposed scale of assimilated pay for the three Presidencies, have been drawn up; and to point out those ranks affected by it, and those left untouched. Assimilation of pay and allowances has been applied to all ranks of Europeans, but it has not been attempted to assimilate the pay of Natives, which has been left at each Presidency as at present, with one exception, (see General Observations to Table 6, Section I., para. 13.) And as in the following Departments in each of the three Presidencies there are duties to be performed by certain persons (hereafter specified) of castes and denominations peculiar to localities, whose rate of pay also is fixed by Local Government Regulations applicable only to the particular Presidency in which serving, no attempt at assimilation has been made either in the pay, nomenclature, or number of these individuals.

In the Adjutant and Quarter Master's DEPARTMENT.

Bengal.	Madras,	Bombay.
Tindal,	Tindals,	-
Lascars,	Regimental Lascars,	Lascars,
Moonshee,	Moonshee,	
Pundit,	***************************************	Pundit,
Moulvie,		
Bildars,	***************************************	-
Gunta Pandics,		
Bheasty,		Bheasties,
Puckallies,	Puckallies.	
Sweepers.		Sweepers,
		Lamp Boy.

IN T	IE MEDICAL DEPA	RTMENT.
Bengal,	Madras.	Bombay.
Apothecary, Steward, Native Doctor.	2nd Apothecary, Asst. Apothecary, 2nd Dresser, Hospital Writer, Totics, Veterinary Pupil.	Apothecary, Asst. Apothecary Steward, Hallalcores.

	o morning	mment,
Bengal,	Madras.	Bombay.
houdry, Iutsuddy,	Choudry,	Choudry
	Peons.	Peons.
lagmen and Weighman		

4. The principle on which the pay of Europeans has been assimilated, will be shown at once by the following examples. In cases where three individuals of the same rank in the several Presidencies each receive a different amount of pay, it has all been added together, and one-third of the whole sum allotted to each person; for example:

When the pay of two out of the three is the same, the third is made to equal the two which agree, for example:

> Bengal, Madras. Bombay. School Master Serjeant, - 48.15.4 48.15.4 28.15.4 48.15.4.

- 5. In all the following Sections, after an explanation of the comparative Tables, an abstract is given, showing the difference of expense between the proposed and existing Establishments of Bengal, Madras, and Bombay; and also the mean cost of the three. This abstract is not given after the explanation of the comparative statements of the several Head Quarters of the Horse Brigade, for the reasons assigned in para. 10.
 - 6. The charges in the several Tables have been arranged under the following heads:

Officers.	Gun Lascars.	Medical Department.
Effective Staff.	Artificers.	Bazar Establishment.
Non-Effective Staff.	Adjt. and QrMaster's Department.	Followers.
Non-Commissioned Rank and File.	Troop QrMaster's Department.	Allowances.

* MISCELLANEOUS CHARGES.

7. The following items have not been included in any of the calculations because the corresponding charges in Bengal, Madras, and Bombay, could not be ascertained.

Annual	wear and	tear of	Ordnance and Carriages.	Bengal,	Ann	ual cost	of Houses for Stabling.
"	33	**	Ammunition Waggons, and Quarter Master's, Store,	Madras and Bombay.	} "	1)	" Sick Stables.
	,,	,,	Artificers', and Line Carts. Horses and Bullocks, show-	20220474	, ,,	27	, Barracks, at 5 per cent, on ori-
"	"	"	ing number and cost of		,,	**	, Barrack Repairs.
			Remounts and period they will last.		22	,,	,, ,, Attendants. ,, ,, Supplies.
		7>	Saddlery, Harness and Horse		(Annu	al cost c	of Materials for the repair of Arms
,,	**	"	Appointments.		i		and Accoutrements.
"	,,	22	Arms and Accoutrements for	Peculiar to Mad-	J "	29 9	, Artificers' ,, ,,
"	,		the Artillerymen, and Bat-	ras.] ,,	"	, Materials for the repair of Ord-
			tery Establishment.		,,,	11 1	, Materials for the repair of Ord-
,,	**	>>	Drill Apparatus.		Ļ,		nance Carriages.
33	77	19	Camp Equipage.	Bengal and	§ Annu	al cost o	of Renewing Saddlery, Harness and
78	,,	**	Quarter Master's and Gene- ral Stores.	Bombay.	(Provide Amounition for Ord
			Equipments and Tools of		:1	"	" Practice Aminumition for Ord- nance and Small Arms.
"	57	"	Gun Lascara.		,,		, Line Articles, Jhools, Mussals,
			Intrenching Tools.		.,	•	and Medicines for Bullocks.
,,	,,	23	Artificers' Tools for the repair				,, Quilta.
23	31		of Ordnance Carriages.		"	Hospit.	al charges, including Bazar Medi- and Europe Medicines.
							•

^{*} Vide Appendix for information relative to Mudras.

OBSERVATIONS

ON SECTION I. AND THE TABLES CONNECTED WITH THE EUROPEAN AND NATIVE HORSE ARTILLERY.

SECTION I. Containing 7 Tables.

- 8. Table 1, gives the Pay and Allowances of every rank in the European and Native Horse Artillery of Bengal, Madras, and Bombay, according to the present rates of pay at each Presidency. In the first column every grade in the three Horse Artilleries is entered; those Europeans and Natives of all ranks recommended to be left out in the new Establishment, are distinguished by their columns for pay under proposed Establishment being left blank; those to be retained in the new Establishment, are distinguished by having the same columns filled in; the Europeans according to the new proposed scale of assimilated pay, the Natives according to the pay of their respective Presidencies.
- 9. Table 2, gives the proposed Establishment of the Head Quarters of a Brigade of Horse Artillery for Bengal, Madras, and Bombay, with one scale of assimilated pay for all Europeans, Commissioned, Warrant, Non-Commissioned and Rank and File, and for Natives, the pay of their respective Presidencies. The mode of calculating the Clothing and Hutting Money is in this Table, shown in the column of Remarks according to the proposed Establishment only, similar calculations for the existing Establishments being given in Table No. 3.
- 10. Table 3, gives a Comparative Statement of the cost of each Head Quarters of the Brigades of Horse Artillery, as existing in the several Presidencies, and of the proposed Establishment of an assimilated Head Quarters of a Horse Artillery Brigade for each of the three Presidencies; with an abstract showing the difference of expense between the existing and the proposed Establishments. Owing to the present organization of the Madras Horse Artillery, where the Officers of two Corps are included in one Brigade (two Brigades having, on occasion of the reduction of 1831, been amalgamated,) and in this Brigade one portion of its Officers, (viz., the Effective Officers,) being on Horse Artillery pay, and (the other viz., the non-effective,) on Foot Artillery Pay, as accounted for below, the only mode of drawing a fair comparison between the expense of a Bengal and Madras Horse Brigade, is by comparing the cost of their Troops respectively, as in Table No. 4.

Officers Effective.

1 Lieutenant Colonel,

2 Colonels,

1 Major,

1 Lieutenant Colonel,

6 Captains,

1 Major,

1 Major,

1 Lieutenants,

2 Veterinary Surgeons.

2 1st Lieutenants,

10 2d Lieutenants.

The mode of calculating the Clothing and Hutting Money is shown in the column of Remarks of Table 3 according to the present Establishment only, similar calculations for the proposed Establishment having already been given in Table No. 2.

- 11. Table 4, gives the proposed Establishment of a European Troop of Horse Artillery, for Bengal, Madras, and Bombay, with one scale of assimilated pay for all Europeans, Commissioned, Warrant, Non-Commissioned and Rank and File; and for Natives, the pay of their respective Presidencies.
- 12. Table 5, gives a Comparative Statement of the cost of a European Troop of Horse Artillery according to the existing Establishments of European Troops in the three Horse Artilleries, and according to the proposed uniform Establishment for the three Presidencies; with an abstract showing the difference of expense between the existing and proposed Establishments.

- 13. Table 6, gives the proposed Establishment of a Native Troop of Horse Artillery in Bengal, Madras, and Bombay, with one scale of assimilated pay for all Europeans, Commissioned, Warrant, and Non-Commissioned, and for Natives the Pay of their respective Presidencies. According to the present Establishment, the Pay and Allowances of every individual under the rank of Commissioned Officer in the Native Horse Artillery in Madras correspond with the Pay and Allowances of those of similar rank in Bengal; with the exception of the Pay Havildar, who in Bengal draws 5 Rupees, and in Madras only Rupees 1-13-10; and in this case, I have assimilated the latter with the former.
- 14. Table 7, gives a comparative Statement of the cost of a Native Troop of Horse Artillery as existing in the three Horse Artilleries, and of the proposed assimilated Establishment of ranks for the Native Troops of the three Presidencies; with the existing rates of Pay for the several ranks in each Presidency, and an Abstract showing the difference of expense between the existing and proposed Establishments.
- 15. The following is an abstract of the actual cost of a European Troop of Horse Artillery in Bengal, Madras, and Bombay, and of a Native Troop in Bengal and Madras, with the mean cost of each compared with the cost of the proposed Establishment. The cost of a Troop in Cantonment would be considerably reduced, as the expense of the following would be deducted, viz. :

Horsekeepers. Carts. Waggon. Horses. Harness, sets. Carriage, spare. 34 1 3 96 by which a saving of nearly one-sixth of the expense on account of Horses, and Rupees 629-10-8 on account of Horsekeepers and Grass-cutters alone, would be effected.

	EUROPEAN TROOP.										N	TIT	E	Твоор.				
,	Establishment.										Establishment.							
	Prese	nt.		Prope	osed		Incre	181	В.	!	Prese	nt.		Prop	osed	 1.	Inca	ease.
Bengal, -	7,123	11	10	8,319	0	7	1,195	4	9	Bengal,	5,623	1	2	6,471	5	4	818	4 :
Madras, -	7,909	8	11	9,060	10	6	1,151	1	7	Madras,	6,302	11	6	7,225	15	5	923	3,11
Bombay,	a 8,227	13	8	9,173	15	4	946	1	8	Bombay,	0	0	0	6 7,3 98	6	11	7,398	6 11
Total	23,261	2	5	26,553	10	5	3,292	8	(Total	11,925	12	8	21,095	11	8	*9,169	15 (
Mean cost of one Troop per Mensem,		11	5	8,851	3	5	1,097	-8	-0	Mean cost of one Troop per Mensem,		11	4	7,031	1.1	6	1,069	0 5

16. The cost of the horses, &c. has been omitted in this statement. The number of horses in the Troops of each Presidency differ very little, being as follows:

Bengal. Madras. Bombay. 169 164

so that the insertion of their cost could not materially affect the comparative Statement, but would have slightly decreased the expense of the Madras Establishment relatively with those of Bengal and Bombay; in which latter Presidencies some of the Troops have a greater number of horses than that above given.

*A Native Troop having been added in the proposed Establishment for Bombay, causes a great apparent increase in the proposed Establishment, but the substitution in Bombay of one Native Troop for one European Troop would be a mentily saving to the State, of upwards of 800 Rupees, for example:

Out of a Bombay European Troop,

Out of a Bombay proposed Native Troop,

Out of a Bombay proposed Native Troop,

Out of a Bombay proposed Native Troop,

Out of a Bombay Burden Troop,

Out of a Bombay proposed Native Troop,

Out of a Bombay Burden Troop,

Out of a

Monthly saving to Government 829 8 9

17. The chief cause of the expense of a Troop of Horse Artillery in Madras and Bombay, being greater than in Bengal, is that the Pay of followers is higher in the two former Presidencies.

•				Bengal.	Madras.	Bombay.
Pay of Horsekeeper,	-	٠.	-	4 0 0	5 4 0	6 0 0
Grass-outter.	_		-	3 8/0	4 0 0	5 0 0

18. The allowance of Rupees 20 for a School in each Troop in Bombay, has been omitted in consequence of a School Master being non-effective in each Troop of the three Presidencies in the proposed Establishment.

OFFICERS IN COMMAND OF A HORSE BRIGADE AND CAPTAIN IN COMMAND OF A TROOP.

19. The allowances for Saddles and Line articles have been left undisturbed, as existing in each Presidency; because any partial change in the system now pursued, would entail an alteration in the local Government Regulations now applicable to all mounted Corps of each Presidency. The cost of Shoeing and Saddlery is greater in the Madras and Bombay Presidencies, than in Bengal.

Shoeing, &c. p	er Ho	rse 1	with	Rs.	5 per	Troop	o for	I	Beng	al.	Ŋ	Ladr	13.	В	omb	ay.
Cavessons, R					_	_	-	2	0	0	2	12	9	3	0	0
Saddles,	-										1	12	0	1	0	0
Harness, }	-	-	-	-	. •	•	-	2	0	0	1	12	0	2	0	0
					Total	per I	Iorse	4	0	0	6	4	9	6	0	0

20. The Saddles, Harness, &c. at Madras are at present both kept up and repaired at the expense of the Officer in charge, on a fixed allowance from Government; whereas in Bengal and Bombay Saddles and Harness are not only periodically renewed, but also repaired at the expense of Government. It is obvious therefore, that the wear and tear charges for each Presidency cannot be correctly calculated according to the same rule; but this has nevertheless been attempted, the result being given as data to guide Superior Authority, when considering the comparative expense of Troops in Bengal, Madras, and Bombay!

CAPTAINS COMMANDING TROOPS AND BATTERIES.

21. In the Bengal and Bombay Artilleries the expense of repairs to Ordnance Carriages and Arms and Accourrements, is defrayed by a contingent gun allowance, whilst the Establishment of Artificers is paid by Government: whereas at Madras all repairs are at the Government charge. The former plan being considered by highly experienced Officers as most favorable to the interests of Government, as well as most conducive to the perfect efficiency of Batteries, has been recommended for general adoption in the proposed Establishment.

HORSE BRIGADE STAFF ADJUTANT AND QUARTER MASTER.

22. In consequence of the two Brigades of the Madras Horse Artillery having been amalgamated on the reduction of 1831, and the duties of Adjutant and Quarter Master having been found too onerous for one Officer, two Officers (both Non-Effective,) were allowed as Regimental Staff, one as Adjutant, the other as Quarter Master and Interpreter, whilst in Bengal and Bombay one Officer performs the duties of both Adjutant and Quarter Master of the Horse Brigade. The proposed Establishment being for one Brigade, the Bengal system of one Officer as Adjutant and Quarter Master on the pay of Rupees 247 has been entered here, in the belief that the error committed in 1831 in depriving the Madras Horse Artillery of one Horse Brigade Command and two Troops (contrary to the principle of the Supreme Government) will hereafter be rectified, and that all Horse Brigades in the three Presidencies will be assimilated in every respect.

MEDICAL ESTABLISHMENTS OF THE HORSE BRIGADE, AND OF THE FOOT ARTILLERY.

23. Statement showing the existing Establishments of Medical Officers attached to Brigades and Battalions in the three Artilleries compared, with the proposed Establishment for the same number of Brigades and Battalions.

	BEN 3 Briga 9 Batta	GAL. des and lions.		ora 8 ide and ilions.	BOMBAY. 1 Brigade and 4 Battalions.			
	Surgeons.	Assistant Surgeons.	Surgeons.	Assistant Surgeons.	Surgeons.	Assistant Surgeons.		
Present Establishment, Proposed do.	$\begin{array}{c} 12 \\ 12 \end{array}$	12 12	6	11 6	4 5	8 5		
In Excess, - Deficient, -	_	_	_	5	1	3		

24. This Table shows an excess of 8 Assistant Surgeons, and a deficiency of 1 Surgeon in the existing Establishment of the three Artilleries as compared with the proposed Establishment. It will be perceived that in the three Presidencies Medical

Officers are apportioned to Brigades of Horse Artillery on three different systems, although with regard to Battalions of Foot Artillery, one uniform system prevails. In Bengal, 1 Surgeon and 1 Assistant Surgeon is allowed to each Horse Brigade, and the same to each Battalion. In Madras, 1 Surgeon is allowed to the Horse Brigade, and 1 Assistant Surgeon to each Troop, making a total of 1 Surgeon and 6 Assistant Surgeons, to a Brigade of Horse Artillery; the Medical Officers for Battalions being in the same proportion as in Bengal. In Bombay there is no Surgeon allowed to the Horse Brigade, but 1 Assistant Surgeon is posted to each Troop; the Medical Officers for Battalions being in the same proportion as in Bengal and Madras.

25. The following statement which is made applicable to the Brigades and Battalions of the three Artilleries as now existing, gives the monthly difference of expense between the proposed Establishment of Medical Officers (which will be found to agree exactly with that existing in Bengal) and the present Madras and Bombay Establishments.

```
Horse \ Artillery. \\ \begin{cases} 4 \ \text{Surgeons}, & @ 863 \ 0 \ 4 = 3.452 \ 1 \ 4 \\ 13 \ \text{Assistant Surgeons}, @ 305 \ 4 \ 0 = 5,138 \ 4 \ 0 \\ Foot \ Artillery. \\ 18 \ \text{Surgeons}, & @ 733 \ 10 \ 0 = 13,205 \ 4 \ 0 \\ 18 \ \text{Assistant Surgeons}, @ 295 \ 12 \ 0 = 5,323 \ 8 \ 0 \\ \end{cases} \\ Horse \ Artillery. \\ \begin{cases} 5 \ \text{Surgeons}, & @ 863 \ 0 \ 4 = 4,315 \ 1 \ 8 \\ 5 \ \text{Assistant Surgeons}, @ 305 \ 4 \ 0 = 1,976 \ 4 \ 0 \\ Foot \ Artillery. \\ \end{cases} \\ \begin{cases} 18 \ \text{Surgeons}, & @ 863 \ 0 \ 4 = 4,315 \ 1 \ 8 \\ \text{Foot Artillery}. \\ \end{cases} \\ \begin{cases} 18 \ \text{Surgeons}, & @ 733 \ 10 \ 0 = 13,205 \ 4 \ 0 \\ \text{Surgeons}, & @ 733 \ 10 \ 0 = 13,205 \ 4 \ 0 \\ \end{cases} \\ \end{cases} \\ \begin{cases} 18 \ \text{Surgeons}, & @ 733 \ 10 \ 0 = 13,205 \ 4 \ 0 \\ \end{cases} \\ \end{cases} \\ \begin{cases} 18 \ \text{Assistant Surgeons}, & @ 295 \ 12 \ 0 = 5,323 \ 8 \ 0 \\ \end{cases} \\ \end{cases} \\ \begin{cases} 18 \ \text{Assistant Surgeons}, & @ 295 \ 12 \ 0 = 5,323 \ 8 \ 0 \\ \end{cases} \\ \end{cases} \\ \end{cases} \\ \begin{cases} 18 \ \text{Difference in favor of Proposed Establishment}, \dots, 2,208 \ 15 \ 8 \\ \end{cases}
```

EFFECTIVE AND NON-EFFECTIVE STAFF HEAD QUARTERS, AND EFFECTIVE AND NON-EFFECTIVE TROOP STAFF.

- 26. The alterations made in the ranks under these heads, will be found to accord generally, with the system of the Royal Army, and with that of the majority of the three Presidencies, excepting in the case of the Troop Quarter Master, who has been included in the proposed Establishment; the following are the grounds for this deviation from the general rule.
- 27. The appointment of Troop Quarter Master has always existed in the Madras Horse Artillery, and has been found highly conducive to efficiency under all circumstances and situations. In Cantonment, the duties of that Officer are limited to a general superintendance of the Horses, Horse Lines, Gram, Forage and Watering duties, with a general control over the Horsekeepers and Grass-cutters; but in the Field, he has the further duty of proceeding in advance to procure a supply of forage for the Troop on its arrival on the new ground of encampment; and the condition of the horses, depends in a

great measure on his exertions. No Non-Commissioned Officer therefore, could efficiently fill the office of Troop Quarter Master, in addition to the performance of his other duties.

28. The permanent Establishment of this appointment with every Troop of Horse Artillery is strongly recommended, as being conducive to the perfect efficiency of the Corps, the improved conduct of the men, and the preservation of the Horses, both in Garrison and in the Field; for the existence of such an appointment acts as a powerful incentive to good conduct in the subordinate ranks; and otherwise, with the present reduced rate of pay of the Horse Artilleryman, there are few inducements for men to enter the Horse Artillery, or for good Non-Commissioned Officers to remain with it whilst there are numberless Staff Serjeants' situations of easy duty, and involving comparatively very little wear and tear of the constitution, to be obtained out of the Corps.

TROOP QUARTER MASTER'S DEPARTMENT.

- 29. In Bengal Gun Lascars are attached to European and Native Troops of Horse Artillery, and in Bombay to European Troops, but they have never been attached to the Madras Horse Artillery, where the Ordnance, Carriages, &c. of a Troop are cleaned by a party of not more than six Horsekeepers, detailed under Troop arrangements, and supervised by the Quarter Master Serjeant of the Troop.
- 30. The duties of Gun Lascars as laid down in Madras General Orders of 1819 are to clear roads, passages for guns, and make ground for the Parks, Magazines, &c., (for which purpose they are equipped with light Pioneer tools in addition to side arms) besides cleaning the Ordnance and Carriages. According to the Bengal system, two Gun Lascars are required with each gun in action, but this is not the case under the Detachment system.
- 31. In the proposed Establishment, each Troop of European and Native Horse Artillery, has been provided with six Store Lascars, in lieu of the Gun Lascars now employed in Bengal and Bombay: the Store Lascars being considered preferable, not only as being unencumbered with Accountements, Clothing and Arms, but also as involving considerably less expense, as shown below. On the Detachment system six Store Lascars would be ample for the Lascar duties of a Troop of Horse Artillery (as is proved by the Madras Horse Artillery never having required more than six Horse-keepers per Troop for that purpose) and the nature of those duties would be more in keeping with the general occupations of the Store Lascars, than with those of the Gun Lascars.
 - 32. The Gun Lascars now attached to the Horse Artillery in India, are as follows:-

	Havildars.	Naigues.	Gun Lascars.	Total.
In Bengal 13 Troops, -	13	. 26	312	341
In Bombay 4 Troops, -	4	0	96	100
•				
	Total17		408	441

and the following comparative statement of the monthly pay with Batta of the proposed Establishment of Store Lascars for the 23 Troops of Horse Artillery in Bengal, Madras and Bombay, and of the Gun Lascars now on the strength of the 17 Troops of Bengal and Bombay, will show, that according to the proposed arrangement, the 23 Troops of Horse Artillery may be provided with Store Lascars, at a monthly cost of Rupees 1,758-8-0 less than is now expended in providing Gun Lascars for the 17 Troops of Bengal and Bombay.

				Total Ra			Total o				and tal.	
BENGAL 13 TROOPS.				100		_		Ì	_			-
13 Havildars,	9	8	0	123 208	8	0						
312 Lascars,	5	12	ŏ	1794			2125	8	0			
BOMBAY 4 TROOPS.	10	8	^	42	اہ	Δ						
4 Havildars, 96 Lascars,	10	ô			ŏ	0	714	o	0	2839	8	0
BENGAL, MADRAS, AND BOMBAY.			- 1		1 1							
138 Store Lascars for 23 Troops, -	7	13	4	1081	0	0	0	0	0	1081	0	0
Difference in far	your c	of p	roj	been	Est	ab	liebro	ent	; <u>,</u>	1753	8	0

PROPOSED ESTABLISHMENT FOR A TROOP OF HORSE ARTILLERY.

33. The existing Establishments of Europeans for each Troop of Horse Artillery in Bengal. Madras, and Bombay, including all ranks who are available to work a Gun, are as follows:

Bengal.	Madras.	Bombay
111	116	111

(See Section I., Table 5.)

The number of men ordinarily employed to work a gun is seven, therefore

6 Guns require	•	•	•	•	-	•	•	-	- 42	men
There are 3 Dr	ivers to o	each (dun,						18	} ,,
" 3	,, to	a Wa	ggon	, -	•			-	- 18	} ,,
There are 6 Ho who dismoun										
Staff Serjeants	2—Trun	poter	s 3-	-Farr	iers 3	,	-	•	- 8	٠,,
The horsed Car	riages, v	iz. :)	
1 Spare Gun 1 Forge Cart	Carriage	, -	-	-	-	-	6 h	orses,	5	,,
1 Forge Cart	·, -	٠,	•	•	-	•	4 h	orses,)	
m.,,1		. 11				_				
Total number of	t men ac	tually	, redi	nred	to a	Troop	, .		127	**
Add Allowance	for sick,	&c.	-	•	-	٠	•	•	10	**
To	tal of all	Rank	s un	der ጥ	roon	Ouer	tan M	agton	127	
	un or un		.b am		Loop	vç uar	ogr 10	abur.	107	

so that the Madras Establishment of men, though actually exceeding the strength of the Bengal and Bombay Troops, is in reality short of the actual number required to take the guns of a Troop efficiently into the Field by 21 men; as less than 137 men cannot be considered an efficient Establishment for a Troop, viz.:

Staff Serjean	ts,			-		-		-				-			2
Serjeants,	-		-				•		-		-				6
Trumpeters,		•		-		•		-		•		-			3
Farriers,					-		-		-		٠		-		3
Corporals,		-						-		-		•			6
Bombardiers,			-		-		-		-				-		12
Gunners, -		-		-		•		-		•		٠		-	105
											•	Fot	al.	٠.	137

and with a 9-pounder Gun Troop, 6 men should be added to provide for the extra pair of horses to each gun team, making a total of 143 men for a 9-pounder Gun Troop. This Establishment allows only 10 for sick, &c., the remaining 127 men having their own particular duty to perform without a single supernumerary.

34. Now it may very reasonably be asked, how can a Troop be expected to remain long in action in an efficient state, if sent on Service as above, without a single spare man to fill up casualties beyond the small allowance of 10 for sick, &c.? especially when it is further considered, that however trifling, by comparison, the loss of a few men and horses would be to Cavalry corps, in a Troop of Horse Artillery the want of a man or horse would cripple a whole sub-division, and render it worse

than useless; and with the view of obviating this, I have added 30 Horsekeepers or Syce Drivers to be entertained on pay superior to that of a Horsekeeper, whose additional duties when in the Field, would be, to drive the Waggons, spare Carriages and Carts, if required; and in Garrison, besides learning to drive, they would act as Horsekeepers. This arrangement would give 30 spare men as drivers, over and above the actual number required with a Troop in the Field; and should the European Drivers be further reduced by casualties, on any pressing service, these Native Drivers might on emergency be taken from the Waggons, &c., and a proportionate reduction made, for the time being, in the number of Ammunition Waggons to accompany the Troop.

- 35. The number of men and horses in the proposed Establishment, (viz., 137 men and 199 horses) is nearly a medium between the establishment proposed by the Special Board of 1836, (viz., 130 men and 210 horses) and that proposed by the Bombay Member of that Board, (viz., 136 men and 193 horses.) In the Royal Horse Artillery, the Establishment laid down in 1819 was 182 men and 186 horses, which complement though only allowing eight men and eight horses for each Detachment, is quite sufficient, as with the quiet geldings in the British service three men can easily hold eight horses, leaving five men available to dismount and work the gun. But it should be remembered that in India the Carriages are heavier, the horses inferior, the roads worse, and the supply of forage generally more uncertain and difficult to obtain than in Europe; besides the exposure and liability to disease being greater.
- 36. The advantages proposed to be given to the Horsekeeper Drivers, are, Increase of Pay and a Pension after 20 years' service, as with Store Lascars.

The Syce and Horsekeeper Drivers in the Horse Batteries now receive in

Bengal.Madras.Bombay.Rupees 6 each.Rupees 7 each.Rupees 7 each.

The same rates to be continued to the Horsekeeper and Syce Drivers in the respective Presidencies.

37. Proposed Establishment of a European Troop of Horse Artillery.

Men.		Ordnance Carriag	es.		Draught Horses.							
2 Staff Serjeants,	,											
6 Serjeants,		6 Guns, .		-	6 I	Torse	eacl	i = 36				
3 Trumpeters,		6 Waggons,	-		6	,,	,,	= 36				
3 Farriers,		1 Spare Carria	ge,	-	G	,,	,,	= 6				
6 Corporals,)	1 Forge Cart,	-		4	,,	,,,	= 4				
12 Bombardiers,	(123 Rank and File.	п	¹ofa]	T-Y		in T],,,,,,,,,	ht82				
105 Gunners,) """ """	5	Otal		Orse	S 1/1 1	Taug	71182				
137 Total.												

Horses as reckoned in the Field and in Cantonment.

1st. In the Field.

	One to each man, including Assistant Apothecary or Native Doctor, - 138 Off Horses in Draught, - 41 Spare, one-fourth the number in Draught, 20
2d.	In Cantonment.
	Riding Horses,
	Off Horses in Draught,
	Spare, one-fourth the number in Draught,
	Total,165

The horses allowed for the waggons, spare carriages and carts in the Field are deducted.

SADDLERY AND HARNESS AS RECKONED IN THE FIELD AND IN CANTONMENT.

1st. In the Field.

138 Riding Saddles, one per man.

102 Sets of Harness, one to each Horse in draught, and spare, including half this number with Off Saddles.

2d. In Cantonment.

138 Riding Saddles, one per man.

81 Sets of Harness, being 2 to each Horse in draught, and one set to each spare Horse including half this number with Off Saddles.

CARRIAGES DRAWN BY BULLOCKS IN THE FIELD FURNISHED BY THE COMMISSARIAT.

1 Spare Waggon,		•	7
1 Store Cart,	•	-	7
1 Quarter Master's Cart, -			7
		Total	21

Horsekeepers.—One to each horse in the Field or Marching.

In Cantonment.—One to each Warrant and Non-Commissioned Officer's, Farrier's, Trumpeter's, Spare and Off Horses, and one to every two of the remainder. In the Field and in Cantonment 20 of the Establishment to have superior pay, and to be available as Horsekeeper Drivers as explained in para. 34.

Horsekeeper Choudries.-Three per Troop, viz., one to each Division.

Grass-cutters.—One to every Horse.

Grass-cutter Choudries .- One to each Division.

	Artificers.	
Bengal.	Madras.	Bombay.
1 Mistry Smith,	1 Maistry,	1 Mistry Smith.
1 ,. Carpenter,	•	1 ,, Carpenter,
	2 Smiths,	2 Smiths,
2 Carpenters,	2 Carpenters.	2 Carpenters.
<u> </u>	2 Armourers.	
2 Firemen,		THE PARTY OF THE P
2 Filemen,	Waneman	page Norwa
2 Hammermen,	2 Hammermen,	2 Hammeraien.
<u></u>	2 Bellows Boys,	2 Bellows Boys.
1 Moochy or Chuckler,	1 Moochy or Chuckler,	

Store-Lascars.—Six per Troop under the Quarter Master Serjeant, to clean the Ordnance and assist in the Store Room.

THREE SCALES OF ESTABLISHMENTS

FOR

A TROOP OF EUROPEAN HORSE ARTILLERY IN THE THREE ARTILLERIES.

1st.—For Field Service with 5 6-Pdrs. and 1 12-Pdr. Howitzer. 6 Ammunition Waggons, 1 Spare Carriage, 1 Forge Cart, 1 Spare Waggon, 1 Store Cart, and 1 Quar* 2nd.—For Cantonments with do. and do. do. ter Master's Cart.

					R	ank an	d File		Native	Ordno	nce C	arringersed.	28, &c.	ages	nce draw ocks.	Carri- n by		Hor	869,		Cho Hor	udries sekcej	and pers.	and	udries Grass- ters.		S ts	of Ha	rness.
									y or		• ii										,		pers.						
TROOP OF	Staff Serjeants.	Scrieants.	Trumpeters.	Farriers.	Corporals.	Bombardiers.	Cunners.	Total.	Assistant Apothecary Doctor.	Gun Carriages.	Waggons, Ammunition	Spare Carriages.	Porge Cart.	Spare Waggon.	Store Cart,	Quarter Master's Cart.	Riding.	off.	Spare.	Total.	Norsekeeper Choudries	In the Field,	In Cantonment.	Grass-cutter Choudries	Grass-cutters,	Riding Saddles.	With Off Saddles.	Without Off Saddles.	Total.
1st. For Field Service with 5 6-Pdr	s.																					 			- <u>-</u> -			<u> </u>	<u> </u>
and 1 12-Pdr. Howitzer, - 2nd. For Cantonments with 5 6-Pdi	-	6	3	3	G	12	105	123	1	6	6	1	1	1	1	1	138	41	20	199	3	*199	0	3	199	138	51	51	102
and 1 12-Pdr. Howitzer, - 3rd. For Field Service with 5 9-Pdr	- {	6	3	3	6	12	105	123	1	6	G	0	o	0	0	0	138	18	9	165	3	0	*103	3	165	138	41	40	81
and 1 24-Pdr. Howitzer, -		_	3		6	12	111		<u> </u>	6	6	1	1	1	1	1	144	4.7	23	214	3	*204	*149	3	214	144	59	58	117

The Establishment for a 6 Gun Troop in Garrison is calculated thus—Deduct the Horses of Waggons, Spare Carriages and Carts.

With 9-Pounder Troops, the addition is made as follows: Gunners 6—Horses 15 with Horsekeepers in proportion—Saddles 6—Harness 15.

The following is the only addition required to the above Establishment for a Native Troop.

	Horses.	Saddles,	Horsekeepers.	Grass-cutters.
1 Subadar, 1 Jemadar,	1	1	1	1
,	Total 2	-2	-	
	10(412	=	<u>2</u>	2

^{*} This number includes 30 Horsekeeper or Syce Drivers.

39. With regard to the expediency of equipping a European Troop with 9 Pdrs., the opinion of Major General Sir Robert Gardiner, K. C. B., of the Royal Artillery, in a Pamphlet addressed to the Chairman of the Committee of the House of Commons, on the Army, Navy, and Ordnance estimates, dated 1848, pages 32 and 33, is as follows:

"The adoption of guns of heavier metal in our Brigades has often been suggested by our most experienced Officers, &c. One of the last acts of the Duke of Wellington previous to the battle of Waterloo, was to substitute 9 Pdrs. in his Troops and Brigades of Artillery for light 6 Pdrs., with the exception of two Troops of Horse Artillery covering the flanks of the Army with Hussar Cavalry. The importance of this foresight, like all His Grace's provisionary arrangements for the chances and exigencies of the Service, was felt in its consequences throughout the day; and certainly contributed to its glorious results."

40. On this subject I cannot do better than quote the opinion of that experienced and able Artillerist Sir Augustus Fraser.

"It may here be fairly observed, in support of the arguments in favor of arming the Horse "Artillery with heavy guns, that, adverting to the nature of the service on which they were about "to be employed, six troops of the ten which were engaged at the battle of Waterloo exchanged im-"mediately before it, their light guns for nine Pounders; so that, including the Howitzers with the "remaining troops, there were then in the Field with the Horse Artillery forty pieces of heavy calibre; and whoever will recollect how, almost exclusively, for some hours, that battle was one of "Artillery, and how much necessarily depended upon the efficiency of that arm, must admit, that the exchange was opportune and judicious. It may not perhaps be too much to say, that had the "lighter pieces been suffered to remain, it might have had a considerable effect on the fortune of the day, and the state and relative utility of such of the troops as retained their lighter guns, and were in exposed situations, very strongly corroborates this idea."

- 41. The addition of 6 men and 15 horses, 6 saddles and 15 sets of harness, is all that is necessary to convert a 6 Gun and 12 Pdr. Howitzer Troop into a 9 Pdr. and 24 Pdr. Howitzer Troop; so that a material augmentation to the force and power of a Horse Artillery Battery can be made at a very trifling cost.
- 42. A Troop of Madras Horse Artillery was in 1831 equipped with 9 Pdr. Guns and marched from the Mount to Kamptee, 750 miles, under Captain Montgomerie, (now Colonel Montgomerie, C. B., and A. D. C. to Her Majesty, Brigadier Commandant of the Madras Artillery,) who reported as follows:—

"I consider 6 horses sufficient for the draught of the 9 Pdr. Guns on common roads, but 8 horses are necessary when the roads are particularly heavy or otherwise difficult; on one occasion I attempted to ford the Kistnah with 6 horses when the depth of water was about 3½ feet with a sandy bed, but the two first guns stuck, and I was obliged to put 8 horses in to get them across, and on several other occasions I had to use the same number of horses. The roads genewrally speaking were good, but I have no doubt, on a hilly or heavy road 8 horses are requisite, I would recommend therefore, that two spare horses should always be at hand."

SECTION I.

TABLE 1.

Table showing the Pay and Allowances of every Rank in the Horse Artillery, European and Native, of Bengal, Madras, and Bombay, with the Pay of the several ranks according to the present rates of pay at each Presidency. In the first column every grade in the three Horse Artilleries is entered; the Europeans and Natives of all ranks which are recommended to be left out in the New Establishment are distinguished by the columns for Pay under proposed Establishment being left blank; those to be retained in the New Establishment are distinguished by having the same columns filled in, the Europeans according to the new proposed Scale of assimilated Pay, the Natives according to the pay of their respective Presidencies.

	RANKS, &c.	F	RES	EN'	r Est	ABL	ler.	HMEN	r.		PROPOSED ESTABLISHMENT.								
No.	RANKS, ac.	Ber	ıgal		Mad	lras,		Bom	bay		Ben	gal		Mac	lras		Bon	ıbay	,
-	Officers.																		
1 1 1 1 1	Colonel, Lieutenant Colonel, Major, Captain, 1st Lieutenant, 2d Lieutenant,	1478 1157 929 563 365 310	0 6 0 4	0 4 4 0		0 6 0 4	0 4 4 0	1157 929 563 365	0 6 0 4	0 4 4 0	929 563 365	0 6 0 4	4 4	1157 929 563 365	0 6 0 4	0 4 4 0	1157 929 563 365	0 6 0 4	0 4 4 0
	EFFECTIVE STAFF HEAD QUARTERS.								·									'	
1	Serjeant Major,	50 44 42 48 38 48 26 48	14 15 15 15 15 15 15 15 15	10 10 4 4 4 4 8	50 44 0 45 0 35 35	15 0 15 0 6 2	10 0 4 0 8 8	28 28 48 26	0 0 15 15 15 2 0	0 0 0 4 4 4 8 0	50 44 42 49 33 48 26	15 15 15 15 15	10 10 4 4 4 4 8 0	50 44 42 48 33 48 26	14 15 15 15 15 15 15 0	10 10 4 4 4 4 8 0	44 42 48 33 48 26	15 15 15 15 15 15 2	10 10 4 4 4 4 8
	Effective Troop Staff (European.)										-								
]	Troop Quarter Master,	0	0 12 0	0 4 0	0 40 0	0 0 12 0	0 0 4 0	50 44 0 46	15 0 7	10 10 0 4	40 40 0	$\frac{12}{12}$	0 0	191 40 40 0 0	12 0	4	40 0	7 12 12 0 0	4 4 0
	Effective Troop Staff (Native.)																		
	Troop Quarter Master, Staff Serjeant, Farrier Serjeant, Serjeant, Troop Havildar Major, Drill Havildar, I brill Naigue, Rough Rider under 16 years' service,	*52 48 0 0 0 14	5 5 0 0 0 0	2 0 0 0	*47 0 * 35 22 30 23	1 0 4 0 8	808000	0 0 0	0 0 0 0	0 0 0	49 0 0 22 0	11 0 0 0	500000	0 22 0	11 0 0 0	500	*49 0 0 22	11 0 0 0 0	5 0 0 0 0
	Non-Effective Staff Head Quarters.																		
	Adjutant, Quarter Master, Adjutant and Quarter Master, Librarian, Reading Master, Writing and Cyphering Master, Hospital Serjeant,	257	0000	0 0	132 0 0 15 15	0 0 0	0	237 8 0	0	00000	0 247 8 0 0	0000	0000	0 247 8 0	00000	000000	247 8 0	000	0 0 0
	Non-Effective Troop Staff (European.)			Ì				.					į	-					
	Saddler Serjeant, Orderly or Pay Serjeant, Drill Corporal, Rough Rider 1st Class, , , 2d ,,	0	0 0	0 0	3 7 10 7	8	0 0 0 0	7 0 0	0000		7	0 0 0 8 0 0	0	7	0 0 0 8 0	00000	7	0 0 0 0 0	0 0

^{*} Includes compensation for Rations, Rupces 6-5-4 each.

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SECTION I.
Table 1 continued.

<u> </u>		1	PRE	SEN	r Esi	TAB	Liei	MEN	r.	-		PBO	POS	ed É	BTA	BLI	enme:	 S T.	
No.	RANKS, &c.	Ber	ıgal	-	Mad	lras	.	Bon	bay	-	Bei	(igal	.	Ma	dras	a.	Bon	obay	 ·.
	Non-Effective Troop Staff (Native.)									-			_ 						
1 1 1 1 1 1 1	Staff Havildar, Pay or Orderly Havildar, Rough Rider 1st Class, , , , , , , , , , , , , , , , , , ,	2 5 0 0 0	0	0	5 3 0	13 4 8 0	0 10 0 0 0	0 0 0	0 0 0	00000	0 5 5 3 7	0	00000		ا ا	0 0 0	۶ ا	1 4	0 0 0 0
1 1 1 1 1 1 1	(EUROPEAN TROOP.) Serjeant, Corporal under 14 years' service, Bombardier under 14 years' service, Trumpeter, Half Pay Trumpeter, Farrier under 14 years' service, Gunner under 14 years' service, Boy,	22 20 21 10 24	15 15 15 2 9 14 6	0 0 8 4 8 8	22 20 21 0 24 14	15 15 2 0 14 6	0 8	22 20 21 0 24 14	15 15 2 0 14 6	4 0 8 0 8 8 11	22 20 21 0 24 14	15 15 2 0 14 6	4 0 0 8 0 8 0 8 0	22 20 21 0 24	15 15 2 0 14 6	4 0 0 8 0 8 5 0	22 20 21 0 24 14	15 15 15 2 0 14 6	0 0 8 0 8 5
]	Subadar, { after 10 years' service,	80 0 0 32 20 16 0 16 9	0 0 0 0 0	0 0 0 0 0 0 0	129 111 101 32 20 16 0 16 16	0 8 0 0 0 0 0	0000000040	0 0 0	00000000	000000000000000000000000000000000000000	0 0 32 20	0 0 0 0 0 8 0 0	0	129 111 101 32 20 16 12 16 16	0 8 0 0 0 8 0 10	0 0 0 0 0	129 111 101 32 20 16 12 16 21	8 0 0 0 0 8 0	000000000
1	GUN LASCARS. Havildar,	9 8 5		0	0		0 0 0	10 0 7	0	0 0 0	Ö.	0	0 0	0 0	0	6 0 0	0 0		0 0
	Mistry Smith, Mistry Carpenter, Smith, Carpenter, Armourer, Fireman, Fileman,	0 12 14 0 10 0 7 7 6 0 5	00000000	00000	0 10 10 10 0 7	0 0 2 2 2 0	4 4	0 14 14 10 10 0 0 7 2	0 0 0 0	0 0 0 0 0	12 14	0 0 0 0 0 0	0 0 0 0	10 10 10	0 0 2 2 2 0	0 0 4 4 4	14 14 10 10 0 0	0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
1	Adjutant and Quarter Master's Department Head Quarters. Moonshee,	9	12	o		0000	0	0	0 0 0 0	0	0 9 5	0 5 2 0	0	30 0 0 0	0	0	0 0 0	6j i	,
1 1 1 1	Puckally, Bheasty, Store Lascar, Lascar, Sweeper, Native Farrier,	9 5 0 4 9	0	6	0	000	0000	7 0 7	0 8 0 0 0	0	4	$0 \begin{vmatrix} 3 \\ 0 \end{vmatrix}$	4 0 0	10 1 0 7 7 1 0 0 0 0	0 1 3 0 0 0	0 4 0		0 4 0 0	

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SECTION I.
Table 1 continued.

		uoie	_																
	DANKS	P	RES	ENT	r Esr	ABL	ren	MENT.			P	nor	OEE	ъ Е	TAI	llis	HMER	T.	
No.	RANKS, &c.	Beng	gal.	-	Mad	ras.		Bomb	ay.		Ben	gal.		Mac	lras	$\cdot \mid$	Bon	ıbay	7.
-	TROOP QUARTER MASTER'S DEPARTMENT (NATIVE TROOP.)																		
1 1 1	Puckally, Bheasty, Store Lascar, Lascar, Sweeper, Recruit and Pension Boy,	9 5 0 4 0	0 0 0	0	0	0 0 5	0 0 4	0	O.	0 0 0	9 5 7 0 4 0	0 0 13 0 0	0 4 0 0	0 7 0	0 13 0	10 0 4 0 0 0	0 7 7 0 0	08 13 0 0 0	0 0 4 0 0 0
	MEDICAL DEPARTMENT HEAD QUARTERS.		į					- {				İ	1				İ		
1 1 1 1	Assistant Surgeon,	395 456 145	4 3 14 5 0	0 0 0 0	863 0 456 0 0 0 0 24		0 3 0 0 0	ŏ		0 3 0 0 0 0 0	863 395 456 145 126 0 0	3 14 5 0 0	3 0 0 0 0 0	863 395 456 0 0 0 24	3 0 0 0	0 0	456 0 0 6 4	30000	3 0 0 0
	MEDICAL DEPARTMENT (EUROPEAN TROOP.)										ı								
1	Assistant Surgeon,	0 0 15 0	0	0	0	i Ni	0		4 0 0 0	0	0 0 15 0	0	0 0 0	70 0	0	0 0 0	70 0	0	0000
	MEDICAL DEPARTMENT (NATIVE TROOP.)										Ì								
1		0 0 15 0	0	ŏ	70	0	0	0	0 0 0	0 0	0 0 15 0	0	0	70 0 14	0	0 0 0	70	0 0	0
	BAZAR ESTABLISHMENT.								-	1	Ì								
	Choudry,	11 5 3 0	0 0 0	0	0	0	0	0	0	0	11 5 3 0	0	0	14 0 0 6	0	0 0 0	0	0 0 0	0
	Followers.										·								
	Choudry or Muccadum of Horsekeepers, - , , , , of Grass-cutters, - Horsekeeper or Syce Driver, - Horsekeeper or Syce, - Grass-cutter, - Driver, -	0 0 0 4 3 5	0	0 0	0 5 4	0	0	10 0 6 5		0	R	12 0 0 8	000	8 8 7 5 4 0	0	0 0 0 0	5	0 0 0 0 0	0

TABLE 2.

Proposed Establishment of the Head Quarters of a Brigade of Horse Artillery for Bengal, Madras, and Bombay, with one Scale of assimilated Pay for all Europeans, Commissioned, Warrant, Non-Commissioned and Rank and File; and Natives, according to the Pay of their respective Presidencies.

ESTABLISHMENT.	Total one of each.	Total of each.		REMARI	XS.
Officers. 1 Colonel, 1 Lieutenant Colonel, 1 Major, 1 Captain. 2 First Lieutenants, 1 Second Lieutenant,	0 0 0 0 0 0 0 0 0 0 0 0 365 4 0 0 0 0	1478 7 0 1157 0 0 929 6 4 563 0 4 730 8 0	1 Major, 5 Cantains.	Optional with the Comme	4 Troops will consist of 4 Captains, nander-in-Chief to ap- 8 First Lieutenants, 4 Second Lieutenants.
EFFECTIVE STAFF. 1 Riding Master, 1 Serjeant Major, 1 Quarter Master Serjeant, 1 Drill Serjeant, 1 School Master Serjeant, 1 Hospital Serjeant, 1 Hospital Serjeant, 1 Trumpet Major, 1 Trumpet Major, Non-Effective Staff. 1 Adjutant and Quarter Master, 1 Librarian,	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	48 15 4 33 15 4			
ADJUTANT AND QUARTED MAGTER'S TO-	Ben Total one of		Madras.	Вомнах.	
ADJUTANT AND QUARTER MASTER'S DEPARTMENT. 1 Moonshee, 1 Tindal, 2 Lassenre, 5 Sweepers, Medical Department. 1 Surgeon, 1 Assistant Surgeon, 1 Veterinary Surgeon, 1 Apothecary, 1 Steward, 2 Hallalcores, 2 Hallalcores, 1 Hospital Writer,	O O O O O O O O O O O O O O O O O O O	11 8 0 0 0 0 21 0 0 863 0 4 305 4 0 456 3 145 14 0 126 5 0	0 0 0 30 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	A CLOTHING, BENGAL. Total of cach per Mensem. Total

Table 2 continued.

BAZAR ESTABLISHMENT. 1 Chondry. 1 Mutsuddy. 3 Flagmen and Weighmen. 2 Peons, Madras—1 Bombay. FOLLOWERS. 7 Syces or Horsekeepers, 7 Grass-cutters, ALLOWANCES. To Officer Commanding the Brigade, To Shoeing, &c. 7 Horses, For providing Shoes, head and heel Ropes for 7 Horses, G For Repairs of 7 Saddles, &c., For a Mess, Head Money for 20 Europeans, Bengal, 18 , Madras and Bombay, Clothing. *Rations for 7 Europeans, Average expense of Hutting Money,	0 0 0 11 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 14 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Total per Annum Solution Solution Total per Annum Solution Soluti
Abstract.	Bengal.	MADRAS.	Вомвач.	entered according to the Form furnished by the Military Auditor General.
Officers, Effective Staff, Non-Effective Staff, Adjutant and Quarter Master's Department, Medical Department, Bazar Establishment, Followers, Allowances, Total per Mensem	5169 0 0 474 13 8 255 0 0 21 0 0 1986 10 7 25 0 0 52 8 0 633 3 4	5169 0 0 474 13 8 255 0 0 30 0 0 1738 7 7 26 0 0 64 12 0 634 7 5 8392 8 8	5169 0 0 474 13 8 255 0 0 20 0 0 1734 7 7 21 0 0 629 12 11 8381 2 2	

The Saddles, &c. at Madras are kept up as well as repaired on this Allowance, those at Bengal and Bombay are only repaired. The whole of the Saddlery, &c. in Bengal and Bombay are renewed periodically at the expense of Government, which is not the case at Madras.

The following items have not been included in any of the calculations, as the corresponding charges in Bengal, Madras, and Bombay could not be obtained.

Original cost, feeding and wear and tear of Horses.

Cost and wear and tear of Ammunition Waggons and Carts.

Cost and wear and tear of Saddlery, Horse Appointments, Arms and Accourtements.

Cost of Practice Ammunition for Ordance and for Small Arms.

Hospital Charges including Bazar Medicines.

Europe Medicines.

Barracks (Houses for Stabling in Bengal).

Annual Quilts.

SECTION I. TABLE 3.

Comparative Statement of the Cost of the Head Quarters of a Brigade of Horse Artillery according to the existing Establishments of the Head Quarters of Brigades in the three Horse Artilleries, and according to the proposed Establishment of the Head Quarters of a Brigade of Horse Artillery for the three Presidencies, with an Abstract showing the difference of expense to the State between the existing Establishments and the proposed one.

	Pre	SENT ESTABLISH	MENT.	Рвороз	SED ESTABLISHME	ENT.	
ESTABLISHMENT.	Bengal.	Madras.	Bombay.	Bengal.	Madras.	Bombay.	REMARKS.
	Total of each	Total of each	Z Total of each Rank.	o Total of each Rank.	Total of each & Rank.	Total of each Rank.	
lajor, laptain, st Lieutenants, d Lieutenant, Von-Effective drawing Foot Ab-	1 310 10 5,169 0 5,169 0 1 152 14 1 50 15 1 1 44 15 1 1 48 15 1 48 15 1 48 15 1 48 15	0 2 2,590 10 0 0 1 1,032 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 563 0 4 2 2 730 8 0 1 1 310 10 4 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 1,157 0 0 1 1 929 6 4 1 563 0 4 1 2 730 8 0 5 1 310 10 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	A Brigade of H. A. of the present Establis ment consists of Commissioned Officers follows: Bengal Madras Bomba; Colonels, 1 2 1 Lieut Colonels, 1 2 1 Majors, - 1 2 1 Captains, - 5 10 5 Ist Lieutenants, 10 20 10 2d Lieutenants, 5 10 5 Bengal Madras Bomba; 4 Troops, 6 Troops, 4 Troo; Captains, - 4 6 4 Ist Lieutenants, 8 18 8 2d Lieutenants, 8 18 8 2d Lieutenants, 4 0 4 Leaving for Head Quarters Bengal Madras Bomba; Colonels, - 1 2 1 Lieut. Colonels, 1 2 1 Majors, - 1 2 1 Captains, - 1 2 1 St Lieutenants, 2 2 2d Lieutenants, 2 2 2d Lieutenants, 1 10 Of the Madras Brigade the following a "Non-Effective" drawing Foot Artille Pay.
Non-Effective Staff. Adjutant. Quarter Master. Adjutant and Quarter Master. Librarian. Beading Master, Writing and Cyphering Master.	0 0 0 0 0 0 0 1 257 0 1 8 0 0 0 0 0	0 1 207 7	0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		$\begin{array}{c cccc} 0 & 0 & 0 & 0 \\ 1 & 247 & 0 & 0 \\ 1 & 8 & 0 & 0 \\ 0 & 0 & 0 & 0 \\ \end{array}$	1 Major, 4 Captains, 2 1st Lieutenants, 10 2d Lieutenants.

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Tuble 3 continued.

								1	ana	e 3 con	11713	uvu.							
ADJUTANT AND QUARTER MASTER'S DEPARTMENT.							{	1											A CLOTHING, BENGAL. Total of each per Mensem.
Moonshee, Tindal.	0 1 2 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0	30 0 0 30	0 0 0 0 0 0 0 0	oi	20	0 0	0 0 1 2 0 0	0 9 11 0 	8 8 0	0 0 0		0 0	0	0 0 5	0 0 0 0 20		1 Corporal,
MEDICAL DEPARTMENT.	- 1				- -	-		- -	1	-	Ti'	_			_	_ [~			
	1 1 1 1 0 0	863 0 4 395 4 0 456 3 3 145 14 0 126 5 0 0 0 0	0 2 0 0	-912 0	0 4 0 0 6 6 0 0 0 0 0 0	0	456 0 0 12 8	0 0 0 0 0	0 [0	395 456 145 126 0 0	4 3 14 5 0	4 1 0 1 3 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	45	5 4 3 0 0 0 0 0 0 0 0 0 0	0	1 1 0 0 2 2	395 4 456 3 0 0 12 6		B CLOTHING, MADRAS. Annum. 3 Serjeants, - 61 1 0 183 3 0 0 0 0 4314 13 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Hospital Writer,	0	0 0 0		24	0 0	0		0 0	0	0	0	0 1	. 2	4 0	0	0	0 0		Total per Mensem 22 12 01
BAZAR ESTABLISHMENT.		1,986 10 7		1,799	6 10	-	476	3 8	3	1,986	10	7	1,73	8 7	7	-	1,734	7	
Choudry, Mutsuddy, Flagmen and Weighmen,	1 3 0	11 0 0 5 0 0 9 0 0	0	0	0 0 0 0 0 0 0 0	0	0	0 (0 1 0 3 0 0	5 9	0	0 1		4 0 0 0 0 0 2 0	0	1 0 0 1	0		2 Serjeants, 5 1 5 10 210 1 Farrier Major, 0 0 0 3 10 6 1 Trumpet Major, 0 0 0 3 0 0 Total per Mensem 16 13 4
	- }	25 0 0		26	0 0		21	0 0	ol	25	0	o	1 2	6 0	0	-	21 (HUTTING MONEY, BENGAL Total of Cach. Total.
Followers. Special or Horsekeepers, Gross-cutters,	9	36 0 0	4	21 16	0 0	2 2 2	12 10	0 0	0 7 0 7	28 24	0 8	0 2	7	6 12 8 0	0	7 7 -		0 (3 Tindal and Lascars, - 1 0 0 3 0 0 18 Syccs and Grass-cutters, - 1 0 0 18 0 0 Total expenditure at every Relief 21 0 0
ALLOWANCES.	-	67 8 0		37	0 0	_	22	0	0	52	8	0		12	0	-	77	0 (Assuming a Relief to take place once every 0 9 4
To Officer Commanding the Brigade,	9	420 0 0 18 0 0	0	1	0 0	0	0	0	0 7	14	0	0		0 0	0	0	0	1	N. B. The particulars of the above charges for the "Proposed Establishment" will be
Ropes, For Repairs of Saddles, &c. For a Mess.	0 0 22	0 0 0 18 0 0 120 0 0 5 8 0	4	$egin{array}{c} 11 \\ 7 \\ 120 \\ 7 \\ \end{array}$	0 0	2 2 0 13	2	0	0 0 0 7 0 0 0 20	14 120	0	0	7 1	19 9 12 4 20 0 4 8	0	7 0	7 120	0	othis Section. The above Statements of Clothing are endered according to the Form furnished by the Military Auditor General.
*Rations	9	A 44 4 5 58 2 0 D 0 9 4	5!	32	12 0 4 8 0 0	0 4 0	C 16 1	3	4 7 0 0	45	3	6	7	32 14 45 3 0 0	4	7	45	3	7 A. P. 4 * Rations per diem 3 4 X 31 = 6-7-4 per 0 month of 31 days.
		664 7 9		600	15 8		573 1	4	8	633	3	4	6	34 7	5	1	629 1	2 1	1

The Saddles, &c. at Madras are kept up as well as repaired on this allowance, those at Bengal and Bombay are only repaired. The whole of the Saddlery, &c. in Bengal and Bombay are renewed periodically at the expense of Government, which is not the case at Madras.

SECTION I.

ABSTRACT OF TABLE 3.

	Равва	nt Establishment.	PROPOSED	D ESTABLISHMENT	INCREASE OR DECREASE OF EXPENSE.								
	Bengal.	Madras. Bombay.	Bengal.	Madras. Bomba		Bengal. Madras.	Bombay.	Total.					
Bazar Establishment, Followers, Allowances,	533 12 - 265 0 s 21 0 - 1986 10 25 0 - 67 8 664 7	0 408 6 4 320 14 6 6 7 7 0 245 0 6 7 1799 6 10 476 3 6 7 0 22 0 6 7 1799 6 10 476 3 6 7 1799 6 10 479 6 7 1799 6 10 479 6 7 1799 6 10 479 6 7 1799 6 10 479 6 7 1799 6 10 479 6 7 1799 6 10 479 6 7 1799 6 10	8 474 13 8 0 255 0 0 0 21 0 0 3 1986 10 7 1 0 25 0 0 6 52 8 0 8 633 3 4	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	8 Cost of Proposed ,, - 0 Increase Decrease		8 8381 2 2 3 0 1533 1 7 0 0 0 0 0	25390 14 1533 1 7073 12					

The following items have not been included in any of the calculations, as the corresponding charges in Bengal, Madras, and Bombay could not be obtained.

Original cost, feeding and wear and tear of Horses.
Original cost and wear and tear of Ordnance and Carriages.
Cost and wear and tear of Ammunition Waggons and Carts.
Cost and wear and tear of Saddlery, Horse Appointments, Arms and Accountments.
Cost of Practice Ammunition for Ordnance and for Small Arms.
Hospital charges including Bazar Medicines.
Europe Medicines.
Barracks (Houses for Stabling in Bengal.)
Annual Quilts.

TABLE 4.

Proposed Establishment of a European Troop of Horse Artillery, for Bengal, Madras, and Bombay, with one Scale of assimilated Pay for all Europeans, Commissioned, Warrant, Non-Commissioned and Rank and File; and Natives, according to the Pay of their respective Presidencies.

ESTABLISHMENT.	Total one of each.	Total of each.	REMARKS.
Officers. 1 Captain, 2 1st Lieutenants, 1 2d Lieutenant,	0 0 0 365 4 0 0 0 0	730 8 0	Optional with the Commander-in-Chief to appoint 1st or 2d Lieutenants.
Effective Staff.			
1 Troop Quarter Master, 1 Serjeant Major, 1 Quarter Muster Serjeant,	0 0 0 0		•
Non-Effective Staff.			
1 Saddler Serjeant, 1 Orderly or Pay Serjeant, 1 Drill Corporal, 1 Rough Rider, 1st Class, 1 Rough Rider, 2d Class, 1 School Master,	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7 0 0 7 0 0 10 8 0 7 0 0	
Non-Commissioned and Rank and File.			
6 Serjeants, 6 Corporals, under 14 years' service, 12 Bombardiers, under 14 years' service, 3 Trumpeters, 3 Farriers under 14 years' service, 105 Gunners under 14 years' service,	28 15 4 22 15 0 20 15 0 21 2 8 24 14 8 14 6 8	137 10 0 251 4 0 63 8 0	

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SECTION I.

			Table 4 con	unuea.				
ESTABLISHMENT.		GAT.	Мат		Bom Total one of		REMARKS.	
	Total one of each.	Total of each.	Total one of each.	Total of each.	each.	Total of each.	A CLOTHING, BENGAL. Total of Total.	
TROOP QUARTER MASTER'S DEPARTMENT:		}	}				Mensem.	
2 Puckallies Bengal, 4 Madras, 1 Bheasty Bengal, 4 Bombay,	9 0 0	5 0 0	al falloid	0 0 0	7 8 0 7 13 4	30 0 0	3 Trumpeters, 3 0 0 9 0 0 3 Farriers - 3 10 5 10 15 7	
6 Store Lascars,	7 13 4 4 0 0	8 0 (0 0 0	89 15 4		77 0 0	6 Lascars, 0 4 V	
• • • •		78 0		89 15			B CLOTHING, MADRAS. Total of each per Annum.	
ARTIFICEES.				14 0 0	000		8 Serjeants, 61 1 0 468 8 0 6 Corporals, 551473 335 7 9	
1 Maistry, 1 Mistry Smith, 1 Mistry Carpenter,	0 0 0	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		0 0 0	0 0 0	0 14 0 0 0 14 0 0 0 20 0 0	J 105 Cummon 431 91 01 4 3 (41 1) V	
2 Smiths,	0 0 0 10 0 0	20 0 0	10/2/4	20 4 8 20 4 8 20 4 8	10 0 0	20 0 0	6 Lascars, 6 0 0 36 0 0	
2 Armourers, 2 Firemen, 2 Filemen, 2 Hammermen,	7 0 0	14 0 (0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ป กเบเต		Total per Mensem	
2 Harmermen, 2 Bellows Boys,	0 0 0	0 0 0	0 2 8 7	5 1 2	7 8 6 2 8 6 0 0 0	5 0 0	C CLOTHING, BOMBAY. each per Mensem. Total.	
1 Moothy of Charact,		91 0		102 12 5		88 0 0	0 6 Corporals, - 3 10 1 43 9 0 12 Bombardiers, - 3 0 0 9 0 0 3 Trumpeters, - 3 0 0 9 0 0	
MEDICAL DEPARTMENT.				70 0 0	uol	70 0 0	3 Farners, 3 0 0 313 0 0	
l Assistant Apothecary,	0 0 0		ololo	0 0 0	0 0 0	0 0 0	Table 1	
1 La Diessei,		15 0		94 8 0		70 0 0		
Followers.							404 Horsekeepers, &c 1 6 0 403 0 0 Total expenditure at every Relief. 433 0 0	
3 Horsekeeper Choudries, 3 Grass-cutter Choudries,	8 12 0 8 12 0 6 0 0	26 4 0	8 12 0	26 4 0	10 0 0	30 0 6 210 0 0	Assuming a Relief to take place once every three years the charge per month 12 6 51 will be	
30 Horsekeeper or Syce Drivers, 169 Horsekeepers, 199 Grass-cutters,	6 0 0 4 0 0 3 8 0	676 0 0	5 4 0	887 4 0	6 0 0	1,014 0 0		
,		1.605 0 0		1.945 12 0		2,279 0 0		

Table 4 continued.

ALLOWANCES. To Officer Commanding the Troop, For Repair of Arms, &c. and Stationery, For Shoeing, &c. 199 Horses, For Shoes, Head and Heel Ropes for 199 Horses, For repair of 138 Riding Saddles, &c. For repair of 102 sets of Harness, For repair of 199 Saddles and sets of Harness, For Contingencies, Tar, Grease, Iron, Steel, Charcoal, &c. for 6 Guns and 6 Waggons, For Cavessons, Ropes, &c. For Gram-pots, &c. For petty Stores, For 1 spare Carriage and 1 Waggon, For 1 Store, 1 Forge and 1 Quarter Master's Cart, Head Money for 142 Europeans, Bengal, "", 143", Madras and Bombay, ", 427 Natives, Madras, Clothing, Rations for 137 Europeans, Averago expense of Hutting Money,	0 0 0 30 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 30 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	15 0 0 90 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	bay are only repaired. The whole of the Saidlery and Harness in Bengal and Bombay are renewed periodically at the expense of Government, which is not the case at Madras. N. B.—The above Statements of Clothing are entered according to the Form furnished by the Military Auditor General. A. P. * Rations per diem 3-4×31=6-7-4 per month of 31 days.
ABSTRACT.	BENGAL.	Madras.	Вомвач.	*
Officers, Effective Staff, Non-Effective Staff, Non-Commissioned and Rank and File, Troop Quarter Master's Department, Artificers, Medical Department, Followers, Allowances, &c.	1,604 2 8 272 15 8 58 8 0 2,214 10 0 78 0 0 91 0 0 15 0 0 1,605 0 0 2,379 12 3	1,604 2 8 272 15 8 58 8 0 2,214 10 0 89 15 4 102 12 5 94 8 0 1,945 12 0 2,677 6 5	1,604 2 8 272 15 8 58 8 0 2,214 10 0 77 0 0 88 0 0 70 0 0 2,279 0 0 2,509 11 0	
Total per Mensem	8,319 0 7	9,060 10 6	9,173 15 4	

The following items have not been included in any of the calculations, as the corresponding charges in Bengal, Madras, and Bombay could not be obtained.

Original cost, feeding and wear and tear of Horses.
Original cost and wear and tear of Ordnance and Carriages.
Cost and wear and tear of Ammunition Waggons and Carts.
Cost and wear and tear of Saddlery, Horse Appointments, Arms and Accoutrements.
Cost of Practice Ammunition for Ordnance and for Small Arms.
Hospital charges, including Bazar Medicines.
Europe Medicines.
Barracks (Houses for Stabling in Bengal.)
Annual Quilts.

SECTION I. TABLE 5.

Comparative Statement of the cost of a European Troop of Horse Artillery according to the existing Establishments of European Troops in the three Horse Artilleries, and according to the proposed uniform Establishment for the three Presidencies, with an Abstract showing the difference of expense to the State between the existing Establishments, and the proposed one.

		PRES	EN1	ESTABLISHA	ı	Tr.		Рвого	SEI	ESTABLISH	ME	ENT.	
ESTABLISHMENT.		Bengal.		Madras.	_	Bombay.	_	Bengal.		Madras.		Bombay.	REMARKS.
	No.	Total of each Rank.	No.	Total of each Rauk.	No.	Total of each Rank.	No.	Total of each Rank.	Š	Total of each Rank.	N	Total of each Rank	
Officens.				·									And the second s
Captain, - 1st Lieutenants, 2d Lieutenant,	1 2 1	563 0 4 730 8 0 310 10 4		1.095 12 0	1 2 1		2			563 0 4 730 8 0 310 10 4		1 563 0 4 2 730 8 0 1 310 10 4	Optional with the Commander-in-Chief to appoint 1st or 2d Licutenants.
EFFECTIVE STAFF.		1,604 2 8		1,658 12 4		1,604 2 8		1,604 2 8		1,604 2 8		1,604 2 8	e appoint 1st of 2d Diedeniants,
Froop Quarter Master, Serjeant Major, Quarter Master Serjeant, Staff Serjeants, Riding Master Serjeant, Rough Riders under 14 years' service,	000102	$\begin{array}{c cccc} 0 & 0 & 0 \\ 40 & 12 & 4 \end{array}$	0 0 2	0 0 0 81 8 8 0 0 0	1 0 1	50 15 10 44 15 10 0 0 0 46 7 4	1 0 0	000	1 3 0 0	191 7 0 40 12 4 40 12 4 0 0 0 0 0 0		1 191 7 0 1 40 12 4 1 40 12 4 0 0 0 0 0 0 0	
Non-Effective Staff.	_	97 9 8	Ň	272 15 8	-	$\frac{24}{167} \frac{14}{5} \frac{8}{8}$	·	$\begin{array}{c c} 0 & 0 & 0 \\ \hline 272 & 15 & 8 \end{array}$	0	0 0 0 272 15 8	(272 15 8	A CLOTHING, BENGAL. Total of each per Mensem. Total.
Saddler Serjeant, Orderly or Pay Serjeant, Orderly or Pay Serjeant, Orderly or Pay Serjeant, Orderly or Pay Serjeant, Rough Rider, 2d Class, School Master,	1 0 0 0	7 0 0 7 0 0 0 0 0 0 0 0 0 0 0	1 1 1 1 0	3 8 0 7 0 0 10 8 0 7 0 0 0 0 0	0 0 0	7 0 0 7 0 0 0 0 0 0 0 0 0 0 0	1 1 1 1 1 1	7 0 0 7 0 0 7 0 0	1 1 1	7 0 0 7 0 0 7 0 0 10 8 0 20 0 0		272 15 8 1 7 0 0 1 7 0 0 1 7 0 0 1 7 0 0 1 10 8 0 1 7 0 0 1 20 0 0	7 Serjeants, - 6 1 5 53 971 6 6 6 77157 8 10 Eombardiers, - 3 10 6 6 77157 8 10 Eombardiers, - 3 10 6 6 77157 8 10 Eombardiers, - 3 10 6 6 10 0 6 10 0 0 6 10 0 0 0 0 0 0 0
Non-Commb. and Rank and File. Serjeants,	1 I	14 0 0		28 0 0		14 0 0		58 8 0		58 8 0		59 8 0	Total per Mensem
Corporals under 14 years' service, - Bombardiers under 14 years' service, Trumpeters, - Half-Pay Trumpeters, Farriers under 14 years' service,	6 10 2 2 2 80 0	$\begin{array}{c cccc} 137 & 10 & 0 \\ 209 & 6 & 0 \\ 42 & 5 & 4 \\ 21 & 2 & 8 \\ 49 & 13 & 4 \\ 1,153 & 5 & 4 \end{array}$	0 2	137 10 0 251 4 0 42 5 4 0 0 0 74 12 0 1,211 0 0	6 10 3 0 2 80	137 10 0 209 6 0 63 8 0 6 0 6 49 13 4	12 3 0	137 10 0 251 4 0 63 8 0 0 0 0	6 12 3 0	137 10 0 251 4 0 63 8 0 0 0 0	1	6 173 12 0 6 137 10 0 2 251 4 0 3 63 8 0 0 0 0 0 3 74 12 0 5 1,513 12 0	B CLOTHING, MADRAS.
		1,787 6 8		1,890 11 4		1,794 4 7		2,214 10 0		2,214 10 0		2,214 10 0	Total per Annum

					Tabl	le 5 co	ntinued	•	<u> </u>			Total of
			1 11	1			T	П				C CLOTHING, BOMBAY. each per Mensem. Total.
GUN LASCARS.					10 8	0 0				0 0		9 Serjeants, 5 1 5 45 12 6 Corporals, 4 10 6 27 15 10 Bombardiers, 3 10 1 35 4
Havildars,	1 2	9 8 0		1	0 0	0 0	o',	0 0	0 0	0 0	0 0 0	3 Trumpeters 1 3 0 0 1 9 0
Naigues, Privates,	24	138 0 0	0 0 0	24		0 0	0		0 0	0 (80 Gunners, 3 0 0 240 0
TROOP QUARTER MASTER'S DEPART-		163 8 0				-						1 Havildar, 0 0 0 1 0 24 Privates, 0 8 0 12 0
Puckallies,	2	18 0 0 5 0 0	4 42 15 4	0		0 2	18		42 15	4 (0 0 0	
Bheasties, Store Lascars,	0 0	0 0 0	0 -0 0 0	0	0 0 28 0	0 6	47 0	0 0	47 0	0	0 0 0 0 30 0 0 5 47 0 0 0 0 0 0	BENGAL, each. Total
Lascars,	2	8 01 0	0 0 0	ŏ		0 2	8	0 0				
Sweepers, Native Farrier,	1	9 0 0	0 0 0	1				_ _	1		1	2 Naigues, 5 0 0 10 0 24 Privates, 1 8 0 36 0 1 Native Doctor 0 0 0 7 0
<i>a</i>		40 0 0	42 15 4	l	79 0	0	78	0 0	89 15	4	77 0 0	3 Naigues, 1 8 0 36 0 24 Privates, 0 0 0 7 0 1 Native Doctor, 0 0 0 1 8 11 Artifleers, 1 0 0 11 0 346 Followers, Horsekeepers
ARTIFICERS.	0	0 0 0	1 14 0 0	. 0	0 0	0 0	0	0 0	14 0			346 Followers, Horsekeepers
Laistry, - Mistry Smith, -	1	12 0 0	0 0 0	1	14 0	0 1		V V		0	1 14 0 0 1 14 0 0 2 20 0 0 2 20 0 0	
distry Carpenter,	1 0	14 0 0	0 0 0 0 2 20 4 8	1	14 0 20 0	$\begin{bmatrix} 0 & 1 \\ 0 & 0 \end{bmatrix}$	اه	0 0	20 4	8	14 0 0	Relief, 416 8
Smiths,	2	0 0 0 20 0 0	2 20 4 8 2 20 4 8 2 20 4 8 0 0 0 0	2	20 0	0 2	20	0 0	2 20 4 2 20 4 2 20 4	8 2	20 0 0	minor consequent 2 years the
Carpenters,	0 2	0 0 0	2 20 4 8 0 0 0 0			0 0	14	വിവി	0 0	0	n 0 0 0	charge per month will be[11 3
Firemen,	2	14 0 0 14 0 0 12 0 0	0 0 0	0	0 0	0 2	14 12	0 0	0 0 0 15 3	00000000	0 0 0 2 15 0 0 2 5 0 0	
Filemen,	0	12 0 0	0 0 0 0 2 15 3 6 2 5 1 2	2	15 0 5 0	0 2 0 0	121	0 0 3	2 5 1	2	5 0 0	MADRAS. each. Total
Bellows Boys, Moochy or Chuckler,	i		2 15 3 6 2 5 1 2 1 7 9 9	ő	ŏ ŏ	0 1	5	이이	1 7 9	9 (0 0 0	1 Second Dresser, 0 0 0 3 0 4 Puckullies, 2 0 0 8 0
Moochy of Chuckler,			102 12 5		88 0	<u></u>	91	0 0	102 12	5	88 0 0	Martal annuality to at
MEDICAL DEPARTMENT.		91 0 0	102 12 5			_		-		-		every Relief 11 0
MEDICAL DEPARTMENT.			1 395 4 0	إ	395 4	0 0	0	0 0	اه اه	0	0.00	Assuming a Relief to take place once every
Assistant Surgeon,	0	0 0 0			70 0	0 0	o	امام	1 70 0	0	70 0 0	S years the charge
Assistant Apothecary, Native Doctor,	1	15 0 0	0 0 0			0 1	15 01	0 0	0 0 0 24 5	0	0 0 0	
2d Dresser,	0	0 0 0		U		_		-	J!	<u> </u>		TOTAL OF
		15 0 0	489 12 0		465 4	0	15	0 0	94 8	0	70 0 0	4 Bheasties 2 0 0 8 0
Followers.					10			4 0	3 26 4	o	3 30 0 0	1 Havilder, 0 0 0 4 0
Horsekeeper Choudries (or Muccadums)	0	0 0 0	3 26 4 0	4	40 0	0 3	- 1	7			- 	
Grass-cutter Choudries (or Mucca- dums,)	0	0 0 0	3 26 4 0	4	40 0	0 3	26	4 0	26 4	0	30 0 0	Total expenditure at every Relief 62 0
Horsekeeper or Syce Drivers, .	0	ol ol ol	o! o!o!o!	0	0 0 810 0 845 0	0 30	180 676	4 0 3 0 0 3 0 0 16 8 0 19	887 4	016	210 0 0 1,014 0 0 9 195 0 0	Assuming a Relief to
Horsekeepers, -	169 169	676 0 0 11 591 8 0 16	4 656 0 0	135 169	845 0	0 199	696	8 0 19	796 0	0 19	995 0 0	take place once every
Grass-cutters,	3		0 0 0		0 0	이 이	υį	י וטוט	0 0	0 0	0 0 0	per Month will be
		1.282 8 0	1,296 8 0		1.735 0	0	1,605	0 0	1,945 12	0	2,279 0 0	

SECTION I.

Tuble 5 continued.								
ESTABLISHMENT.	PRESENT ESTABLIS	HMBNT.	PROPOSED ESTABLISHMENT.					
	Bengal, Madras, O Total of each S Total of each Rank. S Rank.	Bombay, Potal of nach Rank,	Bengal. Madras Bombay. Total of each Hank. Hank.	REMARKS.				
for Shoes, Hend and Heel Ropes, [15] For repairs of Saddles, &c. For repairs of Harness, — Sets, For Contingencies, Tar, Grease, Iron, Steel, Charceal, &c. for 6 Guns and 6 Waggons, For Cavessons, Ropes, &c. for Gram-pots, &c. For petty Stores, ————————————————————————————————————	0 30 0 0 0 30 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 30 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	* Rations per diem 3 4 × 31 = 6-7-4 p month-of 31 days.				
· · · · · · · · · · · · · · · · · · ·	The same of the sa		STRACT.					
Officers, Hective Staff, Non-Effective Staff, Non-Commissed, and Rank and File, In Lasenrs, Fromp Quarter Master's Department, Artificers, Medical Pepartment, Collewers, Allowances, &c. Total per Mensem.	77 9 9 27215 8 167 0 8 7787 6 8 189 111 4 1794 4 72 163 8 0 0 0 178 8 0 0 0 0 0 0 0 178 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Bombay,	1195 4 9 1151 1 7 946 1 8 3292 8				
This instead, feeding and wear so Unional cost, feeding and wear so Unional cost, and wear and tenrio Cost and wear and tenrio	we not been included in any of the cal- of Ordennee and Carringes, of Ordennee and Carringes, of the Wangions and Carts, y, Horsa Appointments, Arms and Accou Ordennee and for Small Arms.	ulations, as the corres	sponding charges in Bengal, Madras and Rombay could no The cost of the Horses, &c. has been unlitted in this State each Fresidency bong as follows: Lean Madra 100 Miffer an alightly in numbers, that the insertion of the compaction Statement, but merely have given a son ment relatively with those of Burses and Bonday, in a greater number of Burses than almost given as the	ment. The number of Horses in the Troops of Bombay. 160 160 Defricational and base materially effected the Undergone of expense to the Madran Establish.				

SECTION I.

TABLE 6.

Proposed Establishment of a Native Troop of Horse Artillery of Bengal, Madras, and Bombay, with one Scale of assimilated Pay for all Europeans, Commissioned, Warrant, and Non-Commissioned; and Natives according to the Pay of their respective Presidencies.

Total one of each.	Total of each.	Total one of each.	Total of	Total one of 1	Total of	REMARKS.
			each.	each.	each.	
1 1 1						•
0 0 0 365 4 0 0 0 0	563 0 4 730 8 0 310 10 4 1,604 2 8	0 0 0 365 4 0 0 0 0		0 0 0	563 0 4 730 8 0 340 10 4 1,604 2 8	Optional with the Commander-in-Chief to appoint First or Second Lieutenants.
0 0 0	191 7 0 49 11 5 22 0 0	0 0 0 0	191 7 0 49 11 5 22 0 0	0 0 0 0 0 0	49 11 5	Including compensation for Rations.
	263 2 5		263 2 5		263 2 5	
0 0 0 0 0 0 0 0 0	7 0 0 5 0 0 7 0 0 5 4 0 3 8 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5 0 0 7 0 0 5 4 0 3 8 0	0 0 0 0 0 0 0 0 0	5 0 0 7 0 0 5 4 0 3 8 0	
						•
0 0 0 0 0 0 20 0 0 16 0 0 16 0 0 9 0 0	80 0 0 32 0 0 120 0 0 96 0 0 150 0 0 48 0 0 27 0 0 945 0 0	0 0 0 0 0 0 20 0 0 16 0 0 12 8 0 16 0 0 16 10 4	32 0 0 120 0 0 96 0 0 150 0 0 48 0 0 49 15 0	0 0 0 20 0 0 16 0 0 12 8 0 16 0 0 21 0 0	32 0 0 0 120 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 191 7 0 0 0 0 0 0 22 0 0 0 0 0 0 5 4 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 191 7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 191 7 0 0 0 0 191 7 0 0 0 0 0 0 191 7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 191 7 0 0 0 0 0 191 7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 191 7 0 0 0 0 191 7 0 0 0 0 191 7 0 0 0 0 191 7 0 0 0 0 0 49 11 5 0 0 0 49 11 5 0 0 0 0 22 0 0 0 0 0 22 0 0 0 0 0 0 22 0 0 0 0 0 0 0 22 0

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SECTION I.

Table 6 continued.

	Bene	AL.	MADRAS.	Вомнач.	
ESTABLISHMENT.	Total one of each.	Total of each.	Total one of each.	Total one of Total of each.	REMARKS.
TROOP QUARTER MASTER'S DEPARTMENT.					
1 Puckally Bengal, 3 Madras, 1 Bheasty Bengal, 3 Bombay, 6 Store Lascars, 1 Sweeper, 8 Recruit and Pension Boys,	0 0 0 0 0 0 7 13 4 0 0 0 0 0	9 0 0 5 0 0 47 0 0 4 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
ARTIFICERS.				-	A & F. CLOTHING. BENGAL AND BOMBAY. 1 Serjeant. 1 Subatar 0 0 0 5 1 5 5 0 6 0 0 6 0 0 6 0 0
1 Maistry, 1 Mistry Smith. 1 Mistry Carpenter, 2 Smiths, 2 Carpenters, 2 Armourers, 2 Firemen, 2 Filemen, 2 Hammermen, 2 Hellows Boys, 1 Moochy or Chuckler,	0 0 0 0 0 0 0 0 0 10 0 0 7 0 0 7 0 0 6 0 0 0 0 0	0 0 0 0 12 0 0 0 0 0 0 0 0 0 0 14 0 0 0 12 0 0 0 12 0 0 0 0 12 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7 8 0 15 0 0	1 Subadar, - 0 0 0 6 0 0 1 Jemadar, - 0 0 0 0 6 0 0 7 Havildars, - 0 0 0 0 4 0 0 7 Havildars, - 2 8 0 10 10 0 2 10 0 0 2 10 0 0 2 10 0 0 2 10 0 0 2 10 0 0 2 10 0 0 0
MEDICAL DEPARTMENT.			102 12 5	85 0 0	6 Natigues - 30, d0 180 0 18
1 Assistant Apothecary, 1 Native Doctor, 1 Veterinary Pupil,	0 0 0 0 0 0 0 0 0	15 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 70 0 0 0 0 0 0 0 0 0 0 0 0 0	3 Puckalites, 18 0 0 6 Laccare, 18 0 0 6 Laccare, 18 0 0 7 18 0 0
Followers.		15 0 0	84 0 0	70 0 0	BENGAL. each. Total.
3 Horsekecper Choudries, 3 Grass-cutter Choudries, 30 Horsekeeper or Syce Drivers, 171 Horsekeepers, 201 Grass-cutters,	8 12 0 6 12 0 6 0 0 4 0 0 3 8 0	26 4 0 26 4 0 190 0 0 694 0 0 703 8 0	8 12 0 26 4 0 7 0 0 210 0 0 5 4 0 897 12 0	1 0 1,000 0 0	Subadar,

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		1 1 1 1	1 1 1 1	
ALLOWANCES. To Officer Commanding the Troop, For repair of Arms, &c. and Stationery, For Shoeing, &c. 201 Horses, For Shoeing, &c. 201 Horses, For repair of 140 Riding Saddles, &c. For repair of 102 sets of Harness, For contingencies, Tar, Greuse, Iron, Steel, Charcoal, &c. for 6 Guns and 6 Waggons, For Cavessons, Ropes, &c. For Gram-pots, &c. For I spare Carringe and 1 Waggon, For 1 Store, 1 Forge and 1 Quarter Master's Cart, Head Money for 6 Europeans Bengal, 7 Madras and Bombay, Head Money for 138 Natives Bengal and Bombay, and 577 Madras, Clothing, Average expense of Hutting Money,	2 0 0 402 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 30 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 Jennidar,
 ABSTRACT. Officers, Effective Staff, Non-Effective Staff, Native Commd., Non-Commd. and Rank and File, Troop Quarter Master's Department, Artificers, Medical Department, Followers, Allowances, Total per Mensem	Bengal. 1,604 2 8 263 2 5 27 12 0 1,498 0 0 65 0 0 91 0 0 15 0 0 1,620 0 0 1,287 4 3 6,471 5 4	MADRAS. 1,604 2 8 263 27 12 0 0 1,541 15 0 0 1,964 4 0 1,523 11 5 5	BOMBAY. 1,604 2 8 263 2 5 27 12 0 1,555 0 0 69 8 0 88 0 0 70 0 0 2,301 0 0 1,419 13 10 7,398 6 11	

The following items have not been included in any of the calculations, as the corresponding charges in Bengal, Madras, and Bombay could not be obtained.

Original cost, feeding and wear and tear of Horses.

Original cost and wear and tear of Ordnance and Carriages.

Cost and wear and tear of Ammunition Waggons and Carts.

Cost and wear and tear of Saddlery, Horse Appointments, Arms and Accoutrements.

Cost of Practice Ammunition for Ordnance and for small Arms.

Hospital charges including Bazar Medicines.

Barracks (Houses for Stabling in Bengal.)

Annual Quilts.

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SECTION I.

comparative Statement of the Cost of a Native Troop of Horse Artillery, according to the existing Establishments in the Troops of the three Horse Artilleries, and according to the proposed assimilated Establishment of Ranks for the Native Troops of the three Presidencies, with the Rates of Pay as now existing for the several Ranks in each Presidency, also an Abstract showing the difference of expense to the State between the existing Establishments and the proposed one.

	PRES	SENT ESTABLISH	MENT.	Рворе	DSED ESTABLISHM	MENT.	
ESTABLISHMENT.	Bengal.	Madras.	Bombay.	Bengal.	Madras.	Bombay.	REMARKS.
	Total of each Rank.	J Total of each Rank.	Total of each Rank.	o Total of each Rank.	C Total of each Rank,	Total of each Rank.	
OFFICERS. Captain,	1 563 0 4 2 730 8 0 1 310 10 4 1,604 2 8	2 730 8 0 1 310 10 4	0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 563 0 4 2 730 8 0 1 310 10 4 1,604 2 8			Optional with the Commander-in-Chief to appoint 1st or 2d Lieutenants.
Effective Staff. Troop Quarter Master, Staff Serjeants, Farrier Serjeant, Serjeants, Troop Havildar Major, Drill Havildar, Drill Naigue, Rough Riders under 16 years' service,	0 0 0 0 0 1 1 *52 5 2 1 4 8 5 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 22 0 0 1 30 8 0 1 23 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0	1 *49 11 5 0 0 0 0 0 0 0 1 22 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	•
Non Effective Staff, Saddler Serjeant, Staff Havildar, Pay or Orderly Havildar, Drill Naigue, Rough Rider, 1st Class, Rough Rider, 2d Class,	0 0 0 0 0 1 2 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 1 1 13 10 0 0 0 0 1 5 4 0 1 3 8 0	0 0 0 0 0 0 0 0 0 0 0 0	$\begin{array}{c cccc} 0 & 0 & 0 & 0 & 0 \\ 1 & 5 & 0 & 0 \\ 1 & 7 & 0 & 0 \\ 1 & 5 & 4 & 0 \end{array}$	0 0 0 0 0 1 5 0 0 1 7 0 0 1 5 4 0 1 3 8 0		

Native Commissioned, Non-Commissioned and Rank and File. Subadars, Jemadars, Havildars, Naigues, Bombardiers, Trumpeters, Furriers under 16 years' service, Troopers under 16 years' service,	1 1 6 6 0 2 2 2 90	32 0 0 120 0 0 96 0 0 32 0 0	0 6 0 0 2 0 84	96 0 0 0 32 0 49 15	0 0 0 0 0 0 0	0 0 0 0	0 0	1	120 96 150 48 27	000000	0 0 0 0 1 0 0 0 10	1 6 6 2 3 3	101 32 120 96 159 49 49 49 15 945 541 15	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6 6 12 3 3 105	120	0 0 0 0 0 0 0	Under 17 years' scryice.
Havildar, Naigues, Privates, TROOP QUARTER MASTER'S DE-	1 2 24	16 0 138 0	0 0 0	0 0	0 0 0 0 0 0		0 0			oi	0 0 0	0 0 0	0 0	0	0 0 0	0	0 0	
PARTMENT. Puckallies, Bheasties, Store Lascars, Lascars, Sweepers, Recruit and Pension Boys, Artificers.	1 1 0 0 1 0	9 0 0 5 0 0 0 0 0 4 0 0 - 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 12 10 0 0	6 0 0 0 0 0 8 0 0 0 0 0	0 0 0	0 0 0 0 0	0 1 0 1 0 6 0 0 1 1 0 0	47	0 0	0 0 0	30 6 0 8	0 0 47 0 0 0 28 0		0 3 6 0 0	0 22 47 0 0 0	0 0	1 Staff Serjeant, -
Maistry, Mistry Smith, Mistry Carpenter, Smiths, Carpenters, Armourers, Firemen, Filemen, Hammermen, Bellows Boys, Moochy or Chuckler,	0 1 1 0 2 0 2 2 2 2 2 1	0 0 0 0 12 0 0 0 0 0 0 0 0 14 0 0 0 14 0 0 0 14 0 0 0 0	0 0 2 2 2 0 0	20 4 20 4 20 4 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0	1 1 0 2 0 2 2 2 2 0	12 14 0 20 0 14 14 12 0 5	000000000000000000000000000000000000000	000000	1 0 0 2 2 2 0 0 2 2 1	14 0 0 0 0 0 4 20 4 0 0 0 0 0 15 3 5 1 7 9 102 12	0 0 8 8 8 0 0 6 2 9	0 1 1 2 2 0 0 0 2 2 0	20 20 0 0 0 15 5	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2 Naigues, 24 Privates, Lascars, - 1 0 0 2 0 0 0 0 0 0 0

SECTION I.

Table 7 continued.

	PRE	SENT ESTABLISH	MENT.	Рвоге	DSED ESTABLISH	MENT.	
ESTABLISHMENT.	Bengal.	Madras.	Bombay.	Bengal.	Madras.	Bombay.	REMARKS.
	Z Total of each	Total of each	Total of each	Total of each	Total of each Rank.	Total of each Rank.	
Medical Department. Assistant Surgeon, Assistant Apolhecery, Native Doctor, Veterinary Pupil, Loty, Followers. Horsekeeper Chondries, Grass enter Chondries, Brivers, Horsekeeper or Syre Drivers, Horsekeeper or Syres. Grass cutters, Allowences. Allowences. To Officer Commanding the Troop, For repair of Arms, &c. and Stationery, For Shoeing, &c. Horses, For Shoeing, &c. Horses, For Contingencies, Tar, Greese, Iron, Steel, Charcoal, &c. for 6 Guns and 6 Waggons, For Catessons, Ropes, &c. For Gram pots, &c. For Gram pots, &c. For repair of Sepoys Pauls, For Lascar Pauls, For Lascar Pauls, Head Money for Europeans, Head Money for Europeans, Head Money for Natives, Folithing, Average expense of Hutting Money,	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1	1	### Company Total of Rech. 1 Subadar,

	PRESENT	ESTABLIS	HMENT.	Propose	D ESTABLE	SUMENT.	Increase or Decrease of Expense.						
Officers, Effective Staff, Non-Effective Staff, Non-Effective Staff, Native Commissioned, Non-Commissioned and Rank and File, sioned and Rank and File, Gun Lascurs, Troop Quarter Master's Department, Artificers, Medical Department, Followers, Allowances,	Bengal.	Madras.	Bombay. 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Bengat. 1604 2 8 263 2 5 27 12 0 1495 0 0 0 0 0 055 0 0 91; 0 0	Madras. 1604 2 8 263 2 5 27 12 0 1541 15 0 0 0 0 107 3 6 102 12 5 91 0 0 1964 4 0	Bombay. 160 1 2 8 263 2 5 27 12 0 1555 0 0 0 0 0 0 0 0 0 0 0 0 8 0 0 85 0 0 0	Cost of present Establishment, - Cost of proposed Establishment, Increase per Mensem * The increase per mensem i the addition of one Troop	Bengal. 5623 1 2 6471 5 4 848 4 2	Madras. 6362 11 6 7225 15 5 923 3 11	Bombay. 0 0 0 0 7398 6 11 7398 6 11 7398 6 11 7398 6 11	21095 11 8 * 9169 15 0 his includes there being		
Total per Mensem	5623 1 2 6	3302 11 6	0 0 0	6471 5 4	7225 15 5	7398 6 11							

The following items have not been included in any of the calculations, as the corresponding charges in Bengal, Madras, and Bombay could not be obtained.

Original cost, feeding and wear and tear of Horses.

Original cost and wear and tear of Ordnance and Carriages.

Cost and wear and tear of Ammunition Waggons and Carts.

Cost and wear and tear of Saddlery, Horse Appointments, Arms and Accountments.

Cost of practice Ammunition for Ordnance and for Small Arms.

Hospital charges including Bazar Medicines.

Europe Medicines.

Barracks (Houses for Stabling in Bengal.)

Annual Quilts.

OBSERVATIONS

ON SECTIONS FROM II. TO V. AND ON THE TABLES CONNECTED WITH THE EUROPEAN AND NATIVE FOOT ARTILLERY.

SECTION II. Containing 5 Tables.

EUROPEAN FOOT ARTILLERY.

- 43. Table 1, gives a Statement of the pay and allowances of every rank in the European Foot Artilleries of Bengal, Madras, and Bombay, with the pay, &c. shown in the same manner as in Section I., Table 1, Horse Artillery.
- 41. Table 2, gives the proposed Establishment of the Head Quarters of a European Battalion for Bengal, Madras, and Bombay, with one scale of assimilated pay for all European Commissioned, Non-Commissioned, and Rank and File, and for Natives the pay of their respective Presidencies.
- 45. Table 3, gives a Comparative Statement of the cost of the existing Establishments of the Head Quarters of a European Battalion in the three Foot Artilleries, and the proposed uniform Establishment of the three Presidencies; with an Abstract showing the difference of expense between the existing and proposed Establishments.

ABSTRACT.

		}	ESTABLISHMENT.							PROPOSED ESTABLISHMENT.						
		Pres	ent.		Prop	osed.		Inc	rcas	е.	Deci	ease	•			
Bengal, Madras, Bombay,		5,496 5,629 5,731	14	4	5,596		0 0 8	0 0 0	0 0	0 0	33	0 13 14	0 4 5			
**************************************	Total'	16,857	3	5	16,727	7	8	0	0	0	129	11	9			
Mean cost of one H ters per Mensem		5,619	1	1 4 1	5,575	13	23	0	<u>-</u>	0	43	3	11			

The Head Quarters of a European Battalion at Madras and Bombay has a larger Medical Establishment than in Bengal which principally occasions the difference of expense.

- 46. Table 4, gives the proposed Establishment of a European Company of Foot Artillery for Bengal, Madras, and Bombay, with one scale of assimilated pay for all Europeans, Commissioned, Non-Commissioned, and Rank and File, and for Natives the pay of their respective Presidencies.
- 47. Table 5, gives a Comparative Statement of the cost of the existing Establishments of a European Company in the three Foot Artilleries, and the proposed uniform Establishment for the three Presidencies, with an Abstract showing the difference of expense between the existing and proposed Establishments.

ABSTRACT.

	Езтави	JEHMENT,		POSED SHMENT.	
•	Present.	Proposed.	Increase.	Decrease.	
Bengal Madras, Bombay, Total	3,805 2 5 3,685 1 4 4,281 3 4 11,771 7 1	3,624 3 4 3,651 6 2 3,667 0 9 10,942 10 3	0 0 0 0 0 0 0 0	180 15 1 33 11 2 614 2 7 828 12 10	
Mean cost of 1 Com- pany per Mensem,	3,923 13 0	3,647 8 9	0 0 0	276 4 33	

Section III. Containing 5 Tables.

GOLUNDAUZ ARTILLERY.

- 43. Table 1, shows the pay and allowances of every rank in the Golundauz Artillerics of Bengal, Madras, and Bombay, with the pay of the several ranks according to the present rates of pay at each Presidency. In the first column every grade in the three Golundauz Artilleries is entered, those recommended to be left out in the new Establishment are distinguished by the columns for pay under "Proposed Establishment" being left blank, whilst those to be retained in the new Establishment have those columns filled in.
- '49. Table 2, gives the proposed Establishment of the Head Quarters of a Golundauz Battalion for Bengal, Madras, and Bombay, with one scale of assimilated pay for all Europeans, Commissioned and Non-Commissioned: and for Natives, the pay of their respective Presidencies.
- 50. Table 3, gives a Comparative Statement of the cost of the existing Establishments of the Head Quarters of a Golundauz Battalion, in the Artilleries of Bengal, Madras, and Bombay, and the proposed Establishment for the three Presidencies; with an Abstract showing the difference of expense between the existing and proposed Establishments.

ABSTRACT.

	ESTABLE	ISHMENT.	Риоро	POSED ESTABLISHMENT.							
	Present.	Proposed.	Increase.	Decrease.	Total Decrease.						
Bengal, Madras, Bombay,	5,435 9 9 5,769 9 9 5,652 4 5	5,357 2 10 5,713 9 9 5,673 13 5	$\begin{array}{cccc} 0 & 0 & 0 \\ 0 & 0 & 0 \\ 21 & 9 & 0 \end{array}$	7S 6 11 56 0 0 0 0 0	0 0 0 0 0 0 0 0						
Total	16,857 7 11	16,744 10 0	21 9 0	134 6 11	112 13 11						
Mean cost of one Head Quarter per Mensem,		5,581 8 8	000	000	37 9 113						

. The Head Quarters of a Golundauze Battalion at Madras and Bombay have a larger Medical Establishment than in Bengal, which principally occasions the difference of expense.

- 51. Table 4, gives the proposed Establishment of a Company of Golundauz Artillery for Bengal, Madras, and Bombay, according to the existing scale of pay in each of the Presidencies.
- 52. Table 5, gives a Comparative Statement of the cost of the existing Establishments of a Golundauz Company in the Bengal, Madras, and Bombay Artilleries, and the proposed assimilated Establishment of Ranks for the Golundauz Companies in the three Presidencies; with the existing rates of pay in the several Presidencies, and an Abstract showing the difference of expense between the existing and proposed Establishments.

ABSTRACT.

	Establi	SHMENT.	PROPOSED ESTABLISHME				
	Present.	Proposed.	Increase.	Decrease.			
Bengal, Madras, Bombay,	2,445 13 10 2,611 4 0 2,439 0 6	2.397 6 8 2.406 14 6 2,405 7 8	0 0 0 0 0 0 0 0 0 0	48 7 2 204 5 6 33 8 10			
Total	7,496 2 4	7,209 12 10	0 0 0	286 5 6			
Mean cost of one Company per Mensem.	2.498 11 - 53	2.403 4 3	0 0 0	95 7 2			

53. The following General Statement of the existing Establishments of the Battalions and Companies of Golundauz in Bengal, Madras, and Bombay, will show the great dissimilarity of organization in the three Artilleries, with reference to this body.

	PR	ESENT ESTABI	ISHMENT.	
Ranks.	Bengal 18 Companies.	Madras 6 Companies.	Bombay 12 Companies.	Total.
Subadars,	18 36 108 108 36 1,584	6 12 48 48 12 552	12 24 72 72 72 24 840	36 72 228 228 72 2,976
Puckallies,	0 18 0 0	6 0 30 40}	0 24 12	6 42 82

Thus, the existing strength of a Golundauz Company in Bengal is 88 Privates; in Madras, 92; and in Bombay, 70—but in consequence of the increased demand for out-station Companies, measures have been taken to re-form the Madras 6 Companies into 8 of 66 Privates, reducing the number of guns from 8 to 6 per Company. This arrangement, which it is supposed will eventually be sanctioned, assimilates the strength in rank and file of a European and a Native Company, and will effect a reduction of 24 Privates in the aggregate strength of the Battalion; but it may reasonably be doubted whether even 8 Companies will be found sufficient, as six of them are constantly on command, three of which, (if we include the Saugor one) are beyond seas, or beyond the real Madras frontier, and the men, being separated from their families, will require to be relieved every three years. To afford that relief, and to keep up discipline by having each Company in rotation for full three years at Head Quarters the Madras Golundauz should be re-organized into two Battalions of six Companies each.

The proposed Establishment given in Table 4 of this Section referred to in para. 51 will be found to be in close conformity with that of a European Company, to which it should be assimilated as the duties of the European and Native Companies are similar.

ESTABLISHMENT OF RECRUIT AND PENSION BOYS.

54. One result of the Proceedings of the Secret Committee assembled in 1834 by order of Lord William Bentinck, &c. &c., Governor General of India, having been the continuance of the Recruit and Pension Boy Establishment in the Madras Artillery, without any alteration in the other Presidencies, that arrangement has been left undisturbed.

ALLOWANCES.

55. An allowance for Schools is at present granted to each Head Quarters of Golundauz at Madras and Bombay; to the former Rupees 21 and the latter Rupees 27-2-8: no such allowance being given in Bengal; but on the other hand, the Bengal Establishment is larger than that of either Madras or Bombay, and therefore the present arrangement has been left undisturbed.

The following are the Establishments:

GUN LASCARS OF EUROPEAN AND GOLUNDAUZ ARTILLERY.

56. The following General Statement gives the total strength in all ranks of the Gun Lascar Establishments of Bengal, Madras, and Bombay, with the different modes of distribution; showing the great dissimilarity of organization existing, particularly in this respect, in the three Artilleries.

1	Rani	ts.			Bengal.	Madras.	Bombay.	Total.
Subadars,		-			12	10	6	28
Jemadars, Havildars,	- -	٠.	٠.	-	12 61	10 44	$\frac{6}{32}$	28 137
Naigues, '- Privates,		٠.	٠.	- [$74 \\ 1,056$	0 600	0 516	74 2,172
Lascar Boys, Bheasties,		-	•	٠ إ	0	80 20	24 12	164 32
Difeasties,	•	-	Tr.	tal	1,215	764		2,575

How DISTRIBUTED.

		BEN	GAL.			MADRAS	•		Вом	BAY.		a l
RANKS.	9 Troops of European Horse Artillery.	4 Troops of Na- tive Horse Ar- tillery.	24 Companies of European Foot Artillery.	Total	16 Companies of European Foot Artillery.	6 Companies of Golundauz,	Total.	4 Troops of European Horse Artillery.	8 Companies of European Foot Artillery.	12 Companies of Golundauz.	Total.	Total strength of Kanks,
Subadars,	0	0	12	12	8	2	10	0	4	2	6	28
Jemadars,	0	0	12	12	8	2	10	0	4	2	6	28
Havildars,	9	4	48	61	32	12	44	4	16	12	32	137
Naigues,	18	8	48	74	0	0	0	0	0	0	0	74
Privates	216	96	744	1,056	480	120	600	96	240	180	516	2,172
Lascar Boys,	0	0	0	0	64	16	80	0	12	12	24	104
Bheasties,	0	0	0	0	16	4	20	0	8	4	13	5 2
												
Total	243	108	864	1,215	608	156	764	100	284	212	596	2,575

57. By the above it will be seen that in Bengal, Gun Lascars are attached to Horse Artillery and European Foot Artillery, but not to Golundauz; in Madras, to European Foot Artillery and Golundauz, but not to Horse Artillery; and in Bombay, to Horse Artillery, and European and Native Foot Artillery; so that in one Presidency (Bengal) Golundauz have no Gun Lascars, and in another (Madras) Horse Artillery have none. In order to establish a greater degree of uniformity, it is proposed to reduce the whole number and to distribute the remainder more equally, giving to each Sub-division 2 Gun Lascars, or 12 per Battery including a Havildar or Naigue; besides Native Officers in due proportion as at present. The following Table will show the existing proportion of Native Officers to Havildars, and of Havildars to Gun Lascars in the three Presidencies.

	BENGAL.	MADRAS.	Вомвау.	
Ranks.	13 Troops and 24 Companies of Foot Artillery.	22 Companies of Foot Artillery.	4 Troops and 20 Companies of Foot Artillery.	
	PROPORTION O	P TO HAVILDARS RA	NE AND FILE.	
Subadars,	To Have, 1 to 57.			
Jemadare,	To Have. 1 to 5-	To Havs. 1 to 4:	Fo Havs. I to 5%	
Havildars, -	-To R&F to 18			

58. The following Comparative Statement exhibits the monthly difference of expense (in pay only) between the present and proposed Establishments for 14 Batteries, (Rs. 7,232-10-8) which number of Batteries has been taken with the view of drawing a comparison between the two Establishments

tablishments, and of showing that the existing proportion of Native Officers to the Subordinate ranks in the three Presidencies, has been retained as closely as possible.

	Cost of PRES	ENT EST	ABLISHMENT FO	в 14 В	ATTERIES.	Cost of proposed Establishment for 14 Batteries.						
RANKS,	Bengal.		Madras.] ;	Bombay.		Bengal.	1	Madras.	I	lombay.	
	o Total of ea	ch ox	Total of each Rank.	No.	Total of each Rank.	No.	Total of each Rank.	No.	Total of each Rank.	No.	Total of each Rank.	
Subadars, Jemadars, Havildars, Naigues, Privates, - Lascar Boys, Bhensties,	7 413 0 7 157 8 28 266 0 28 224 0 434 2495 8 0 0 0	0 28 0 28 0 420 0 420 0 14	0 0 0 2940 0 0 196 0 0	28 0 420 21	127 8 0 294 0 0 0 0 0 2940 0 0 73 8 0	2 8 6	76 0 0 48 0 0 885 8 0 0 0 0	8 6 154 14	78 10 8 50 8 0 1078 0 0 49 0 0	2 8 6 154 14	84 0 0 52 8 0 1078 0 0 49 0 0	
Total	504 3556 0	0 532	3816 13 4	497	3720 0 0	172	1172 8 0	186	1340 2 8	186	1347 8 0	

ABSTRACT.

									Ben	gal.		Mad	lras.	Во	mbay	٠.	Tota	ıl,	
Monthly cost of present Establishment, Monthly cost of proposed Establishment,	<u>.</u>	•	-	-	•		•		3556 1172	8	0	3816 1340	13 2	4 372 8 134	0 0 8	0	11,092 3860		
						То	tal	of	Mon	thly	, D	ecre	ase c	f Exp	ens	e	7232	10	8

HORSE AND BULLOCK EATTERIES.

SECTION IV. Containing 5 Tables.

- 59. Table 1, shows the pay and allowances of every rank, &c. in a Horse Field Battery, also in a Bullock Battery of Bengal, Madras, and Bombay, with the pay, &c. shown in the same manner as in Section I. Table 1, Horse Artillery.
- 60. Table 2, A gives a proposed Establishment for a Horse Field Battery for Bengal, Madras, and Bombay, with pay, &c. as before described for Europeans and Natives.
- 61. Table 2, B gives a proposed Establishment for a Bullock Battery for Bengal, Madras, and Bombay, with pay, &c. as before described for Europeans and Natives.
- 62. Table 3, A gives a Comparative Statement of the cost of the existing Establishments of a Horse Field Battery in the three Artilleries, and the proposed uniform Establishment for the three Presidencies; with an Abstract showing the difference of expense between the existing and proposed Establishments.

ABSTRACT.

	ESTABLE	SHMENT.	PROPOSED ESTABLISHMENT.									
	Present.	Proposed.	Increase.	Decrease,	Total Increase.							
Bengal,	1,940 0 8 1,914 5 10 1,538 13 3		$\begin{array}{cccc} 0 & 0 & 0 \\ 521 & 5 & 6 \\ 796 & 1 & 2 \end{array}$	9 0 3 0 0 0 0 0 0	0 0 0							
Total	. 5,393 3 9	6,701 10 2	1,317 6 8	9 0 3	1,308 G							
Mean cost of 1 Battery p Mensem,	er - 1,797 11 11	2,233 14 0%	0 0 0	0 0 0	436 2 1							

The chief cause of the expense of a Horse Battery in the proposed Establishment being greater in Madras and Bombay than in Bengal is, that the pay of followers is higher in the two former Presidencies, as shown in para. 17.

63. Table 3, B gives a Comparative Statement of the cost of the existing Establishments of a Bullock Battery in the three Artilleries, and the proposed uniform Establishment for the three Presidencies; with an Abstract showing the difference of expense between the existing and proposed Establishments.

ABSTRACT.

				Esn	ABL	15 HM EN	Paoro	ED Es	STABLISH MENT					
			P	resent		Pre	pos	ed.	Incre	ase.	D	ecre	166.	
Bengal,		-	403	0	5	547	12	5	144 1	2 0	0	0	0	
Madras, -		-	588	5	9	704	13	1	116.	7 4	0	0	0	
Bombay,		-	0	0	0	704	11	1	704 1	1 1	0	0	0	
ar residency manuscript residency (Time)	Total		991	6	2	1957	4	7	-965 1	1 5	0	0	0	
Mean cost o per Mense				11	1	652	6	105	156 1	3 93	0	0	0	

The greater cost of a Bullock Battery in the Madras Presidency, arises from the higher rate of pay given to the Drivers, &c.

^{*} The addition of the cost of one complete Bullock Battery is included in this sum, in explanation of which it is necessary to mention that there is no regular Establishment for a Bullock Battery in the Bombay Artillery.

HORSED FIELD BATTERIES.

- 64. The proposed Horse Field Batteries each consists of five light 9 pounder Guns, and one light 24 pounder Howitzer, (weighing ten cwt.) each Battery having the same number of Carriages as a Troop. The Establishment for Bengal Horse Field Batteries was (in 1845) fixed by the late Governor General at 120 horses with an addition of ten extra horses on Service, or on the frontier; but these were afterwards reduced excepting in the Batteries in the Punjab; all the others being again fixed at the previous insufficient complement of 98 horses, and 56 bullocks, with an addition of three horses (for the Native Officers) to Batteries manned by Golundauz.
- 65. Late experience has shown the great superiority of Horse over Bullock draught, and the absolute inefficiency of the latter for Field Artillery; but as a certain number of Bullock Batteries are still maintained (as it would appear from a mistaken notion of economy) it is necessary to say a few words upon the subject. Although Foot Artillery Batteries are not required to possess the same celerity as Horse Artillery, still, to be efficient they must have sufficient power of movement to admit of change of position on the march or in the Field, from the flanks or centre of the Divisions to which they are attached, so as to cover all advances of the Infantry; for which a degree of speed is required that can never be attained even on a smooth parade with Bullocks in the best condition and fresh from their sheds, much less after a long march with jaded cattle on rough ground. It is notorious that under ordinary circumstances Bullocks cannot keep up with Infantry on the line of march, and that in difficulties they must invariably either cause delay, or call for the constant aid of the Infantry to bring them on; whilst on a retreat the guns drawn by them must inevitably be sacrificed if the enemy are active. Such Artillery is rather a burden than an assistance to a force; the only animal suitable to Field Artillery is the Horse, and until every Battery which it is necessary to maintain, be horsed, the Field Artillery must remain inefficient. Another circumstance must not be overlooked in a comparative view of horsed, and Bullock Batteries; viz.; that even were the Bullocks capable of the rapid movement required of them, when proceeding with all speed to any distant part of the line, either threatened, or in actual need of support, the Gunners, being dismounted, could not keep up with them; and even the slightly accelerated pace at which they do occasionally proceed, blows the men before they reach the spot, thus rendering the gun partially inefficient; whilst it is notorious that the hard work undergone by the men with Bullock Batteries brings them prematurely on the Invalid or Pension Establishment, and the cost of Soldiers thus transferred at a comparatively early period of life, if taken into account, would prove how costly a Bullock Battery is in comparison to a Horsed Battery.
- 66. In calculating the number of Horses required for a Battery, it is necessary to consider what they are expected to do. It is indispensable that a Battery should possess such facilities of movement as never to cause delay on the line of march to the other Arms, and also to admit of occasional rapid movement in changes of position. It is also necessary that on these last occasions, the Gunners should be all conveyed on the Carriages, so as to admit of their coming into action fresh and untired. Now as each Gun Carriage complete weighs on an average thirty-four and half cwt., and with the addition of Gunners and Ammunition, nearly forty cwt. it is evident that the English Service complement of eight Horses per team is indispensable, and moreover that these should be strong, serviceable cattle. It is also necessary that a Forge Cart should always be up with the Battery as in the Horse Artillery; and for this, four more horses are requisite. An improvement is also called for in the description of Horses allotted to these Batteries, which should be very superior to those allowed at present; it is not necessary that they should be of great height, but they ought to be compact, strong animals. Fourteen hands and one inch might be fixed as a minimum height, but a maximum standard should also be established, to prevent the inconvenience, of having extremes of sizes in the same team. Arab and Persian Horses would always be preferable for this work; but the smaller compact sturdy Horses from the Studs of the several Presidencies might also be allotted to this branch, which should on no account be made a receptacle for every inefficient Horse rejected by the other Arms.

67. PROPOSED ASSIMILATED ESTABLISHMENT OF A HORSE FIELD BATTERY.

Men. 1 Staff Serjeant, 1 European Farrier and Saddler, 1 Native Farrier, 3 Havildars, 3 Naigues, 60 Syce Drivers, 1 Bheasty.	Ordnance Carriages. Draught Horses. 6 Guns 8 horses each = 48 6 Waggons 6 , , = 36 1 Spare Carriage, - 6 1 Forge Cart, - 4 Total horses in draught, 94 Single Riders, 8*
Followers. Syces or Horsekeepers,	Single Iditers,

Horses as reckoned in the Field and in Cantonment.

- 1st. In the Field.—Horses in Draught 94-Single Riders 8-Spare 1 the number in draught 24—Total 126.
- 2d. In Cantonment.—Deduct from the number in the Field the Horses of Spare Carriage and Forge Cart.—Horses in draught 84—Single Riders 8—Spare 4 the number in draught 22— Total 114.

SADDLERY AND HARNESS AS RECKONED IN THE FIELD AND IN CANTONMENT.

- 1st. In the Field.—8 Riding Saddles, 1 to each single rider.
- 118 Sets of Harness, one to each horse in draught and spare, including half this number of off saddles.
- 2d. In Cantonment.—8 Riding Saddles, 1 to each single rider.
 106 Sets of Harness, one to each horse in draught and spare, including half this number of off saddles.

Carriages drawn in the Field by Bullocks furnished by the Commissariat.

1 Spare Waggon, - 1 Store Cart, -	-		-	-	7
1 Quarter Master's Cart,	-	•	-	٠.	7
				Total.	. 21

Horsekeepers.—One to each horse in the Field or marching, 60 Syce Drivers included.
In Cantonment.—One to each Non-Commissioned Officer's, Farrier's, Trumpeter's, spare and off-horse, and one to every two of the remainder, including 60 Syce Drivers.
Grass-cutters.—One to every horse.
For Batteries attached to Native Companies three additional Horses would be requisite for the

Native Officers.

68. PROPOSED ESTABLISHMENT OF A BULLOCK BATTERY OR KARKHANA.

Ordnance.	${\it Draught Bullocks.}$
6 Guns @ 10 Bullocks each =	60
6 Waggons @ 8 ,, , =	48
1 Spare Carriage,	6
1 Forge Cart,	8
1 Store Cart	8
1 Artificer's Cart,	- 8
1 Quarter Master's Cart,	6
Total Bullocks in dra	aught, 144

BULLOCKS AS RECKONED IN THE FIELD AND IN CANTONMENT.

In the Field.—Bullocks in draught 144—Add spare \(\frac{1}{2} \) the number in draught 28—Total 172. In Cantonment.—Deduct from the number in the Field the Bullocks of Spare Carriage, Forge, Store, Artificer's and Quarter Master's Carts.—Bullocks in draught 108—Add spare \(\) the number in draught 22—Total 130.

Drivers—One to each pair of Bullocks.—In the Field 79—In Cantonment 60.

Sirdars or Choudries—One to each Division.—Sirdar Choudry or Darogah one to each Karkhana.

¹ Man in charge of Waggons.
3 Men, being in charge of each Division of Waggons.
4 Aids—A, B, C, and D.
5 Total

COMPARATIVE STATEMENTS.

SECTION V. Containing four Tables.

- 69. The following Tables (1, 2, and 3) have been drawn up with the view of showing the great dissimilarity existing in the different ranks, and number of each rank in the several Brigades of Horse Artillery, in the Battalions of Europeans and Golundauz Artillery, in the European and Native Troops, and in the European and Golundauz Companies of the Artilleries of the three Presidencies; and Table 4 with the view of showing at one glance the cost and organisation of the three Artilleries.
- 70. Table 1, gives a Comparative Return in one view, of one Head Quarters of a Horse Brigade, one Head Quarters of an European Battalion of Foot Artillery, and one Head Quarters of a Golundauz Battalion of Artillery, in Bengal, Madras, and Bombay; showing the several ranks, and the number and designation of each rank in the existing Establishments of the several Presidencies compared with those of the proposed Establishments.
- 71. Table 2, gives a Comparative Return in one view, of one European Troop, one Native Troop, one European Company, and one Golundauz Company of Bengal, Madras, and Bombay, showing the several ranks, and the number and designation of each rank, in the existing Establishments of the several Presidencies compared with those of the proposed Establishments.
- 72. Table 3, gives a Comparative Return in one view, of one Horse Field Battery, and one Bullock Battery of Bengal, Madras, and Bombay, showing the several ranks, and the number and designation of each rank, in the existing Establishments of the several Presidencies compared with those of the proposed Establishments.
- 73. Table 4, gives a Comparative General Return showing in Abstract the cost of the present compared with the proposed Establishment under the following heads:

HORSE ARTILLERY.

1 Head Quarters of a Brigade of Horse Artillery complete—1 European Troop complete—1 Native Troop complete.

FOOT ARTILLERY.

1 Head Quarters of a European Battalion complete—1 European Company complete—1 Head Quarters of a Golundauz Battalion complete—1 Golundauz Company complete.

FOOT ARTILLERY BATTERIES.

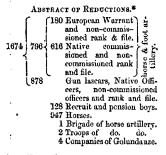
- 1 Horse Battery complete—1 Bullock Battery complete—also, A Statement of the distribution of Officers.—The number of Brigades and Battalions.—The number of European and Native Troops and Companies.—The number of each description of Batteries.—The number of pieces of Ordnance with their Artilleries, according to the present Establishment, with the proposed one.
- 74. In explanation of Table 4 it will be necessary to refer to the original relative proportions, fixed for Artillery Batteries in India by the Honorable the Court of Directors in the years 1796 and 1824, viz., 15—10—6; and also to bear in mind the unequal reduction of the Madras Artillery made in 1831 by the Madras Government contrary to the principle of the Supreme Government, as is shown by the different application of the same order to the Bengal and Bombay Artilleries. It must be recollected that the Madras Artillery has, in addition to the duty common to the other Presidencies of repressing internal revolt, others peculiarly its own; viz., the protection of the whole Coast of the Peninsula, (the only part vulnerable to a European foe,) and the furnishing of the transmarine garrisons of India; which latter calls especially require to be carefully provided for.

In order therefore to place the Madras Artillery upon an equal footing with the Artilleries of the other Presidencies, the proposed Establishment has been fixed (in Table 4) at 40 Troops and Companies or 240 pieces of Light Field Ordnance thus:

TOTAL PROPOSED ESTABLISHMENT OF THE MADRAS ARTILLERY.

8 Troops of Horse Artillery of 6 Guns each,		-	48
16 Light Field Batteries horsed of 6 Guns each,	-		96
8 Light Field Batteries in Bullock draught of 6 Guns each,		-	48
8 Reserve Companies capable of manning,	-	-	48
Total 40 Troops and Companies. Total of pieces equipped and in 1	Resc	rve,	240

and this Establishment can be completed by restoring to Madras all that was struck off in 1831, (as



shown in margin,)* and forming it into 2 Troops, and one Battalion of 6 Companies and 6 Horse Batteries, with a proper complement of Officers; thus returning to the original proportions of 15——10——6, as fixed in 1796 and confirmed in 1824 for Bengal, Madras, and Bombay. Allowing the above allotment of ordnance for Madras, and proportionately for the two other Presidencies, the Establishment for all India will consist of 750 pieces of Ordnance, as nearly as possible 3.4 pieces per 1000 men, which is the basis of the calculations made by the Bengal Military Board for the Bengal army: and if these pieces

be allotted to the several Presidencies in the proportions of 12——8——5,—the Artilleries of Bengal and Madras will be fixed exactly in the 1796 and 1824 proportions; giving to Bombay a slight advantage beyond what these standards allowed.

No. of Batteries in	ı	No. of Guns and Howitzers in
Horse Artillery Batteries, Light Field Batteries horsed, Light Field Batteries with Bullocks, Reserve Companies, Total	24 16 10 50 12 8 5 25	Horse Artillery Pieces, 144 70 150 1

75. Taking the allotment of Ordnance for the Army in India in the Bengal Military Board's proportion of 3\frac{3}{4} per 1000, of which 2\frac{1}{3} will be fully equipped; and calculating the numerical strength of the 26 Regiments regular Cavalry (European and Native)

(when placed on a war Establishment,) at about 20,000 Cavalry and 180,000 Infantry—Total—about 200,000 sabres and bayonets—(the Cavalry at 750 sabres and the Infantry at 960 bayonets per Regiment)—then, the number of Guns required (at 3\frac{3}{4} per 1000) will be 750, of which 2\frac{1}{3} per 1000 or 466 (say 450) pieces will be fully equipped and the remainder 284 (say 300) in reserve.

76. Giving to the Madras Artillery the above Establishment of 40 Troops and Companies or 240 Guns, the Bengal and Bombay Establishments according to the 1796 proportions, viz.: 15——6 would be as follows:

	Hergal.	Madras,	Bombay.	Total.
Troops and Companies,	60	4)	25	125
	360	240	150	750

77. It may be urged that the Bengal Army on the war Establishment, consists of 109,661, Regular Troops, and 41,644 Irregulars, and that the total strength of that army being thus 151,305, sabres and bayonets, the proportion of Artillery falls below what has been taken as the standard. But these Irregular Troops are to be viewed more in the light of an armed police force than in that of a properly constituted Army; at the same time however being officered from the Regular Army, they must in reality detract from the real efficiency of that body which is, after all, the main stay in the hour of trial, and therefore, instead of swelling the main body of fighting men, they occasion a drain upon its vitality by weakening the real source of strength in a Native Army, in withdrawing so many efficient Officers from Corps already greatly under officered. But taking them, for the sake of argument, as a fighting body of men, and not as a police, these Irregular Corps have 57 guns attached to them, equivalent to $9\frac{1}{2}$ Batteries, which ought, by a parity of reasoning, to be looked upon as an actual addition to the strength of the Bengal Artillery, whereby the preponderance of Bengal in ordnance over the sister Presidencies is considerably augmented.

78. To facilitate reference, the following table (drawn up according to the original relative proportions, fixed for Artillery Batteries in India by the Honorable Court of Directors in the year 1796, viz., 15—10—6) is given to show the mode of apportioning the different descriptions of Batteries to each Presidency; for example, if 24 be the number of Horse Batteries for Bengal, 16 would be the proper proportion for Madras, and 10 for Bombay, making a Total of 50 Horse Batteries with 300 Guns, and so on for a smaller number of Pieces.

Bengal,	*60	55	51	48	4 5	42	39	36	33	30	27	*24	21	18	*15	12	9
Madras,	*40	37	34	32	30	28	26	24	22	2 0	18	*16	14	12	*10	8	6
Bombay,	*25	22	2 0	19	18	17	16	14	13	12	11	*10	8	7	*6	5	4
Troops and Companies,	125	114	105	99	93	87	81	74	68	62	56	50	43	37	31	25	19
Guns for India, -	750	684	63 0	594	558	522	486	444	408	372	336	300	258	222	186	150	114

79. Calculating the Establishment of Officers on the admirable principle laid down in the Honorable Court's despatch (No. 22 of July, 1844,) of 4 Officers per Battery of 6 Guns, and 3 Officers per Reserve Company, and by adding 150 Officers (the number absent last year on Staff employ, furlough to Europe, and on leave in India East of the Cape) the whole Artillery of India will have (including Colonels) 651 Officers; 99 above the present complement: allowing on an average, (absentees included,) 5 Officers per battery; or for the 125 batteries 620; and these—distributed into grades in the proportion fixed for the Cavalry, viz., one Lieutenant Colonel, one Major six Captains, and 12 Subalterns,—will form the Artillery Establishment as follows:

		Bengal.	Madras.	Bombay.	Total.
	31 Colonels, ~	15	10	6	31
	31 Lieut. Colonels, -	15	10	6	31
	31 Majors,	-1 15	10	6	31
	186 Captains,	90	60	36	186
	372 Subalterns, -	- 180	120	72	372
otal	651 Total	315	210	126	651

80. The Artilleries to be divided into Troops and Companies European and Native as follows:

Bengal, -	European Troops.	Native Troops.	Total Troops,	European Comps.	Native Comps.	Comps.	Tetal Troops and Comps.
Madras, Bombay, -	- 4 3	4 2	12 8 5	28 20 12	20 12 8	48 32 20	60 40 25
Tota	1 15	10	25	60	40	100	125

The number of Brigade and Battalion commands to be as follows:

				Brigades.	Battalions.	Total.
Bengal, Madras, - Bombay,			- , -	3 2 1	12 8 5	15 10 6
	•	,	Total	6	25	31

The number and description of the different Batteries with the number and Calibre of Ordnance for each Presidency, to be as follows:

	No	or B	ATTERLY	s.	No. o	p Guns	AND H	OWRS.
	Bengal.	Madras.	Bombay.	Total.	Bengal.	Madras.	Bombay.	Total.
Horse Artillery Batteries, Light Field Batteries horsed,	12 24	8 16	5 10	25 5 0	72 144	48 96	30 60	150 300
Light Field Batteries with Bullocks, Reserve Companies,	12 12	8 8	5 5	25 25	72 72	48 48	3 0 3 0	150 150
Total	60	40	25	125	360	240	150	750

- 81. General Sir Henry Fane, &c. &c. Commander-in-Chiefin India, in paras. 1 and 2 of his Minute, dated 15th January, 1836, wrote thus on the subject of the Madras Artillery Equipments.
- 1. "The letter from the Military Secretary of the Madras Government to the Secretary of the "Government in India, Military Department, dated 24th November, 1835, shows a subject, which, "from what I have learnt, appears to have been very long under discussion, without much approximation having been made towards a settlement of the question debated, and without grounds have ing presented themselves, on which to have such an arrangement, as may lead to a final and desirable result." "The subject to which the letter quoted immediately relates, is the equipment of "Field Batteries, horse and foot, in the Madras Presidency."
- 82. During four years (from 1842 to 1846,) the Brigadier Commandant of the Madras Artillery declined to recommend an equipment for the Madras Artillery, on the ground, that one uniform system of equipment was about to be promulgated by the Bengal Government, for the guidance of the whole of the Indian Artillery.
- 83. In 1847 the Madras Military Board urged the Madras Government to move that of Bengal to settle the important question of equipment which had been so long in abeyance; and in 1849 a letter was received from the Government of India directing the report on the allotment of Ordnance, &c., fixed in 1848 for the Bengal Artillery by the Bengal Military Board, to be transmitted to the Madras Government, and by them communicated to His Excellency the Commander-in-Chief and to the Military Board at Madras, in answer to the reference made to the Supreme Government in 1847, respecting the Madras Artillery Equipment.

- 84. In the instructions received by the Madras Government the following will be found: "The "proportions of Ordnance equipments for Bengal being now settled, these proportions would form a "good precedent for the Madras proportions, and the General Orders laying down the proportions "of waggons, ammunition, and other important points of Ordnance equipments, are forwarded for the "information of the Madras Government, with a view to assist in a final settlement of the question." So that after the lapse of upwards of 14 years (See Para. 1, General Fane's Minute of 1836, above quoted,) the Bengal proportions of Ordnance equipments were sent for the purpose of "forming a good precedent for the Madras proportions."
- 85. The Report of the Madras Permanent Artillery Select Committee in their Proceedings, dated 27th June, 1849, Meeting 155, Article 521, will show how totally inapplicable these instructions were as a guide for the Artillery of Madras and Bombay.
- 86. It is remarkable that the Honorable Court of Directors when alluding to the past should so long ago as 1834 (vide despatch to the Government of Bengal, No. 18, 11th July, 1834, para. 23,) have accurately predicted precisely what has happened in the present instance, viz.: "Each Government "recommends its own fancied superiority in Ordnance improvements, and advocates the suggestions of its own Artillery Officers, little or no attention being paid to what may be already in useful operation at the sister Presidencies; and comparisons which might be beneficial and lead to uniformity, "are seldom made."
- 87. As an illustration of the present system it will be sufficient to advert to two points in the instructions lately sent to the Madras Artillery. Shafts were ordered by the Bengal Government to be discontinued in the Artillery of India, and Poles to be generally adopted. That the Bengal Artillery should condemn the shaft is not to be wondered at, for according to their Horse Artillery system, with a rider on each horse, it would be impossible to use them, but this is in no way applicable to the Madras or to the Bombay Horse Artillery. Shafts have been very extensively introduced in the Bombay Horse Artillery, and are considered superior to the pole, both by them and by the Royal Artillery; (for my own part I have not the slightest doubt of the superiority of shafts over the pole,) but in consequence of the Bengal system preventing their being used, the Bengal Government have decided that the Madras and Bombay Artilleries should be deprived of that which would be to them as great a benefit as to the Royal Artillery, who use shafts. Again—the small store box of the Bengal Carriage has been ordered to be removed, and to be placed between the limber boxes; with the long Bengal pattern limber axle, (which corresponds in length with the Bengal gun axle) the small Store box can be so placed, but it cannot on any other carriage in the world.
- 88. General Sir Henry Fane, Commander-in-Chief in India, in his Minute of the 15th January, 1836, observes in Para. 6, "Perfect similarity should be carried through every branch of the "service, and in none more carefully, than in the Field Artillery and ordnance generally, whether for "field or siege; and in the stores and equipments for the same," and in Para. 14 of the same Minute he observes, "That a Reform in the Ordnance Department, with a view to useful uniformity "in all its branches in each of the Presidencies, and with the object of reducing their means to a "well considered end, will produce a very considerable eventual saving to the Honorable Company, "I have no doubt whatever."
- 89. Since that date, dissimilarity between the Indian Artilleries has been increasing, in consequence of all attempts to assimilate the three Artilleries being relinquished at the very moment when the greatest efforts were required.
- 90. There can be no real difficulty in carrying out His Excellency General Sir Charles Napier's wish of assimilating the IndianArtilleries; there can be nothing to prevent an unprejudiced Committee of Artillery Officers of the three Presidencies, assembled under His Excellency's direction, from mak-

ing one sweep of all real dissimilarities, and establishing one uniform system. With respect to the pattern of Gun Carriage, the essential point of assimilation is, that all Ammunition and Store boxes be so constructed as to carry the same description and quantity of Ordnance Ammunition and Stores; so that supposing all existing patterns of Gun Carriages now in use throughout India to be temporarily retained until worn out, or until the new pattern of carriage be fixed upon," and supposing them all to differ in axles, naves, trails, pintle loops, &c. &c., this can in no way affect the grand object of assimilation in its true sense, provided only they be assimilated in this respect, and I think no one will deny that the three Indian Artilleries, might within a month of the order for assimilation, take the Field together, similarly organized in this essential point, with the same equipments. In Madras we have at this moment, at one Station, three different patterns of Carriages: the boxes as originally constructed held different allotments of ammunition, but their inside fittings having been altered, all now carry the same quantity; and for all service purposes, these Ordnance Carriages may be considered similar. With respect to the different Artillery Equipments, no one conversant with the subject will gainsay the fact, that any one Presidency might to-morrow abolish all its present equipments and adopt those of a sister Presidency as a whole, and be just as efficient, barring Presidency prejudices, as before the change.

91. As to the system of Horse Artillery organization, what says the Special Board of 1836?

"The several systems of organization as existing at the three Presidencies, have necessarily un"dergone minute discussion of their respective details; and the result is, that whatever may be the
"mode adopted for carrying the Artillerymen, whether on the off-horses as in Bengal, or on sepa"rate riding horses as at Madras and Bombay, the aggregate number of men and horses requisite
for a Troop must be fixed by the number of carriages to be drawn by horses, and the number of
men to be mounted; and that whether a Troop be organized upon the one system, or the other,
the number of men and horses will be alike." Again in another part of the same report. "The
majority of the Board are of opinion that the Detachment system (or that, where the Artillerymen for working the Guns are mounted on Horses, distinct from those used for the draught of the
"Carriages,) is the most efficient."

92. The system of Drill, is a point which the Special Board could decide in a week; if the adoption of the complete Madras Codes of Drill be still objected to, let the Committee set to work and compile one of their own from the British Artillery, Cavalry and Infantry Books; general assimilation for all service purposes can be carried out in a very short period, but when it is effected the real difficulty, (which is to prevent each Artillery from returning to its own peculiar system under the fancied notion of improvement,) will still remain to be overcome. To check this effectually, stringent orders will be required, and in my humble opinion, a Central Artillery Committee will be found absolutely necessary to prevent deviations, after the uniform system shall have been once properly established. Those Officers of the three Artilleries appointed to superintend the assimilation, might continue as a Committee on the Artillery of India, to prevent partial alterations being introduced, before the same shall have been laid before the Central Artillery Committee. The working of this proposed plan would be very simple :-Let all Artillery subjects be submitted in the first instance, as they now are, to the Permanent Artillery Select Committees in Bengal, Madras, and Bombay, and their Proceedings submitted periodically (say quarterly, to be despatched on the 1st April, July, October and January,) to the Central Artillery Committee, who would be located near the Head Quarters of the Army of India. This Committee might submit all alterations to His Excellency the Commander-in-Chief in India, by direct communication, and their recommendation when sanctioned by His Excellency, might be promulgated to the three Artilleries, in the same way that the Madras Artillery are in the habit of publishing their Proceedings for the guidance of their own Officers. After this system had been in operation for about a twelvemonth, it would be for His Excellency to determine the expediency, or otherwise, of constituting a Permanent Central Artillery Committee acting under the immediate orders of His Excellency the Commander-in-Chief.

93. I cannot I think make a more appropriate conclusion to this statement than by quoting from the following Despatches of the Honorable Court of Directors.

First Extract published in Jamisson's (Bombay) Code of 1844, Page 491, viz.: "We would ob"serve that measures should be taken for a mutual communication of information by the seve"ral Artillery Select Committees to each other, so that the results of all experiments made by them
"may be known to the Officers of Artillery at the three Presidencies." Second Extract from the
Court's Despatch to the Governor of Bengal, No. 18, 11th July, 1834, Para. 24. "We desire that
"you will obtain every necessary information and detail from the other Presidencies, to enable you
"to establish one uniform system which without advocating or upholding any local one, should
"have reference only to the Establishment of a clear and well digested Code, for the regulation of
"all the Ordnance of India."

A. F. OAKES, Captain,

Madras Horse Brigade,

Director Artillery Depót of Instruction.

SAINT THOMAS' MOUNT, 24th December, 1849.

SECTION II.

TABLE 1.

Table showing the Pay and Allowances of every Rank in the European Foot Artilleries of Bengal, Madras, and Bombay, with the Ray of the several ranks according to the several rates of pay at each Presidency. In the first column every grade in the three European Foot Artilleries is entered; the Europeans and Natives of all ranks which are recommended to be left out in the New Establishment are distinguished by the columns for Pay under proposed Establishment being left blank; those to be retained in the New Establishment are distinguished by having the same columns filled in, the Europeans according to the new proposed Scale of assimilated Pay, the Natives according to the pay of their respective Presidencies.

	DANVO 6.	F	'A B	8EM	r Est	AB	LIS	HMBX	Ŧ.		E	RO	POS	ed E	BTA:	BLI	SHMB.	NY.	
No.	RANKS, &c.	Bengal. Madras. Bombay.			Ben	gal		Ma	lras		Bon	abay	7.						
-	Officers.																		
1 1 1	Colonel, Lieutenant Colonel, Major, Captain, 1st Lieutenant, 2d Lieutenant,	1295 1032 789 433 265 213	4 3 10 12	0000	433 265	4 3 10 12	0000	1295 1032 789 433 265 213	3 10 12	0000	789 433 265	3 10 12	0000	265	4 3 10 12	0000	1295 1032 789 433 265 213	3 10 12	0000
1	Eppective Staff Head Quarters.																		
1 1	Serjeant Major, Quarter Master Serjeant, Drill Serjeant, Hospital Serjeant, School Master Serjeant, Urill Corporal, Bugle Major,	48 42 49 36 46 28 23	7 7 7 7 15	4	42 40	7 7 0 7 15	0 44 0	42 40 26 26 28	7775	4 5	40 31 46 28	7 7 7 15	4 0	42 40 31 46 28		4 0	42 40 31 46 28	7 7 7 7 15	10 10 4 4 4 0 8
	Effective Staff (Company.)				-			99			32	3	4	32	2	4	32	3	4
1	Staff Serjeant,	32	3	4	33	19	5	32	8	4	32	3	7	34	۱	7	20	ľ	7
9 5 1	NON-EFFECTIVE STAFF HEAD QUARTERS.																		
	Adjutant and Quarter Master, Librarian, Hospital Serjeant, European Butcher, Camp Colorman, Pay Havildar for Gun Lascars,	257 8 0 20	0	000	10	000000	000000	237 8 0 0 2 4	000000000000000000000000000000000000000	00000	237 8 0 0 0	lΛ	00000	237 8 0 0 0	00000	00000	237 8 0 0 0	00000	0000
-	Non-Effective Staff (Company.)																		
	1 Pay or Orderly Serjeant,	7	G	0	3	8	0	7	0	0	7	0	0	7	0	0	7	0	0
	Nos-Commissioned and Rank and File. 1 Serjeant, 1 Corporal, under 14 years' service, 1 Bonatardier, under 14 years' service, 1 Bugler, 1 Haif Pay Bugler, 2 Gunner, under 14 years' service, 1 Boy,	19	. 1	0	19	15 15 2	6.	21 19 15 0	15 2 0 12	0 8 0	21 19 16 9 13	15 15 2	4 0 8 4 6	19	7 15 15 2 1 12 0	8	19 18		8
	Gun Lascare. 1 Steadar, after 10 years' service, 2 moder 6 m 1 temadar, 1 Havinar, Neigne, 1 Private, vider 16 years' service,	59 0 0 22 9 8	0	0		0 6 6 13	0 0 4	0 42 31 24 17 10 0	0 8 8 8 8	0000000	0 0 22	0	0000000	0 42 31 24 17 9 8		00000480	0 42 31 24 17 10 8 7	0 0 8 8 8 8 8 12 0	0000000

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SECTION II.
Table 1 continued.

No.	RANKS, &c.	P	RESE	т Евт	ABLIE	UMENT.		Propos	ED ESTABLI	EHMENT.
4	man and	Beng	gal,	Mad	ras.	Bombay,		Bengal.	Madras.	Bombay.
	ARTIFICERS.									
1 1 1 1 1 1 1 1 1 1	Armourer, Fireman,	0 12 14 0 10 0 7	000000000000000000000000000000000000000	0 10 10 10 0	2 4 2 4 0 0 0 0	14 0 14 0 10 0 10 0 0 0	0000	0 0 0 0 12 0 0 0 14 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 10 2 4 10 2 4 10 0 0 0 0 0 0	14 0 0 14 0 0 10 0 0 10 0 0 0 0 0
ĺ	Bellows Boy, Chuckler,	6 0 0	0 0	2	9 9 8 7 9 9	2 8	0 0 0	6 0 0 0 0 0	2 8 7	7 6 0 2 8 0 0 0 0
	Adjutant and Quarter Master's Department.									
1		0 9 5 1 0	0 0 0 0 0 0 0 0 0 0	0 0 0	00000000	15 0 0 0 0 0 4 0 2 8	0	0 0 0 0 0 0 9 8 0 5 12 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	15 0 0 0 0 0
	Staff Serjeant's Establishment.									
1 1	Puckally, Bheasty, Lascar, Sweeper, Lascar Boy,	0	0 0 0 0 0	7 0 0	11 10 0 0 0 0 0 0	7 8 7 0 4 0	0	9 0 0 0 0 0 0 0 0 4 0 0 0 0	0 0 0 0 0 0 0 0 0	41 0i 0
,	MEDICAL DEPARTMENT.	500	ء اما		. ا					
	Assistant Surgeon, Apothecary, Steward, 2d Apothecary, Assistant Apothecary, 2d Dresser, Toty, Hallalcore, Hospital Writer,	0 126 0	0 0	0 0 126 70 24 7	12 0 0 0 0 0 5 0	145 14 126 5 0 0 70 0 0 0 0 0 6 0	0 2 1	33 10 0 0 95 12 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	733 10 0 0 295 12 0 145 14 0 126 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
١,	BAZAB ESTABLISHMENT.									
	Mutsuddy,	5 3 0	0 0 0 0 0 0	0	0 0 0 0 0 0	0 0		11 0 0 5 0 0 3 0 0 0 0 0	14 0 0 0 0 0 0 0 0 6 0 0	16 0 0 0 0 0 0 0 0 5 0 0

SECTION II.

TABLE 2.

Proposed Establishment of the Head Quarters of a European Battalion for Bengal, Madras, and Bombay, with one Scale of assimilated Pay for all Europeans, Commissioned,
Non-Commissioned and Rank and File; and Natives, according to the Pay of their respective Presidencies.

ESTABLISHMENT.	Total one of cach.		REMARKS.	
OFFICERS. 1 Colonel, 1 Lieutenant Colonel, 1 Major, EFFECTIVE STAFF.	0 0 0 1032 4	0 0 0 -		
1 Serjeant Major, 1 Quarter Master Serjeant, 1 Drill Serjeant, 1 School Master Serjeant, 1 Hospital Serjeant, 1 Drill Corporal, 2 Bugle Majors,	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	- 0 0 4 4 4 0 4 0		
Non-Effective Staff. 1 Adjutant and Quarter Master, 1 Librarian,	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	O O O O MADRAS,	Вомвах.	
Adjutant and Quarter Master's Department.	Total one of Total of each.			
1 Moonshee, 1 Pundit, 1 Tindal, 2 Lascars, 1 Sweeper, 1 Lamp Boy,	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	

SECTION II. Tuble 2 continued.

		1	uble 2 cont	inuea.				
ESTABLISHMENT.	Ben	JAL.		DRAS,		BAY.	REMARKS	•
ESTADAISM SEETT.	Total one of each.	Total of cach.	Total one of each.	Total of each.	Total one of	Total of each,		
MEDICAL DEPARTMENT. 1 Surgeon, 1 Assistant Surgeon, 1 Apothecary, 1 Steward, 1 2d Apothecary, 1 Assistant Apothecary, 1 2d Dresser, 2 Toties, 2 Hallalcores, 1 Hospital Writer, BAZAR ESTABLISHMENT. 1 Choudry, 1 Mutsuddy, 3 Flagmen and Weighmen, 2 Peous, ALLOWANCES. To Officer Commanding the Battalion, Head Money for 14 Europeans, Bengal, """, "15 "", Madras, 16 Bombay, Clothing, *Rations for 8 Europeans, Average expense of Hutting Money,	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	295 12 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	295 12 0 145 14 0 0 126 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 Corporal, 2 Buglers, 1 Tindal, 2 Lascars, Total per Mensem. B CLOTHING, MADRAS. 5 Serjeants, 1 Corporal, 2 Buglers, 1 2d Dresser, Total per Mensem. C CLOTHING, BOMBAY. 5 Serjeants, 1 Corporal, 2 Buglers, 1 Corporal, 2 Hutting Money, 3 Followers at 1 Rupee cach 1.36 E HUTTING MONEY, 1 2d Dresser, Rupees 3.36=	Total of each. 48 0 0 0 36 0 6 24 0 0 36 0 6 0 0 0 36 0 6 0 0 0 36 0 6 0 0 0 36 0 6 0 0 0 36 0 6 0 0 0 36 0 6 0 0 0 36 0 6 0 0 0 36 0 6 0 0 0 36 0 6 0 0 0 36 0 6 0 0 0 3 0 0 6 0 0 0 0 3 0 0 6 0 0 0 0 0 3 0 0 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
ABSTRACT.	Brn	FAL.	Mai	RAS.	Вом	BAY.	N. B. The above Statemen	ts of Clothing are
Officers, Effective Staff, Non-Effective Staff, Adjutant and Quarter Master's Department, Medical Department, Bazar Establishment, Allowances, &c. Total per Mensem The following items have not been included in any of the Original cost and wear and tear of Ordinance a Cost and wear and tear of Annumitical Ways	31 2 2 2 11	16 12 0 84 10 0 45 0 0 21 0 0 55 11 0 25 0 0	31 2 2 12	116 12 0 284 10 0 445 0 0 30 0 0 288 3 0 26 0 0	31 2 2 2 13	16 12 0 84 10 0 45 0 0 21 8 0 83 9 0 26 0 0	the Military Auditor Genera	i,
Original cost and wear and foar of Ordinance a Cost and wear and tear of Ammunition Wagg Cost and wear and tear of Amma and Accountre Cost of Practice Ammunition for Ordinance an	with white Carrier		ung charges in	Bengal, Madras, Hospital Chr Europe Med Barracks, Annual Quil	temes.	uld not be obtai Bazar Medicines	ned.	

SECTION II.
TABLE 3.

Comparative Statement of the Cost of the Head Quarters of a European Ballalion according to the existing Establishments of the Head Quarters of Ballalions in the three European Foot Artilleries, and according to the proposed uniform Establishment for the Foot Artilleries of the three Presidencies, with an Abstract showing the difference of expense to the State between the existing Establishments and the proposed one.

		PRES	EN	r Establish:	IEI	T.		Prop	osi	ED ESTABLISH	M-E	NT.	
ESTABLISHMENT.		Bengal.		Madras.		Bombay.		Bengal.		Madras.	_	Bombay.	REMARKS.
	No.	Total of each Rank.	No.	Total of each Rank.	No.	Total of each Rank.	No.	Total of each Rank,	Ž	Total of each	No.	Total of each	-
Officers.													
olonel,	1 1 1	1,295 5 0 1,032 4 0 789 3	1 1	1,032' 4' 0		1,032 4 (789 3 ($\begin{array}{c ccccccccccccccccccccccccccccccccccc$		$egin{array}{c cccc} 1 & 1,295 & 5 & 6 \\ 1,032 & 4 & 6 \\ 1 & 789 & 3 & 6 \\ \hline \end{array}$	1	1.032 4 0	A Battalion of European Foot Artillery co sists of 4 Companies, therefore to calcula the cost, the following charges must be ad
Effective Staff.		3,116 12 0		3,116 12 0		3,116 12		3,116 12 0		3,116 12		3,116 12	ed to the cost of 4 Companies and 1 He Quarters, viz.:
orjeant Major, uarter Master Serjeant, rill Serjeant, hood Master Serjeant, ospital Serjeant, rill Corporal, ugle Majors,	1 1 1 1 1 1 2	48 7 10 42 7 10 40 7 4 36 7 4 29 15 0 40 5	1 1 0 1	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1 1 1 1	42 710 40 7 4 26 7 4 26 7 4 28 5 8		$\begin{array}{cccccccccccccccccccccccccccccccccccc$]	1 42 7 10 1 40 7 4 1 46 7 4 1 31 7 4 1 28 15 6		42 7 10 40 7 46 7 31 7 28 15	Pay of 1 Captain, 433 10 1 7 2 First Lieutenants, - 531 8 2 7 1 Second - 213 5 4 Head money for the above at Annas 4 each,
Non-Effective Staff.		289 10		271 2 8		259 0 8	•	284 10 0		284 10)	284 10	1,179 7
ljutaut and Quarter Master, - brarian, - ospital Serjeant, - uropean Butcher, ump Colorman, - y Havildars for Gun Lascars, -	1 0 1 0	8 0 0 0 0 0 20 0 0 0 0 0	0 0 0	0 0 0 10 0 0 0 0 0 0 0 0	1 0 0 1	8 0 0 0 0 0 0 0 0 2 8 0		8 0 0 0 0 0 0 0 0 0 0 0	0 0		0 0 0	8 0 0 0 0 0 0)))
DJUTANT AND QUARTER MASTER'S DEPARTMENT.		285 0)	247 0 0		255 8 0		245 0 0		245 0		245 0)
oonshee, undit, indul, sears, veepers, omp Boy, sear Boys,	0 0 1 2 0 0 0	0 0 0 9 8 0 11 8 0 0 0 0	0 0	0 0 0 0 0 0 0 0 0	0 0 1 1	15 0 0 0 0 0 0 0 0 4 0 0 2 8 0		$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0		1 0 0 1 1	15 0 0 0 0 0 4 0 2 8	o o o o

SECTION II.

								Te	ble	e 3 con	tinu	ed.					A terrotomorphisms and the second sec
	_		RESI		Establisi	IME	NT.				Pro	Post	ED ESTAI	Lisn	ME	NT.	
ESTABLISHMENT.		Bengal.			Madras.	- -	Bombay		_	Bengal		_	Madras		_	Bombay.	REMARKS.
	No.	Total of c	ach	ž To	otal of eac Rank,	h	Total of Raul	each	No.	Total of Ran	cac k.	h ģ	Total of Ran	each k.	No.	Total of each	
Medical Department. Surgeon, Assistant Surgeon, Apothecary, Steward, 2d Apothecary, Assistant Apothecary,	1 1 0 1 0	مَامَ	0 0 0	1 0 0 1	295 12 0 0 0 0 126 5	0 1 0 1 0 1 0 0	145 126 0	12 0 14 0 5 0	0 1 0	295 0 126 0	10 12 0 5 0	0 1 0 0 0 0	0 0 126	0 0 0 0 5 0	1 1 1 0	295 12 0 145 14 6 126 5 0 0 0 0	2 Lascars,
2d Presser, Toties, Hallalcores, Hospital Writer,	0 0 0	0 0 0 0 0 0 0 0 0 0	0 0 0 0	1 2 0 1	24 8 14 0 0 0	0 1 0 0 0 0 0 2 0 0	0 0 0 12	0 0	000	0 0	0 0 0	0 1 0 2 0 0 0 1	24 14 0	0 0 8 0 0 0 0 0	0 0 2 0	70 0 0 0 0 0 0 0 0 12 0 0	4 Scrjeants, 48 0 0 192 0 1 Corporal, - 0 0 0 36 0 2 Buglers, 21 0 0 48 0 1 2d Dresser, 0 0 0 36 0 Total per Annum 312 0
BAZAR ESTABLISHMENT.				-				- -						- -	li		Total per Mensem 20 0
Choudry, Mutsuddy, Flagmen and Weighmen, Peons,	1 1 3 0	910	0 0	0	0 0	0 0	0 0	l ol o	ī	11 5 9 0	0 0	0 1 0 0 0 0		0 0	1 0 0 2	0 0 0	5 Scrieants, 4 0 0 20 0 1 Corporal, 0 0 0 3 0 2 Buglers, 2 0 0 4 0
		25 0	0		26 0	0	26	0 0		25	0	0	26	0 0		26 0 0	Total per Mensem
For Schools,	1.1 0 0	3 8 120 6 0 0	0000	14 0 0	120 0	0 10	5 4 7 120 9 45	0 0	14 0 0	3 120 0	0	0 15 0 0 0 6	3 120	0 0 0 12 0 0 0 0	16	400 0 0 4 0 0 120 0 0	P HUTTING MONEY, BENGAL. 3 Followers, at Rs. 1 cach 3÷36=0 1 4 E HUTTING MONEY, MADRAS. 1 2d Dresser, Rs. 3 - 3÷36=0 1 4 N. B. The particulars of the above charge for the "Proposed Establishment" will be found in the column of Remarks in Table 2 of this Section.
Clothing, *Rations, Average Expense of Hutting Money,	0 8 0	51 10 D 0 1	·i	1-	# 26 0 45 3 # 0 1	41 3	3 51	0 (10 8	8	51		0 6 8 8 4 6	30 51 61	0 0 10 8 1 4	0 8 0	51 10 8	
		603 4	9		594 12	8	647	10 8		603	4	0	605	8 0		602 10 8	* Rations per diem 3 4 × 31 = 6-7-4 per month of 31 days.

ABSTRACT OF TABLE 3.

	PRESENT ESTABLIS	HMENT.	Proposed I	Establishment.	INCREASE OF DECREASE OF EXPENSE.
	Bengal. Madras.	Bombay.	Bengal. N	Madras. Bombay.	Bengal Madras, Bombay, Total
Effective Staff, Non-Effective Staff, Adjutant and Quarter Master's Establishment, Medical Department, Bazar Establishment, Allowances,	289 10 0 271 2 285 0 0 247 0	8 259 0 5 0 255 S 0 0 42 S 0 0 1383 9 0 0 26 0 0 8 647 10 S	28410 0 2 245 0 0 2 21 0 0 1155 11 0 12 0 25 0 0 3 603 4 0 6	284 10 0 284 10 0 0 245 0 0 0 245 0 0 0 245 0 0 0 288 3 0 1383 9 0 0 26 0 0 0 26 0 0 0 305 8 0 602 10 8	Decrease per Mensem 45 0 0 33 13 4 50 14 5 129 11

The following items have not been included in any of the calculations, as the corresponding charges in Bengal, Madras, and Bombay could not be obtained.

Original cost and wear and tear of Ordnance and Carriages.
Cost and wear and tear of Ammunition and Carts.
Cost and wear and tear of Arms and Acconfrements.
Cost of Practice Ammunition for Ordnance and for Small Arms.
Hospital charges including Bazar Medicines.
Europe Medicines.
Barracks.
Annual Quilts.

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TABLE 4.

Proposed Establishment of a European Company of Foot Artillery, for Bengal, Madras, and Bombay, with one Scale of assimilated Pay for all European, Commissioned, Non-Commissioned and Rank and File: and Natives, according to the Pay of their respective Presidencies.

ESTABLISH MENT.	Total one of cach.	otal of each.		7,000 - 100		REMARKS	3,		
OFFICERS. 1 Captain,	0 0 0 265 12 0 0 0 0	433 10 0 531 8 0 213 5 0						Marie de des de la company de la company de la company de la company de la company de la company de la company	
Effective Staff. 1 Staff Serjeant,	0 0 0	1,178 7 0 32 3 4	•						
Non-Effective Staff.									
1 Pay or Orderly Serjeaut, Non-Commissioned and Rank and File.	0 0 0 -	7 0 0	•						
6 Serjenuts, 6 Corporals, under 14 years' service, 6 Bombardiers, under 14 years' service, 2 Buglers, 2 Half pay Buglers, 60 Gunners, under 14 years' service,	26 7 4 21 15 0 19 15 0 18 2 8 0 1 4 13 12 6	158 12 0 131 10 0 119 10 0 36 5 4 18 2 8 826 14 0 1,291 6 0							
	BENGA	L.	Мар	HAB.	Вом	BAY.	A CLOTHING, RI	Total of	
GUN LASCARS.	Total one of cach.	Total of each,	Total one of each.	Total of each.	Total one of each.	Total of each.	7 Serieants	Mensem. 41 01 0	Total.
! Subadar, ! Jennadar, - ! Havildar, ! Naigne, - !! Privates,	59 0 0 22 8 0 9 8 0 8 0 5 12 0	8 6 107 3 3 5) 5 6 107 3 6 107 63 4 0	21 8 0 17 8 0 9 13 4 8 6 8 7 0 0	3 8 0 2 8 0 5 9 107 3 9 81 77 0 0	2 t 8 0 17 8 0 10 8 0 8 12 0 7 0 0	3 8 0 2 8 0 6 0 0 3 12 0 77 0 0	6 Corporals, 6 Bombardiers, 2 Buglees, 60 Gonners, 5 Subadar, 6 Havildar, 7 Naigure, 11 Privates, -	- 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	18 0 0 19 0 0 4 0 0 120 0 0 0 13 85 0 6 10 0 9 12 0 6 10 5 8 0 180 12 65

Ċ

Table 4 continued.

ESTABLISHMENT.	- Вы	(GAI	Мар	RAS.	Bombay.		
	Total one of each.	Total of each.	Total one of each.	Total of each.	Total one of cach.	each.	REMARKS.
STAFF SERJEANT'S ESTABLISHMENT. 2 Puckallies,	9 0 0	18, 0 0	10 11 10			0 0	Total of each per Annum. 7 Serjeants, 45 01 0 336 0 0 0 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
3 Bheasties, 4 Lascars, 2 Sweepers Bengal, 1 Bombay, 1 Lascar Boy,	0 0 0 0 0 0 4 0 0 0 0 0	0 0 0 8 0 0 0 0 0	0 0 0 0 0 0 0 0 0	0 0 0	7 0 0 28 0 0 0 4 0 0 0 3	8 0	2 Buglers, - 21 0 0 46 0 0 0 60 Gunners, - 24 0 0 1440 0 0 0 13 11 5 1 1440 0 0 13 11 5 1 1440 0 0 13 11 5 1 1440 0 0 13 11 5 1 1440 0 0 13 11 5 1 1440 0 0 13 11 5 1 1440 0 0 1 13 11 5 1 1440 0 0 1 13 11 5 1 1440 0 0 1 13 11 5 1 1440 0 0 1 13 11 5 1 1440 0 0 1 13 11 5 1 1440 0 0 1 13 11 5 1 1440 0 0 1 13 1 1 1440 0 0 1 13 1 1 1440 0 0 1 13 1 1 1440 0 0 1 13 1 1 1440 0 0 1 13 1 1 1440 0 0 1 13 1 1 1 1440 0 0 0 1 13 1 1 1 1440 0 0 0 1 13 1 1 1 1440 0 0 0 1 13 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Artificers.				-			2 l'uckallies 6 0 0 12 0 0 Total per Annum
1 Maistry, 1 Mistry Smith, 1 Mistry Carpenter,	0 0 0 0	$\begin{array}{c cccc} 0 & 0 & 0 & 0 \\ 12 & 0 & 0 & 0 \\ 14 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 \end{array}$	$ \begin{array}{c cccc} 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 \\ 0 & 0 & 2 & 4 \end{array} $	o o o	0 0 0 14	0 0	Total per Mensem 190 15 63 C CLOTHING, BOMBAY. Total of each per Mensem. Total. Mensem.
2 Smiths, 2 Carpenters, 2 Armourers, 2 Firemen, 2 Filemen, 2 Hammermen, 2 Bellows Boys, 1 Chuckler.	10 0 0 0 0 0 7 0 0 7 0 0 6 0 0 0 0 0	20 0 0 0 0 0 14 0 0 14 0 0 12 0 0 0 0 0	10 2 4 10 2 4 10 2 4 0 0 0 0 0 0 7 9 9 2 8 7 0 0 0	20 4 8 20 4 8 0 0 0 0 0 15 3 6 5 1 2	10 0 0 23 0 0 0 0 0 0 0 0	000000	7 Serjeants, 3 0 0 28 0 0 0 6 Corporats, 3 0 0 18 0 0 18 0 0 28 0 0 0 6 Rombardiers, - 2 0 0 0 12 0 0 0 2 Buglers, 2 0 0 0 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Allowances.		86 0 0		102 12 5	88	0 0	Total per Mensem 189 k 103 1 HUTTING MONEY, Total of BENGAL. Total,
To Officer Commanding the Company. For Repair of Arms, &c. and Stationery, For petty Stores, Contingent allowance for 6 Guns and Waggons, Contingent allowance for 1 spare Carriage and	0 0 0 0 0 0 0 0 0 15 0 0	30 0 0 0 12 0	0 0 0 0 0 0 0 0 0 15 0 0	0 12 0	0 0 0 30	$\begin{array}{c c} 0 & 0 \\ 12 & 0 \\ \end{array}$	Subadar,
1 spare Waggon, Contingent Allowance for 1 Store, 1 Forge and 1 Quarter Master's Cart,	5 0 0 5 0 0		5 0 0	1 1 1			Total expenditure at every Relief 38 11 54 Assuming a Relief to take place once every 3 years the charge per month will be 11 11 234
Head Money for 87 Europeans, Head Money for 12 Natives Bengal and Bombay.	0 4 0	21 12 0	0 4 0	21 12 0	0 4 0 21	12 0	E HUTTING MONEY, MADRAS. A Subadar 211 01 0 31 6 103
and 27 Madras. * Rations for 82 Europeans, Clothing, Average expense of Hutting Money,	0 2 0 6 7 4 0 0 0 0 0 0	1 8 0 529 9 4 A 189 12 6 D 1 1 2	0 2 0 6 7 4 0 0 0 0 0			10 10	\$ Subadar, 21 0 0 3 6 103 4 Havildar, 12 0 0 1111 55 4 Havildar, 4 0 0 2 4 64 8 Naigue, 3 0 0 1 4 64 11 Privates, 2 0 0 22 0 0 2 Puckallies, - 2 0 0 2 0 0 Total expenditure at every Relief. 34 11 54
		919 7 0		922 6 2	919	4 5	Assuming a Relief to take place once every 3 years the charge per month will be 0.15 5;

SECTION II. ABSTRACT OF TABLE 4.

ABSTRACT.	Bengal.	Madras.	Вомвач.	BOMBAY.	otal of Total.
Officers, Effective Staff, Non-Effective Staff, Non-Commissioned and Rank and File, Gun Lascars, Staff Serjeant's Establishment, Artificers, Allowances, &c. Total per Mensem	1,178 7 0 32 3 4 7 0 0 1,291 6 0 83 12 0 26 6 0 86 0 0 917 7 0	1,178 7 0 32 3 4 7 0 0 1,291 6 0 92 3 7 24 15 8 102 12 5 922 6 2	32 3 7 0 1,291 6 92 12 58 0 88 0 919 4		12 0 0 1 1/11 55 4 10 0 2, 4 66 3 0 0 1 4 65 2 0 0 2 2 0 0 2 0 0 6 0 0 Relief. 36 11 53 well be 1 0 38 ff Clothing are entered ed by the Military Au-

The following items have not been included in any of the calculations, as the corresponding charges in Bengal, Madras, and Bombay could not be obtained.

Original cost and wear and tear of Ordnance and Carriages.

Cost and wear and tear of Arms and Accoutrements.

Cost and wear and tear of Arms and Accoutrements.

Cost of Fractice Ammunition for Ordnance and for Small Arms.

Hospital charges including Bazar Medicines.

Barracks.

Annual Quilts.

SECTION II.
TABLE 5.

Comparative Statement of the cost of a European Company of Foot Artillery, according to the existing Establishments of European Companies in the three Foot Artilleries, and according to the proposed uniform Establishment for the three Presidencies, with an Abstract showing the difference of expense to the State between the existing Establishments, and the proposed one.

		Pres	EN	r Establish	(E)	IT.		Pror	osei	Establish	IENT.		
ESTABLISHMENT.	_	Bengal.		Madras.		Bombay.		Bengul.		Madras.	Bon	bay.	REMARKS.
	No.	Total of each Rank.	No	Total of each Rank.	No.	Total of each Runk.	Š	Total of each Rank,	No.	Total of each Rank.	Ž Tota	l of each Rank.	
Officers. Captain,	1 2 1	531 8 0	1	1,178 7 0	2 1	433 10 0 0 531 8 0 213 5 0 1,178 7 0 32 3 4]	1 433 10 0 2 531 8 0 2 13 5 0 1,178 7 0 1 32 3 4) 1	433 10 0 531 8 0 213 5 0 1,178 7 0 32 3 4	2 5 1 2 1,1	33 10 0 31 8 0 13 5 0 78 7 0 32 3 4	Companies as follows: Bengal Madras Bombay.
Pay or Orderly Serjeant,	1	7 0 0	1	3 8 0	1	7 0 0]	7 0 0	1	7 0 0	1 -	7 0 0	Lascar Boys, - 0 16 6 PayHavildars(NE) 0 0 2 The proposed Establishment for 7 Companies (or Batteries) of European Foot Artillery to consist of
Serjeants, Corporals, under 14 years' service, Bombardiers, under 14 years' service, Buglers, Half-pay Buglers, Gunners, under 14 years' service, Boy,	6 6 2 2 60 0	131 10 0 119 10 0 36 5 4 18 2 8	$\frac{1}{60}$	36 5 4 18 2 8 826 14 0	5 10 2	105 13 4 109 11 0 199 6 0 36 5 4 0 0 0 0 1,102 8 0 6 13 11	60	3 119 10 0 36 5 4 2 18 2 8 0 826 14 0	6 0 2 2 60	131 10 0 119 10 0 36 5 4 18 2 8 826 14 0	6 1 6 1 2 2	58 12 0 31 16 0 19 10 0 36 5 4 18 2 8 26 14 0	Bengal, Madras, Bombay, Subadar, - 1 1 1 1 1 1 1 1 1 1 1
Gun Lascars.		1,291 6 0		1,291 6 0		1,560 9 7		1,291 6 0		1,291 6 6	1,2	91 6 0	A CLOTHING, BENGAL. 7 Serjeants,
Subadar, Jemadar, Havildars, Naigues, Privates under 16 years' service,	161/62 2 31		30	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	2 0 30	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1	8 6 10 9 3 3 5 1 5 6 10 9 9 6 10 9 6 10 9 9 6 10 9 9 6 10 9 9 6 10 9 9 6 10 9 9 6 10 9	11	3 8 6 2 8 0 5 9 105 3 9 83 77 0 0 92 3 73	11	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	6 Bombardiers,

SECTION II.

Table 5 continued.

The state of the s			Par	SENT	Езтав	Lisii	MENT				Pi	toro	SED	Езтаві	ляпм	ENT	.	
ESTABLISHMENT.		Bengal			Modras.			Bombuy,		В	Bengal,			Madras,			oinbay.	REMARKS.
	ş.	Tutal of Ran		S.	Total of Ran	each t.	No.	Total of ea	ach S	1	otal of C	each	No.	Total of a Rank.	rach	T	otal of each Rank.	·
STAFF SERJEANT'S ESTABLISHMENT Puckallies, Bheasties, Luscars, Sweepers, Lascar Boys,	2 0 0 2 0	ol.	0	0 2 0 *1 0 0	21 7 0 0		0 *4 4	30 0 28 0 4 0	0 2 0 0	2	18 0 0 0 0 0 8 0	0 0 0		21 7 0 0 0 0 0 0 3 8	8 0 0	0 3 4 1 1 1	0 0 0 22 5 0 28 0 0 4 0 0 3 8 0	Total of each per Tota
ARTIFICERS. Maistry, Mistry Smith, Wistry Carpenter, Smiths, Jarpenters, Armourers, Firemen, Filemen, Hummermen, Bellows Boys, Chuckler, ALLOWANCES.	0 1 1 0 2 2 2 2 2 2 0 0	0 12 14 0 20	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 1 0 0 0 0 0 0 0 2 0 2 0	28 	7 8 0 0 0 0 0 0 0 4 8 4 5 0 0 0 0 3 1 2 9 9	0 1 1 2 2 2 0 0 0 0 2 2 0	0 0 14 0 120 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		22	26 0 0 0 12 0 0 0 20 0 0 0 14 0 12 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 0 0 2 2	24 15 14 0 0 0 0 0	8 0 0 8 8 8 0 0 6 2 9	0 1 1 2 2 2 0 0 0 0 2 2 2 0 0	58 0 0 0 0 0 14 0 0 14 0 0 20 0 0 0 0 0 0 0 0 15 0 0 88 0 0	1 Privates, - 6 0 0 18 0 0 18 0 0 0 0 0 0 0 0 0
Fo Officer Commanding the Company, for repair of Arms, &c. and Stationery, for petty Stores, Sontingent Gun allowance for 6 Guns and Waggons, For Additional Carriages and Carts, Head Money for Europeans, Head Money for Natives, Rations, Jiothing, Average expense of Hutting Money,	0 0 3 87 36 82	90 15 21 4 529	0 12 0 0 12 8	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 12 0 0 0	0 0 0 3 107 33	30 0 0 0 90 0 15 0 26 12 4 2 061 16	0 87 0 12 8 82	77	[189]12	00 00 46	0 0 0 5 87 27 82 0	30 0 0 12 90 0 25 0 6 9 9 9 190 15	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 6 7 2 2 0	30 0 0 30 0 0 0 12 0 90 0 0 25 0 0 21 12 0 1 8 0 529 9 4 159 10 10	\$ Subadar,
A. P. Rations per diem 3.4×31=6.7-4 per though of 31 days.	U	930		1	795	8 11		1,100 15	9 (919 7		0	922 6	5	0	919 4 5	Assuming a Relief to take place once every 5 years the charge per Month will be.

ABSTRACT OF TABLE 5.

	. PRESENT ESTAB	LISHMENT.	Proros	ed Establi	SHMENT.	INCREASE OF DECREASE OF EXPENSE.								
Officers, Effective Staff, Non-Effective Staff, Non-Commissed, and Rank and File, Gun Lascars, Staff Serjeant's Establishment, Artificers, Allowances, &c. Total per Mensen.	32 3 4 33 15 7 0 6 3 8 1291 6 01291 6 254 0 0 25010 26 0 0 28 7 86 0 0 102 12 930 2 1 795 14	5 32 3 4 0 7 0 0 1560 9 6 252 0 6 6 0 0 6 5 88 0 6 2 1100 15 4	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	32 3 4 7 0 0 1291 6 0 92 12 0 58 0 0 88 0 0 919 4 5	-								

+ N. B.—The particulars of the above charges for the proposed Establishment will be found in the column of Remarks in Table 4 of this Section.

The above Statements of Clothing are entered according to the Form furnished by the Military Auditor General.

The following items have not been included in any of the calculations, as the corresponding charges in Bengal, Madras, and Bombay could not be obtained.

Original cost, and wear and tear of Ordnance and Carriages.

Cost and wear and tear of Arms and Accourtements.

Cost of practice Ammunition for Ordnance and for Small Arms.

Hospital charges including Bazar Medicines.

Europe Medicines.

Barracks.

Annual Quilts.

SECTION III.

TABLE I.

TABLE 1.

Table showing the Pay and Allowances of every Rank in the Golundauz Artilleries of Bengal, Madras, and Bombay, with the Pay of the several Ranks according to the present rates of Pay at each Presidency. In the first column every grade in the three Golundauz Artilleries is entered, those which are recommended to be left out in the New Establishment are distinguished by the columns for Pay under "Proposed Establishment" being left blank, those to be retained in the New Establishment have the last columns for Pay filled in.

ć	DAYES 6	I	RE	EN	т Евт	(AB)	LIEI	IMENT	•	_	P	ROI	205	ED E	TA:	BLI	ISHMENT.			
Ň	RANKS, &c.	Ber	gal.	_	Mac	lras	.	Bon	bay		Ber	gal		Ma	dras	·	B02	nba	y	
	Officers.																			
1 1 1 1	Colonel,	1295 1032 789 433 265 213	5 4 3 10 12 5	0 0 0 0 0	1295 1032 789 433 265 213	4 3 10 12	0 0 0	789 433 265	3 10 12	0 0	1032 789 433 265	3 10 12	0 0	1295 1032 789 433 265 213	3 10 12	0 0 0	1032 789 433 265	3 10 12	0 0	
	Effective Staff (Head Quarters.)					j														
1 1 1 1 1 1 1 1 1	Serjeant Major, Quarter Master Serjeant, Drill Serjeant, Havildar Major, Quarter Master Havildar, Drill Havildar, Drill Naigue, Bugle Major,	*54 *48 46 21 19 19 14	12 0 0 0 8	8	24 0 19 15	0 0 4 8	0	0 0	0 0 0	0 0 0 0	0 21 0 19 14	0 0 0 0 8	0 0 0	0 24 0 19 15	13 0 0 0 4 8	20000	*48 0 24 0 19	0 0 4 8	0000	
	Non-Effective Staff (Head Quarters.)							Ì						-						
1 1 1 1 1 1 1	Subadar Major, Native Adjutant,	212 137 25 0 0 0 0 0	0 0 0 0 0	0000000	17 0 0 0	0 8 0 0 0	0 0 0 0 0	132 25 17 10 5 3	0 8 0 4 8	0 0 0 0 0	132 25 17 0 0 0	0 0 0 0 0	000000	25 17 0 0 0	0 8 0 0 0	0 0 0 0	132 25 17 0 0	000000	000000	
	Non-Effective Staff (Company.)							-												
1 1 1		5 2 0	0 0	0 0 0	1 2 0	13 0 0	0	2	0 0	0	5 2 0	0	000	5 2 0	000	0	5 2 0	0	0	
	NATIVE COMMISSIONED, NON-COMMISSIONED, AND RANK AND FILE.	,				-		-	İ				.							
1 1 1 1 1 1 1 1 1 1	Naigue,	67 0 0 0 24 14 12 0 11 7	0 0 8 0 0 0	0	70 52 42 24 14 12 0	0 8 0 8 0 0 0 0	0 0 0 0	70 52 42	8 0 8 0 0 0 0	000000	ó	0 0 8	0 0 0 0	0 70 52 42 24 14 12 9 11	0 8 0 8 0 0 8	0000000	0 70 52 42 24 14 12 9 11	8080080	0 0 0	
		0	0	0	0	0	0	0		0	59	0	0	ol	0	0	0	٥	0	
	Subadar, after 10 years' service, after 6 ,, ,, Jemadar,	000000000000000000000000000000000000000	0 0 0 0 0	0 0 0 0	42 31 24 17 9 0 7	8 8 8 8 13 0	0 0 0 0 4 0 0	42 31 24 17 10 0	0 8 8 8 0 0	0 0 0 0 0	0 0 0 22 9	0 0 8 8	0 0 0 0	42 31 24 17 9	0 8 8 8 13	0 0 0 0 4 8	42 31 24 17 10	0 8 8 8 8 12	0 0 0 0	

^{*} Including compensation for Rations, Rupces 6-5-4 each.

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SECTION III.

Table 1 continued.

No.	RANKS, &c.	, 1 Pi	PRESENT ESTABLISHMENT. (PROPOSED ESTAT								(P	ROP	ose	D Es	TAE	LIS	плех		
N		Beng	gal.		Mad	ras	-	Bom	bay	-	Ber	ıgal		Ma	lras		Boni	bay	
	Artificers.				İ											_	-		
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Mistry Smith, Mistry Carpenter, Smith, Carpenter, Armourer, Fireman, Fileman, Hammerman,	0 7 6 0	0000000	0 0 0 0 0 0 0 0 0 0 0	14 0 0 10 10 10 0 0 7 2	00223	00044400017	0 14 14 10 10 0 0 0 7 2	000000088	000000000	0 12 14 0 10 0 7	00000000	0	0	00222009	0 4 4 0	14 14 10 10 0 0	0 0 0 0 0 0 0 8	000000
	Moulvie, Tindal, Lascar, Bildar, Gunta Pandy, Bheasty for Lascars, Recruit Boy,		8	0 0 0 0 0	30 0 0 7 6 0 0 0 3 3 3	0 0 0 0 0 0	0 0 0 4 0 0 0 0 0	0 15 0 0 0 0 0 7 3 3	0 0 S	0 0 0 0 0 0 0 0	9 0 3 5	0 0 8 0 6 0 0	00000000000	0 0 0 0 0	00500088	000400000	15 0 0 0 0 0 0 0 0	0 0 0 0 0 0 8	0
	ESTABLISHMENT (COMPANY.) Puckally,	0	0	0	10	11	10	. 0	0	0	0	0	0	10	11	10	o	0	0
	Bheasty, Lascar, Sweeper, Lascar,	5	12	0000	0.	0 5 0 0	O	700	0 8 0 0	0	5 4	0 12 0 0	0	0	0 0 8	0	7	0	
	MEDICAL DEPARTMENT				İ				ĺ				ĺ		i				
	Surgeon, Assistant Surgeon, Apothecary, Steward, Assistant Apothecary, Native Doctor, 2d Dresser, Toty, BAZAR ESTABLISHMENT.	0	0 0 0	00000000	295	12 0 0	000000	295 145 126 70	5 0 0	0 0 0	0 0 0 15	0 0	0000	- 0	0 0 0 8	0	145 126 70 0	12 14 5 0 0	0.
	Choudry, Mutsuddy, Flagman and Weighman, Peon,	11 5 3 0	0000	C	14 0 0 6	0 0	0000	16 0 0 5	0	0 0 0	3	Θĺ	0	o	0 0 0	0	0	0 0	0

SECTION III.

TABLE 2.

Proposed Establishment of the Head Quarters of a Golundaux Battalion for Bengal, Madras, and Bombay, with one Scale of assimilated Pay for all Europeans, Commissioned, and Non-Commissioned; and Natives according to the Pay of their respective Presidencies.

	Вь	NGAL.	Мар	RAB.	BOMBAY		REMARKS.
ESTABLISHMENT.	Total one of	Total of each.	Total one of each,	Total of each.	Total one of each.	Total of each.	
Officers.	•						3
1 Colonel,	0 0 0	1,032 4 0	. 0 0 0	1,295 5 0 1,032 4 0 789 3 0 3,116 12 0		,295 5 0 ,032 4 0 789 3 0 ,116 12 0	
EFFECTIVE STAFF.							
1 Serjeant Major, 1 Quarter Master Serjeant, 1 Havildar Major, 1 Drill Havildar, 1 Drill Naigue, 2 Bugle Majors,	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	*48 13 2 21 0 0 19 0 0 14 8 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	*48 13 2 24 0 0 19 4 0 15 8 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	*48 13 2 24 0 0 19 4 0 15 8 0	A CLOTHING, BENGAL 2 Serjeants,
Non-Effective Staff. 1 Adjutant, 1 Quarter Master and Interpreter, 1 Subadar Major, 1 Native Adjutant,	0 0 0	132 0 0 25 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0	25 0 0		192 7 0 132 0 0 25 0 0 17 8 0	1 Naigue, 0 0 0 0 1 1 0 0 0 2 Ruglers, 0 0 0 0 0 4 0 0 0 0 0 0 8 0 0 0 0 0 0 8 0 0 0 0
Adjutant and Quarter Master's Department.						_ _	Buglers, 24 0 0 48 0 0 1 Tindal, 0 0 0 6 0 0 0 2 0 0 12 0 0 12 0 0 12 0 0 0 12 0 0 0 12 0 0 0 12 0 0 0 12 0 0 0 12 0 0 0 12 0 0 0 12 0 0 0 12 0 0 0 12 0 0 0 12 0 0 0 12 0 0 0 12 0 0 0 12 0 0 0 12 0 0 0 0
1 Moonshee, 1 Pundit, 1 Moulvie, 1 Tindal, 2 Lascars, 2 Bildars, 3 Gunta Pandies, 30 Recruit Boys, 40 Pension ,, } Madras, \$6 Bombay,	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	8 0 0 8 0 0 9 8 0 0 0 0 7 0 0 15 0 0	0 0 0 0 0 0 0 0 0 0 0 0 6 5 4 0 0 0 0 0 0	0 0 0 0 0 0 7 0 0 12 10 8	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 21 0 0	Total per Aunum Total per Mensem Total per Mensem Total. Total one of each per Mensem Serjeants,

SECTION III.

Table 2 continued.

	Ben	GAL.	Ма	DRAS.	Вом	BAY.	REMARKS.
ESTABLISHMENT.	Total one of each.	Total of each.	Total one of cach.	Total of each.	Total one of each.	Total of each.	ICEMARKS.
MEDICAL DEPARTMENT. 1 Surgeon, 1 Assistant Surgeon, 1 Apothecary, 1 Steward, 1 Assistant Apothecary, 1 Native Doctor, 1 2d Dresser, 2 Toties, BAZAR ESTABLISHMENT. 1 Choudry, 1 Mutsuddy, 3 Flagmen and Weighmen, 2 Peons, ALLOWANCES. To Officer Commanding the Battalion, For a Mess, Regimental School and Stationery, Clothing, Average expense of Hutting Money, ABSTRACT. Officers, Effective Staff, Non-Effective Staff,	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	733 10 0 295 12 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	733 10 0 295 12 0 0 0 0 0 0 0 70 0 0 24 8 0 14 0 0 1,137 14 0 14 0 0 0 0 0 12 0 0 26 0 0 21 0 0 26 0 0 120 0 0 21 0 0 558 15 9 RAS.	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	733 10 0 0 295 12 0 145 14 0 126 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	D RUTTING MONEY, Total of BENGAL. 2 Havildars, 5, 0, 0 10 10 10 0 2 Buglets, 0 0 0 5, 0 0 1 Naigue, 0 0 0 5, 0 0 2 Buglets, 0 0 0 7, 0 0 1 Naive Doctor, 0 0 0 7, 0 0 3 Followers, 1 0 0 3 0 0 Total expenditure at every Relief. 35 0 0 Assuming a Relief to take place once every 3 years, the charge per month will be MADRAS. Total of Total. 2 Havildars, 0 0 0 8 0 0 2 Bugle Majors, 4 0 0 8 0 0 2 Bugle Majors, 4 0 0 8 0 0 2 Bugle Majors, 4 0 0 8 0 0 2 Bugle Majors, 5 0 0 0 0 3 0 0 0 0 0 4 0 0 0 0 0 5 0 0 0 0 0 6 0 0 0 0 0 7 10 10 10 10 8 0 0 0 0 0 9 0 0 0 0 0 10 10 10
Adjutant and Quarter Master's Department, Medical Department, Bazar Establishment, Allowances, &c.	1,0	77 8 0 944 6 0 25 0 0 336 7 6	1,	294 10 8 137 14 C 26 0 0 558 15 9	1,8	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	•
Total per Mensem	5,6	357 2 10	5,	713 9 9	5,6	73 13 5	

The following items have not been included in any of the calculations, as the corresponding charges in Bengal, Madras, and Bombay could not be obtained.

Original cost and wear and tear of Ordnance and Carriages.
Cost and wear and tear of Ammunition Waggons and Carts.
Cost and wear and tear of Arms and Accoutrements.
Cost of Practice Ammunition for Ordnance and for Small Arms.

The following items have not been included in any of the calculations, as the corresponding charges in Bengal, Madras, and Bombay could not be obtained.

Hospital charges including Bazar Medicines.

Europe Medicines.

Barracks.

SECTION III.

TABLE 3.

Comparative Statement of the Cost of the Head Quarters of a Golundau: Battalion according to the existing Establishments of the Head Quarters of Battalions in the Golundaux Artillery of Bengal, Madras, and Bombay, and according to the proposed Establishment of a Golundaux Battalion for the three Presidencies, with an Abstract showing the difference of expense to the State between the existing Establishments and the proposed one.

	Par	ESENT ESTABLIS	IMENT,	Prop	osed Establishm	IENT.	
ESTABLISHMENT.	Bengal.	-Madras.	Bombay.	Bengal.	Madras.	Bombay.	REMARKS,
	Total of each	Total of each	Total of each Rank.	Total of each Rank.	o Total of each Rank,	Total of each Rank.	:
Officers. Colonel,	1 1,032 4	$\begin{bmatrix} 0 & 1 & 1,032 & 4 \\ 0 & 1 & 789 & 3 \\ & & & \end{bmatrix}$	0 1 1,295 5 0 0 1 1,032 4 0 0 1 799 3 0 0 3,116 12 0	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1 1,032 4 0 1 789 3 0	1 1,295 5 0 1 1,032 4 0 1 789 3 0 3,116 12 0	11 tead money for the above at Annas 2 cach. 0 8
Effective Staff.	3,110,12	3,116 12		3,110 12 0			1.170 1
Serjeant Major, Quarter Master Serjeant, Drill Serjeant, Havildar Major, Quarter Master Havildar, Drill Uavildar, Drill Naigue, Bugle Majors,	1 *48 13 : *46 12 8 1	2 1	2 1 *54 12 0 2 1 *49 11 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 *49 13 2 0 0 0 0 1 21 0 0 0 0 0 0 1 19 0 0 1 14 8 0		1 *54 13 2 1 *48 13 2 0 0 0 0 1 24 0 0 0 0 0 1 19 4 0 1 15 8 0 2 34 8 0	
	255 15	0 212 6	104 8 0	190 2 4	212 6 4	196 14 4	
Non Effective Staff. Adjutant. Quarter Master and Interpreter, Subsdar Major, Native Adjutant, Itavildar Major, Drill Havildar, Drill Naigue, Bugle Majors, Pay Havildars for Gun Lascars,	1 137 0 0 1 1 25 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 1 132 0 0 1 25 0 0 1 17 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 1 192 7 0 0 1 132 0 0 0 1 25 0 0 0 1 17 8 0 0 1 10 0 0 0 1 5 4 0 0 1 3 8 0 0 2 8 0 0	1 132 0 0 0 1 25 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 132 0 0 0 1 25 0 0 0 1 17 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 192 7 0 0 1 132 0 0 0 1 1 17 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	

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SECTION III.

Table 3 continued.

·		Pres	ENT	ESTABLISH	MEN	T.		Рвор	DSE	D ESTABLISH	MEN	TT.	
establishment.		Bengal.		Madras.		Bombay.		Bengal.	Ī	Madras.		Bombay.	REMARKS.
	No.	Total of each Rank.	No.	Total of each Rank.	No.	Total of each	h Š	Total of each Rank.	Š.	Total of each Rank.	No.	Total of each Kank.	
ADJUTANT AND QUARTER MASTER'S DEPARTMENT. Moonshee, Pundit, Moulvie, 'Tindal, Laccare, Bheasties for Lascars, Bildars, Gunta Pandies.	1 1 1 0 0 2 3	9 8 6 0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 7 0 0 12 10 8 0 0 0	0 0 0 0 0	15 0 0 0 0 0 0 0 15 0	0 0 0 0	1 30 0 6 1 8 0 6 1 8 0 6 1 9 8 6 0 0 0 0 6 2 7 0 6		0 0 0	0 0	15 0 0 0 0 0 0 0 0 0 0 0	2 Buglers, 2 2 1 0 4 0 0 0 1 Tindat, Total per Mensem 20 8 0 Total per Mensem 20 8 0 B CLOTHING, MADRAS. each per Annum. Total.
Recruit Boys, Pension Boys, Lascar Boys, MEDICAL DEPARTMENT.	0 0	0 0 0	30 40 16	105 0 0 140 0 0	} ₆	21 0	o	3 15 0 0 0 0 0 0 0 0 0 0 77 8 0	30 40	105 0 0	}6 0	21 0 0	2 Havildars, 12 0 0 21 0 0 1 Naigue, 0 0 12 0 0 2 Buglers, - 24 0 44 6 0 1 2d Dresser, - 0 0 0 12 0 0 3 Tindal and Lasears, - 6 0 0 18 0 0 Total per Annum. 210 0 0
Surgeon, Assistant Surgeon, Apothecary, Steward, Assistant Apothecary, Native Doctor, 2d Dresser, Totics,	1 0 0 0 1 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 1 1 1 0 0	295 12 145 14 1 126 5 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0	1 733 10 0 1 295 12 0 0 0 0 0 0 0 0 0 0 0 0 0 1 15 0 0 0 0 0 0	0 0 1 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1	295 12 0 145 14 0 126 5 0 70 0 0 0 0 0	2 Serjeauts,
BAZAR ESTABLIŞUMENT.		1,044 6	2	1.137 14 0		1,371 9	0	1,044 6 0		1,137 14 0		1,371 9 0	E HUTTING MONEY, Total of MADRAS. Total. 2 Havildars, 4 0 0 8 0 0 1 Naigue, 0 0 0 3 0 0
Choudries, Mutsuddy, Flagmen and Weighmen, Pcons,	1 3 0	11 6 6 5 0 6 9 0 6 0 0 6	0 0 2	1 9 9 9	0			3 9 0 0	1 0 0 2	0 0 0	1002	0 0 0 10 0 0	2 Bugle Majurs, 4 0 0 8 0 0 1 22 Dresser, 5 0 0 1 3 0 0 8 0 0 0 1 22 Dresser, 5 0 0 0 1 22 Dresser, 7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

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-

To Officer Commanding the Battali For a Mess, Regimental School and Stationery, Clothing, Average expense of Hutting Money,	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	0 0 27 2 8 0 0 0 0 0 0 C 8 0 0 0 15 8 0 9 0 F 0 1 9 0 0 15 6	0 120 0 0 0 120 0 0 0 120 0 0 0 N. B.—The above Statements of Clothing are entered coording to the Form furnished by the Military Auditor 0 17 6 0 0 12 0 0 Establishment will be found in the column of Remarks in Table 2 of this Section.
		ABSTRACT.	
	PRESENT ESTABLISHMENT.	PROPOSED ESTABLISHMENT.	Increase or Decrease of Expense.
Officers, Effective Staff, Non-Effective Staff, Adjutant and Quarter Master's Department, Medical Department, Bazar Establishment, Allowances, &c. Total per Mensem	374 7 0 366 15 0 406 3 77 8 6 350 10 8 72 0 1044 6 0 1137 14 0 1371 9 25 0 0 26 0 26 0 26 0 541 9 9 558 15 9 555 4	0 366 15 0 366 15 0 366 15 0 0 77 8 0 294 10 8 36 0 0 0 1044 6 0 01137 14 0 1371 9 0 0 25 0 0 25 0 0 26 0 0	Cost of present Establishment, 5435 9 9 5760 9 9 5652 4 5 16857 7 11 Cost of proposed Establishment, 3357 2 10 5713 9 9 5673 13 5 16744 10 0 Increase 0 0 0 0 0 0 6 21 9 0 21 9 0 Decrease 78 6 11 56 0 0 0 0 0 0 134 6 11 Total Decrease per Mensem 112 13 11

The following items have not been included in any of the calculations, as the corresponding charges in Bengal, Madras, and Bombay could not be obtained. Howing items have not been included in any of the calculations, as Original cost, and wear and tear of Ordnance and Carriages. Cost and wear and tear of Armanition Waggons and Carts. Cost and wear and tear of Arms and Accoutrements. Cost of practice Ammunition for Ordnance and for Small Arms. Hospital charges including Bazar Medicines. Europe Medicines. Barracks.

ALLOWANCES.

SECTION III.

TABLE 4.
Proposed Establishment of a Company of Golundauz Artillery for Bengal, Madras, and Bomboy, according to the existing Scale of Pay in each of the Presidencies.

	Beng	PAL.	MAI	SHAB.	Вох	IBAY.	
ESTABLISHMENT.	Total one of each.	Total of each.	Total one of each.	Total of each.	Total one of each.	Total of each.	REMARKS.
Officeus.							A CLOTHING, BENGAL. Total of each per Mensem.
1 Captain, 2 1st Lieutenauts, 1 2d Lieutenaut,	0 0 0 265 12 0 0 0 0	$\begin{array}{c cccc} 433 & 10 & 0 \\ 531 & 8 & 0 \\ 213 & 5 & 0 \end{array}$	$\begin{array}{c c} 0 & 0 & 0 \\ 265 & 12 & 0 \\ 0 & 0 & 0 \end{array}$	531 8 0	0 0 0 265 12 0 0 0 0	531 8 0	6 Naigues 1 0 0 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Non-Effective Staff.		1,178 7 0		1.178 7 0		1,178 7 0	50 Privates, 0 8 0 30 0 0 13 84 Subadar, 5 0 0 0 13 84 5 0 0 0 103
1 Pay or Orderly Havildar, 1 Brigade Havildar,	U 0 0 0	5 0 0	0 0 0	5 0 0	0 0 0	3 3	\$ Havidar, \$ Gun Lascars, - 1 0 0 0 9 1\$\\ \text{Naigue}\$, \$ 10 0 0 6 fus 11 Privates, \$ - 0 0 0 5 8 0 5 8 0 1 Lascar, \$ - 0 0 0 0 0 0 0 0 0 0 0 0 0
Native Commissioned, Non-Commissioned, and Rank and File.		7 0 0		7 0 0		7 0 0	Total per Mensem
1 Subadar, 2 Jemadars, 6 Havildars, 6 Naigues, 6 Bombardiers, 2 Buglers, under 16 years' service, 60 Privates,	14 0 0 0 12 0 0	67 0 0 49 0 0 84 0 0 72 0 0 57 0 0 22 0 0 420 0 0	0 0 0 21 8 0 14 0 0 12 0 0 9 8 0 11 0 0	49 0 0 84 0 0 72 0 0 57 0 0	0 0 0 24 8 0 14 0 0 12 0 0 9 8 0 11 0 0 7 0 0	*42 0 0 49 0 0 84 0 0 72 0 0 57 0 0 22 0 0	1 Subadar, - 0 0 0 97 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
GUN LASCARS.		771 0 0		746 0 0		746 0 0	# Naigue. A = 0 6 0 3 13 8
! Subadar, ! Jenadar, ! Havildar, ! Naigue, !! Privates,	- 59 0 0 22 8 0 9 8 0 8 0 0 - 5 12 0	8 6 10g 3 3 55 5 6 10g 3 6 10g 63 4 0	24 8 0 17 8 0 9 13 4 8 6 8 7 0 0	2 8 0 5 9 10 3 9 8	24 8 0 17 8 0 10 8 0 8 12 0 7 0 0	2 8 0 6 0 0 3 12 0	Total per Aunum
Establishmen't.		83 12 0		92 3 7?		92 12 0	Subadar,
i Puckally. 1 Bheasty Bengal, 2 Bombay. 1 Lascar Bengal and Madras, 3 Bombay. 1 Sweeper. 1 Lascar Boy.	0 0 0	5 0 0	0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 6 5 4 0 0 0	0 0 0 7 8 0 7 9 0 0 0 0 0 0	15 0 0 21 0 0 0 0 0 3 8 0	6 Naignes 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

* Under 6 years' acrvice.

Table 4 continued.

			·	
ARTIFICERS. 1 Malstry, 1 Mistry Smith, 1 Mistry Carpenter, 2 Smiths, 2 Carpenters, 2 Firemen, 2 Firemen, 2 Filemen, 2 Hammermen, 2 Bellows Boys, 1 Chuckler, ALLOWANCES. To Officer Commanding the Company, To repair of Arms, &c. and Stationery, For petty Stores, Contingent allowance for 6 Guns and Waggons, Contingent allowance for 1 spare Carriage and 1 Waggon, Contingent allowance for 1 Store, 1 Forge, and 1 Quarter Master's Cart, Head Money for 99 Natives Bengal and Bombay, and 114 Madras, Clothing, Average expense of Hutting Money,	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 14 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6 Havildars, 5 0 0 30 0 0 6 6 Naigues, 5 0 0 0 30 0 0 0 0 0 0 0 0 0 0 0 0 0 0
ABSTRACT.	Bengal.	Madras.	Bombay.	per month will be
Officers, Non-Effective Staff, Native Commissioned, Non-Commissioned, and Rank and File, Gun Lascars, Establishment, Artificers, Allowances, &c. Total per Mensem N. B.—The above Statements of Clothing are at The following items have not been included in any of the calculation original cost, and wear and tear of Ordneade and Carriages, Cost and wear and tear of Annuntion Waggons and Carris.	1,178 7 0 0 7 0 0 771 0 0 83 12 0 14 12 0 86 0 0 256 7 8 2,397 6 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1,178 7 0 0 7 0 0 7 0 0 0 7 0 0 0 0 0 0 0 0	1,178 7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2 Buglers, 2 0 0 4 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0
Cost and wear and tent of Arms and Accountermonts. Cost of Practice Ammunition for Ordnance and for Small Arms.	Europe Med Barracks	nemes,		Assuming a Relief to take place once every 3 years, the charge per month will be

SECTION III.

TABLE 5.

Comparative Statement of the Cost of a Golundaux Company of Artillery according to the existing Establishments of Golundaux Companies in the Bengal, Madras, and Bombay Artilleries, and according to the proposed assimilated Establishment of Ranks for the Golundaux Companies in the three Presidencies, with the rates of Pay as now existing, for the several Ranks in each Presidency, also an Abstract showing the difference of expense to the State between the existing Establishments and the proposed one.

	_	Pa	ESE	NT ESTABLISE	[M	ENT.		I			ED ESTABLI			existing Establishments and the proposed of
ESTABLISHMENT.	-	Bengal.		Madras,		Bombay,		Bongal,			Madras.	T	Bombay.	REMARKS.
	No.	Total of eac	h S	Total of each Rank,	No.	Total of each Rank.	No.	Total of Rank	each	No.	Total of ear Rank,	ch S	Total of each Rank,	
Officers. aptain,	1 2 1	531 8	0 2	433 10 0 531 8 0 213 5 0 1,178 7 0	1	531 8 0	2	433 10 531 8 213 5 1,178 7	0	1 2 1	433 10 531 8 213 5 7,178 7	0 :	1 433 10 0 2 531 8 0 1 213 5 0 1,178 7 0	The present Establishment of Gun Lass for a Battalion of Golundauz (of 6 C panies) consists of 2 Companies Madras, a 1 Bombay as follows: Madras Madras Bombay Madras Bombay Madras M
Non-Effective Staff.														(or Butteries) to consist of:
ny or Orderly Havildar, - rigade Havildar, -	1	2 0	0 1 0 3	- <u>-</u>	1			5 0 2 0		1	9 .		$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Subadar, 1 1 1 Privates, 77 77 Jemadar, 1 1 1 Lascar, 1 0 7 Invildars, 4 4 4 Boys 0 7 Naigues, 3 3 3 3 3
ATIVE COMMISSIONED, NON-COMMISSIONED, AND RANK AND FILE.	-	7 0	0	3 13 10		7 0 0		7 0	0		7 0	0	7 0 0	A CLOTHING, BENGAL. Total of each per Members. Total
ibadar, madars, avildars, aignes, ombardiers, uglers, under 16 years' service, -	- 60	40 0 84 0 72 0 0 0 22 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	112 0 0 96 0 0 0 0 0 22 0 0	6 0	49 0 0 84 0 0 72 0 0 0 0 0 22 0 0	2 6 6 2	49 0 84 0 72 0 57 0 22 0	0 0 0	1 6 6 6 2 60	49 0 84 0 72 0 57 0 22 0	0 1 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2 49 0 0 6 84 0 0 6 72 6 0 6 57 0 0 2 22 0 0	1 Subadar, 0 0 0 0 0 N 0 2 Jenndars, 3 0 0 6 0 6 Invitidars, 1 0 0 6 0 6 Naigues, 1 0 0 6 0 2 Buglers, 2 10 0 0 4 0 88 Privates, 0 1 0 0 0 44 0 1 Lascar, 0 0 0 0 0 4 1 Total per Mensem, 7 4 4 B CLOTHING, MADRAS. 7 Total of each per Annum.
GUN LASCARS.		910 0	o	965 0 0		759 0 0		771 0	0		746 0	0	746 0 0	1 Subadar, 0 01 0 96 0 2 Jemadars, 36 0 72 1 8 Havildars, 12 0 6 56 0
ubadars, emadars, avidars, aigues, rivates, under 16 years' service,	- 0	0 0	0 20	0 0 0	1	0 0 0	7 47 72.	3 6	5; 10; 10;	- }}	3 8 2 8 5 9 10 3 9 8 77 0		3 8 0 2 8 0 6 0 0 3 1 2 0	Binglers 12 0 0 950 91 Privates 6 0 0 552 0 Skibailar 6 0 0 0 552 0 Skibailar 6 0 0 0 552 0 Jemudar 6 0 0 12 0 0 Havilders 6 0 0 12 0 0 20 Privates 6 0 0 12 0 0 Bleusty 6 0 0 4 0
Maker sources (a. t. a. 1987) for solvenings of the solvening source of the solvening of th	!	0 0	o	173 10 8		122 8 0		83 12		-	$\frac{-}{92} {3} {7}$	-	92 12 0	Total per Annum

* Under 6 years' service.

	Table 5 continued.
ESTABLISHMENT.	C CLOTHING, BOMBAY. Total of each per Mensen. 1 Suhadar. U; 0; 0; 0
Puckallies, Bheasties, Lascars, Sweeper, Lascar Boy,	0 0 0 0 1 10 11 10 0 0 0 0 0 0 0 0 0 0
Artificers.	14 12 0 - 21 11 10 36 0 0 14 12 0 20 9 2 39 8 0 Total per Mensem
Mistry Smith, Mistry Carpenter, Smiths, Carpenters, Armourers.	0
To Officer Commanding the Company,	0 30 0 0 0 0 30 0 0 0 0 30 0 0 0 0 30 0 0 0 0 30 0 0 0 0 30 0 0 0 0 30 0 0 0 0 30 0 0 0 0 30 0 0 0 0 30 0 0 0 0 30 0 0 0 0 30 0 0 0 0 0 30 0 0 0 0 0 30 0 0 0 0 0 30 0 0 0 0 0 0 30 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Contingent Gun Allowance for 6 Guns and Waggons,	0 90 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Head Money for Natives, 109	Total.
Clothing,	0 A 74 4 0 0 IR 97 0 0 0 C 72 0 0 0 72 8 6 0 73 7 5 0 69 2 10 7 3 10 6 12 10 0 IC 9 13 11 0 F 7 11 6 0 6 9 2 0 7 2 11 0 7 3 10 6 8 10 6 8 10 6 12 10 7 10 10 11 10 10
• 1 Bheasty for Lascars to 11 Company of Golundauz.	Bheastics, 20 0 4 00 Total expenditure at every Relief

ABSTRACT OF TABLE 5.

The second control of the second control of	PRESENT	r Establis	HMENT.	Рвогозв	D ESTABLE	SHMENT.	Increase or	Decrease	of Expen	se.	
	Bengal.	Madras.	Bombay.	Bengal.	Madras.	Bombay.		Bengal.	Madras,	Bombay.	Total.
Officers. Non-Effective Staff, Native Commissioned, Non-Commissioned, and Rank and File, Gun Lascars, Establishment, Artificers, Allowances, &c. Total per Mensem	910 0 0 910 0 0 0 0 0 14 12 0 86 0 0 249 10 10	3 13 10 965 0 0 173 10 8 21 11 10 112 4 9 156 3 11	7 0 0 759 0 0 122 8 0 36 0 0 88 0 0 248 1 6	7 0 0 771 0 0 83 12 0 14 12 0 86 0 0 256 7 8	7 0 0 746 0 0 92 3 7 20 9 2 102 12 5 259 14 4	7 0 0 746 0 0 92 12 0 39 8 0 88 0 0 253 12 8	Cost of proposed Establishment, Decrease per Mensem	2445 13 10 2397 6 8 48 7 2	2406 14 6		7209 12 10

The following items have not been included in any of the calculations, as the corresponding charges in Bengal, Madras, and Bombay could not be obtained.

Original cost, and wear and tear of Ordnance and Carriages.

Cost and wear and tear of Arms and Carriages.

Cost and wear and tear of Arms and Accourtements.

Cost of practice Ammunition for Ordnance and for Small Arms.

Hospital charges including Bazar Medicines.

Europe Medicines.

Barracks.

SECTION IV.

TABLE 1.

Table showing the Psy and Allowances of every Rank, &c. in a Horse Field Battery, also in a Bullock Battery of Bengal, Madras, and Bombay, with the Pay of the several Ranks according to the present rates of Pay at each Presidency. In the first column every grade in the three Horse Field Batteries and Bullock Batteries is entered; the Europeans and Natives of all Ranks which are recommended to be left out in the new Establishment are distinguished by the columns for Pay under proposed Establishment being left blank; those to be retained in the new Establishment are distinguished by having the same columns filled in, the Europeans according to the new proposed Scale of Assimilated Pay, the Natives according to the Pay of their respective Presidencies.

	DANTE CA	P	RES	EN:	т Езт	ABI	ISI	MENT.			P	KOI	POSI	ED Es	TA	BLI	ние	NT.	
No.	RANKS, &c.	Вепр	gal.		Mad	ras.		B om	bay		Ben	gal	.	Ma	dra	3,	Bo	mba	ıy.
	Horse Field Battery, Effective.																		
1 1 1 1 1 1 1 1 1	Farrier, under 17 years' service, Havildar, Naigue,	*46 *42 0 9	12 0 0 0 8 0	0 0	0 0 0 0 16	0 0 0 0 10 0 6	0 0 0	0 21 0 10 8	0 0 0	0000000	0 0 *42 9 0 9	0 12 0 0 8 0	0080000	0 *42 16 0 12 8	0 0 12 10 0 0 6 0	0 0 8 4	0 *42 21 0 10 8	0 0 12 0 0 8 12 0	0 0 8 0 0 0 0
1	Non-Effective.	- o	0	0	0	0	0	10	8	0	0	0	o	0	0	o	O	o	0
1	Establishment. Moochy,	5 0 5 0	0000	0	0	11	9 10 0 0	a	8 0 8 0	Λl	ച	0	0 0 0	10	- Ol	9 10 0 0	- 7	ol	0 0 0
1	FOLLOWERS. Horsekeeper Choudry, Grass-cutter Choudry (or Muccadum,) Syce or Horsekeeper, Grass-cutter,	0 0 4 3	0 0 0 8	0	8 8 5 4	12 12 4 0	0 0	0 10 6 5	0 0 0 0	0	8 8 4 3	12 12 0 8	0 0 0 0	8 8 5 4	12 12 4 0	0 0 0	10 10 6 5	0	0
1 1	7, 24, 2000, 7	200 7 0 5 5 5	0 4 0	0	17 0 12 6	0008	0 0 0	0 0 0	0 0 0 0 0	0 0 0	5	0 0 4 0 0	0 0 0 0 0	17 0 12 6	0	0 0 0 0 0	15 17 0 12 6 7	0	0

^{*} Includes compensation in lieu of Rations, Rupees 6-5-4 each.

SECTION IV.

TABLE 2 A

Proposed Establishment for a Horse Field Battery for Bengal, Madras, and Bombay, with one Scale of assimilated Pay for Europeans; and Natives, according to the Pay of their respective Presidencies.

	Ben	GAL.	Мај	RAS.	Вом	IBAY.	
ESTABLISHMENT.	Total one of each.	Total of each.	Total one of each.	Total of each.	Total one of each.	Total of each.	REMARKS.
Effective Staff, &c.		*43 8 8		*43 8 8	0 0 0	•43 8 8	A CLOTHING, BENGAL, Cach per Mensem. Total of Cach per M
1 Staff Serjeant, 1 European Farrier and Saddler, 1 Native Farrier, 3 Havildars, 3 Naigues, 60 Drivers,	0 0 0 0 0 0 9 8 0 6 0 0	9 0 0 28 8 0 24 0 0 360 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	*42 12 8 16 10 4 36 0 0 25 4 0 420 0 0	0 0 0 0 0 0 10 8 0 8 12 0 7 0 0	42 12 8 21 0 0 31 8 0 26 4 0 420 0 0	3 Naigues
Establishment.		507 13 4		584 3 8		- - -	1 Native Farrier, 0 0 0 43 14 14 15 3 Havildars, 12 0 0 36 0 0 3 80 igues, 6 0 0 18 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
l Moochy, 1 Puckally, 1 Bheasty, 4 Recruit Boys,	0 0 0	0 0 0 5 0 0 0 0 0	0 0 0 0 0 3 8 0	10 11 10 0 0 0 14 0 0		7 8 0 0 0 0	1 Puckally, 0 0 0 6 6 0 0 Total per Anaum 559 11 $\frac{1}{1_2}$ Total per Mensem $\frac{559}{46}$ 10 $\frac{1}{10}$ C CLOTHING, BOMBAY. Total of each per C. Total
Followers.		10 0 0		32 5 7		18 0 0	Mensem. 1 Staff Serjeant,
1 Horsekeeper Choudry, 1 Grass-cutter Choudry, 66 Syces or Horsekeepers, 126 Grass-cutters,	0 0 0 0 0 0 4 0 0 3 8	8 12 6 8 12 6 264 0 6 441 0 6	0 0 0 5 4 0	346 8 0	0 0 0 0 0 0 6 0 0 5 0 0	10 0 0 10 0 0	1 Native Farrier, 0 0 0 0 1 1 8 0 3 4 avillars, 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
ALLOWANCES.		722 8 0		868 0 0			▶ HUTTING MONEY, BENGAL. Total of each. Total of each. 1 Native Farrier, 0 0 0 1 1 8 0 6 10 0 15 0 0 0 15 0 0 0 15 0 0 0 0 15 0 0 0 0
For Shoeing 126 Horses, For providing Shoes, Head and Heel Ropes for 126 Horses, For repairing 118 Sets of Harness, &c. For keeping up and in repair 67 Saddles and Horse, Accourtements, For repairing 8 Saddles,	0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2 12 5 1 12 6 1 12 6			252 0 0 T	3 Havildars, 5 0 0 0 15 0 0 0 15 0 0 15 0 0 15 0 0 15 0 0 15 0 0 15 0 0 15 0 0 15 0 0 0 15 0 0 0 15 0 0 0 0

^{*} Includes compensation for Rations at 6-5-4 each.

For Gram-pots, &c. For Cavessons and Cotton Ropes, Horse Allowance for 1 Captain, for 3 Subalterns, Veterinary Allowance for 126 Horses, Head Moncy for 69 Natives Bengal and Bombay, and 269 Madras, Clothing, Average expense of Hutting Money,	0 0 0 0 20 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 20 0 0 0 0 0 0 0 0 0 0 0 0 0 0	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Total Total Total Total
ABSTRACT. Effective Staff, &c	BENGAL. 507 13 4, 10 0 0 722 8 0 690 11 1 1,931 0 5	MADRAS. 584 3 8 32 5 7 868 0 0 951 2 1 2,435 11 4	1,000	1 Notive Farrier, 0 0 0 2 0 0 3 1 avildars, 4 0 0 12 0 0 3 1 avildars, 4 0 0 12 0 0 0 0 0 0 0 0 0

G The Saddles, &c. at Madras are kept up as well as repaired on this allowance, those at Rengal and Bombay are only repaired. The whole of the Saddlery and Harness in Bengal and Bombay are renewed periodically at the expense of Government.

N. B. The above Statements of Clothing are entered according to the Form furnished by the Military Auditor General.

The following items have not been included in any of the calculations, as the corresponding charges in Bengal, Madras, and Bombay could not be obtained.

Original cost, feeding and wear and tear of Horses.

Cost and wear and tear of Saddlery and Horse Appointments.

Hospital charges including Bazar Medicines.

Europe Medicines.

Houses for Stabling in Bengal.

SECTION 1V.

TABLE 3 A.

Comparative Statement of the Cost of a Horse Field Eattery according to the existing Establishments in the three Artilleries, and according to the proposed Establishment of a Horse Eattery for the three Presidencies, with an Abstract showing the difference of expense to the State between the existing Establishment, and the proposed one.

		P	RESENT	· Es	втавіл	SHME	NT.					Pro	ros	ED	Esta	BLI	SHM	ient	۲,		
ESTABLISHMENT.		Bengal.		Me	dran.	_ _		mbay			Benga		_[_	_	Madra				milin		REMARKS.
	ò	Bengal. Total of Rani	each o	To	ital of ea Rank.	uch 2	T	otal of Ran	ench k.	No.	Total Ra	of ca mk.	ch z	<u> </u>	Total o Ro	of cac nk.	h c	T	otal o Rai	f cach	
																		Ì			A CLOTHING, BENGAL. Total of cach per Menseen,
Effective Staff, &c. Staff Serjeant, Lough Rider and Farrier Serjeant,	0	0 0 *46 1	0 0 2 8	1 *	49 4		1 .	46 1	2 8				8	1 0	*43		8	1 0	*43	8 8	1 Rough Rider and Farrier Serjeant
Assistant Farrier and Saddler, - Luropean Farrier and Saddler.	1 0	*421	2 8	0	0 0	0	0	0	0 0	0	*42	0 12	0	0	*42	0	0	ő	0 *42	0 0 12 8	Total per Mensem
Vative Farrier, Farriers, under 17 years' service, Tavildars,	- 1 0 - 3		0 0	2 2	0 0 33 4 24 0	8	$\frac{1}{0}$	0	0 0 0 0		9 0 28	- 1	0	0	16 0 36		4 0	0 0	إن	0 0 0	1 Staff Serjeant, Mensem.
Vaigues, Drivers, under 16 years' service, Bullock Drivers,	60 3	24 360	0 0 4	2	16 13 308 0 0 0	0 4	2	17 280	8 0 0 0		24 360	Ö	0	3 69 0	25 420 0	Ô		3 30 0	26	4 0 0 0 0 0	2 Farriers, 4314 14 87.12 2 Havildars, 12 0 0 24 0 2 Naigaes, 6 0 0 12 0 44 Drivers 6 0 0 201 0
		526	1 4	4	122 6	9		356	4 8		507	13	4	Ì	584	3	8		585	1 4	Total per Annum
Non-Effective.								- 1						ĺ							C CLOTHING, BOMBAY. Total of cach per Total
European Farrier,	- 0	0	0 0	0	0 0	0	1	10	8 0	O	Ü	0	U	0	0	O.	0	0	o	0 0	Measons
ESTABLISHMENT												-		-		ļ			İ	1	Total per Mensem
Moochy, Puckally, Bheasty, Recruit Boys,	- 1 0 - 1 0	5 0	0 0	1 0 4	7 9 10 11 0 0 14 0 32 5	10 0 -	1 0 1	0 7 0	8 0 8 0 8 0	0 1 0	5 0	0 0	0 0 0 0	1 1 0 4	0 14	11 1 0 0	0	1 0 1 0	0 7 0	8 0 0 0 8 0 0 0	1 (40.15)
Fot lowers.	<u> </u>	10	0 0	-	32 8	-	-	18	0 0		10	-0	0		32	5	7	-	18	0 0	Total expenditure at every Relief 322 8 Assuming a Relief to take place ance every 3 years, the charge per mouth will be
Horsekeeper Chandries, Grass cutter Chandries, (or Muces	- 1			1	į.	U		0		ì	5	12	0	1	8	12	0	,	10	0 0	F. HUTTING MONEY, MADRAS. Total of cach Total of cach 2 o 0 d 4 or 2 llavildars, 4 0 8 0 8 0
dunis.) Syres or Horsekeepers, Grass cutters,	$\frac{1}{7}$	292			$\begin{array}{c c} & 6 & 12 \\ 267 & 12 \\ 392 & 0 \end{array}$	$\begin{bmatrix} 0 \end{bmatrix}$ 3	iii :	10 216 445	0, 0	GĠ	264 441	12 0	0 0	1 56 26		12		id] :	396	0 0	2 Nangues, 3 0 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
	1	722	8 0	-	677 4	0	- 1	671	-	1	722		0		565	- -	0	-	-		Total expenditure at every Relief. 108 0 Assuming a Relief to take place once every 3 years, the charge per month will be 3 0

Table 3 continued.

	1	1	ī	<u> </u>	1	i i	1	ī	1 1	1	1				1		1	1	
ALLOWANCES.				1		1	1								1	1			
•	ı	1	! !	ı	l	1 1	1	1					i		1			- 1	
For Shocing Horses,	123	246	0	0 0	0	0	0 (0	0	0	0 126	252	0	0 0	0	0	0 0	0	0 6)[
For providing Shoes, Head and		1			•		ı								-				F HUTTING MONEY, BOMBAY. Total of Total.
Heel Ropes,	- (0	0	0 98	274	11	s 89	178	0	0 0	0	0	0 126	352		6 126		0 0	each.
For repairing Harness, &c	118	177	0	0 92	161	0	0 84	126	0	0 118	177	0	0 118	206	8	0 118	177	0 0	1 Native Farrier, 0 0 0 2 0 0 2 Havildars, 4 0 0 6 0 0
For repairing Saddles, &c	5	5	0	0 51	89	4	0 5	5	0	0 8	8	0	0 67	117	4	0 8	8	0 (2 Naigues,
For Gram-pots,	1 0	20	ol	ol o	0	0 0	ol o	0	0	0 0	20	0	0 0	20'	0	0 0	20	0 (1 40 Drivers, 2 0 0 80 0 0 0
For Cavessons and Cotton Ropes,	10	5	0	ol o	1 0	0.0	ol o	5	0	0 0	5	0	0 0	5	0	0 0	5	0 (1 Bheasty, 0 0 0 2 0 0
Horse Allowance for 1 Captain, .	1	60	ol	0 1	60	0 0	0 1	60	0	0 1	60	0	0 1	60	0	0 1	60	0 0	
,, for Subalterns,	3	90	o	0 3	90	0 0	0 3	90	0	0 3	90	0	0 3	90	0	0 3	90	0 0	Assuming a Relief to take place once every 3 years, the charge per
" , for 1 Asst. Surgeon,	0	0	lol	0 1	30	l oi e	o lo	0	0	0 0	0	0	0 0	0	0	0 0	0	0; (month will be 2 11 63
	123	15	G	0 98	12	3 (89	11	1	1 126	15	12	0 126	15	10	8 126	15	[0]	
Head Money for Natives, -	69	! 8	10	0 208	26	ol (0 46	5	12	0 69	8	10	0 269	33	10	ol 69	8 1	10 0	
Clothing.	0	A 45	8	0 0	B 36	13 (o lo	C 29	8	ol o	45	8	0 0	46	10	6 0	45	81 (N. B.—The Particulars of the above charges for the "Pro-
Average expense of Hutting Money,	l o	1 8			E 3		o o	2	11			13	1 0	4	0	5 0	4	0 8	posed Establishment" will be found in the column of Remarks in Table 2 A of this Section.
l			<u>-</u> -				_	I	_].	_[- -	-		-	[The above Statements of Clothing are entered according to
,	1	681	7	4	782	5	ß	453	0	7	690	11	1	951	2	1	685	t3l :	the Form furnished by the Military Auditor General-

ABSTRACT.

	PRESENT ESTABLISHMENT.	PROPOSED ESTABLISHMENT.	INCREASE OR DECREASE OF EXPENSE.
	Bengal, Madras, Bombay.	Bengal, Madras. Bombay.	Bongul. Madras. Bombay. T
Effective Staff, &c Non-Effective, Establishment,	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Cost of present Establishment, - 1949 0 8 1914 5 10 1538 13 3 339: Cost of proposed Establishment, 1931 0 5 2435 11 4 2334 14 5 670 Increase

♣ The Saddles, &c., at Madras are kept up as well as repaired on this allowance, those at Bengal and Bombay are only repaired. The whole of the Saddlery and Harness in Bengal and Bombay are renewed periodically at the expense of Government.

The following items have not been included in any of the calculations as the corresponding charges in Bengal, Madras, and Bombay could not be obtained.

Original cost, feeding and wear and tear of Horses.

Cost and wear and tear of Saddlery and Horse Appointments,

Hospital charges including Bazar Medicines.

Europe Medicines.

Houses for Stabling in Bengal.

SECTION IV.

TABLE 2 IB.

Proposed Establishment for a Rollock Battery for Bengal, Madras, and Bombay, with one Scale of assimilated Pay for Europeans; and Natices, according to the Pay of their respective Presidencies.

ESTABLISHMENT.		NGAL.	į.	DRAS.		BAY.	REMARKS.
and the state of t	Total one of each.	Total of each	Total one of each.	Total of each.	Total one of each.	Total of each.	
ESTABLISHMENT. 1 Bullock Serjeant (Non-Effective,) 1 Darogah,	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 29 0 0 0 0 0 0 0 430 0 0	0 0 0 0 0 0 12 0 0 6 8 0	0 0 0 36 0 0 559 0 0 7 0 0	0 0 0 0 0 0 0 0 0 12 0 0 6 8 0 0 0	17 0 0 0 0 0 36 0 0 559 0 0 7 8 0	Total per Annum
ALLOWANCES. Stationery, Head Money for 90 Natives Bengal and Bombay, and 91 Madras, Clothing, Average Expense of Hulting Money,			0 2 0	612 0 11 6 0 18 47 8 0 15 5 3 1	ol ol c	634 8 0 6 12 6 11 4 0 C 47 0 0 F 5 3 1	3 Chondrices, 1 0 0 43 0 0 6 45 0 0 0 45 0 0 0 45 0 0 0 45 0 0 0 0 45 0 0 0 0 0 0 0 0 0
ABSTRACT. Establishment, Allowances,	BES 477 6		MA1		Box 63 70		1 Darogah. 3 Chondres. 3 Chondres. 3 Chondres. 3 Darogah. Total expenditure at every Relief. Assuming a Relief to take place once overy 3 years, the charge per 3 Darogah. N. B.—The above statements of Clothing are entered as
Total per Mensem	54	7 12 5	70	1 13 1	70-		cording to the form furnished by the Military Auditor General

Original cost, feeding and wear and tear of Bullocks.

Hospital charges including Bazar Medicines.

Original cost, feeding and wear and tear of Bullocks.

Europe Medicines.

SECTION IV.

Comparative Statement of the Cost of a Bullock Battery according to the existing Establishments in the three Artilleries and according to the proposed uniform Establishment of a Bullock Battery for the three Presidencies, with an Abstract showing the difference of Expense to the State between the existing Establishments and the proposed one.

	PRESENT	r Establishment.	Рворо	SED ESTABLISHMENT.	
ESTABLISHMENT.	Bengal,	Madras. Bombay.	Bengal.	Madras, Bombay	REMARKS.
•	Total of each c Rank.	Total of each Rank.	ch o Total of each Rank.	Madras, Bombay of Total of each Front of Rank. Rank	cach
ESTABLISHMENT. Bullock Serjeant (Non-Effective), - Darogah, Sirdars, Choudries, Drivers, - Bheasty, Stationery, Head Money for Natives, Hutting Money,	1 20 0 0 1 0 0 0 0 1 4 29 0 0 0 0 0 0 0 3 59 295 0 0 72 1 5 0 0 0 349 0 0 0 10 0 0 63 7 14 0 76 0 33 8 0 0	10 0 0 0 0 0 0 0 0 17 0 0 0 0 0 0 0 0 0	0 1 15 0 0 0 0 0 0 0 0 4 29 0 0 0 86 430 0 0 0 1 5 0 0 479 0 0 0 6 12 0	1 15 0 0 1 15 0 1 17 0 0 1 17 0 0 0 0 0 0 0 0 3 36 0 0 3 36 0 86 559 0 0 86 559 0 1 7 0 0 1 7 8 634 0 0 634 8 0 612 0 0 613 0 11 6 0 90 11 0 0 47 8 0 0 47 6 0 5 3 1 0 5	A CLOTHING, BENGAL.
		A	BSTRACT.	·	
PRES	ent Establishme	ENT. PROPOSED E	STABLISHMENT.	1	INCREASE OR DECREASE OF EXPENSE.
T The part in the colu The abov	0 531 0 0 5 57 5 9 5 588 5 9 6 1 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2	0 0 0 479 0 0 634	13 70 13	a'	ablish 547 12 5 704 13 1 704 11 1 1957 4
The following items have not been incl Original cost, fee	uded in any of the calc ling and wear and tear including Bazar Medi	ir of Bullocks.	g charges in Bengal,	Madras, and Bombay could no	t be obtained.

Hospital charges including Bazar Medicines. Europe Medicines.

SECTION V.

TABLE 1.

A Comparative Return in one view of one Head Quarters of a Horse Brigade, one Head Quarters of a European Battalion of Foot Artillery, and one Head Quarters of a Golundauz Battalion of Artillery in Bengal, Madras, and Bombay, showing the several Ranks and the number and designation of each Rank in each of the Presidencies, according to the existing and proposed Establishments.

	HORSE AF	RTILLERY.			EUROPEAN FO	OT ARTILLERY.			GOLUNDAUZ	ARTILLERY.	
Ďв	esent Establishmi	ENT.	PROPOSED ASSIMI- LATED ESTABLISM-	Pa	ESENT ESTABLISHE	ent.	PROPOSED ASSIMI-	Pa	esent Establishm	ENT,	PROPOSED ASSIMI-
Bengal.	Madras.	Bombay.	MENT,	Bengal.	Madras.	Bombay.	MENT.	Bengal.	Madras.	Bombay.	MENT.
- Annual	OFFIC	CERS.			OFF	CERS.			OFFI	CERS.	,
1 Colonel, 1 Lt. Colonel, 1 Major, 1 Captain, 2 1st Lieutenants, 1 2d Lieutenant.	2 Lt. Colonels, 2 Majors, 1 Captains,	1 Lieut. Colonel, 1 Major, 1 Captain, 2 1st Lieutenants,	1 Colonel, 1 Lt. Colonel, 1 Major, 1 Captain, 2 1st Licutenants, 1 2d Licutenant.	1 Colonel, 1 Lieut, Colonel, 1 Major,	1 Colonel, 1 Lt. Colonel, 1 Major,	1 Colonel, 1 Lieut. Colonel, 1 Major,	1 Colonel, 1 Licut. Colonel, 1 Major,	l Colonel, l Lt. Colonel, l Major,	I Colonel, I Lieut. Colonel, I Major,	1 Colonel, 1 Liout. Colonel, 1 Major,	l Colonel, l Lt. Colonel, l Major,
		VE STAFF.			EFFECTIV	E STAFF.			EFFECTI	VE STAFF.	
l Riding Master, l Serjeant Major, l Qr. Mr. Serjeant, l Drill Serjeant,	l Serjeant Major,		I Riding Master, I Serjeant Major, I Qr. Mr. Serjeant, I Drill Serjeant,	i Serjeant Major, i Qr. Mr. Serjeant, i Drill Sorjeant,	1 Serjeant Major, 1 Qr. Mr. Serjeant, 1 Drill Serjeant,	1 Serjeant Major, 1 Qr. Mr. Serjeant, 1 Drill Serjeant,	l Serjeant Major, l Qr. Mr. Serjeant, l Drill Serjeant,		l Serjeant Major, l Qr. Mr. Serjeant,	1 , ,	, , ,
School Mr. Scrjt. Hospital Scrjt. Farrier Major.		1 School Mr. Serjt. 1 Hospital Serjt. 1 Farrier Major.	1 School Mr. Scrit. 1 Hospital Scrit. 1 Farrier Major.	1 School Mr. Scrit. 1 Hospital Scrit.	1 School Mr. Scrjt.	l School Mr. Serjt. l Hospital Serjt.	i School Mr. Serjt. i Hospital Serjt.	I Drill Havildar,	I Drill Havildar,) 1 Drill Havildar,
Trumpet Major,	1 Trumpet Major,			O Duelo Waine	9 Puele Moiere	2 Duelo Maiore	D. Duyle Majaya	l Havildar Major, l Qr. Mr. Havildar,			l Havildar Major,
Trumpet Major, Rough Ridr, Scrit. Drill Corporal.	t frampet Major,	1 Trumpet Major,				2 Buglo Majors, 1 Drill Corporal.		2 Bugle Majors, I Drill Naigue.	2 Bugle Majors, 1 Drill Naigue.		2 Bugle Majors, 1 Drill Naigue.

SECTION V. Table 1 continued.

					240(0 1	continucu.					
	HORSE AF	RTILLERY.			EUROPEAN FO	OT ARTILLERY.			GOLUNDAUZ	ARTILLERY.	
Pa	ESENT ESTABLISHME	NT.	Риоровий Аввии-	ł	BSENT ESTABLISUE	ENT,	PROPOSED ASSINI-	Pı	desent Estadlishin	ENT.	PROPOSED ASSIN
Bengal.	Madras.	Bombay.	LATED ESTABLISH- MENT.	Bongal.	Madras.	Bombay.	MENT.	Bengal.	Madras.	Bombay.	MENT.
	NON-EFFECT	TIVE STÂFF.			NON-EFFEC	TIVE STAFF.	,		NON-EFFEC	TIVE STAFF.	
	1 Adjutant,							l Adjutant,	I Adjutant,	1 Adjutant,	l Adjutant,
Adjt, & Qr. Mr.	l Quarter Master,	1 Adit, & Qr. Mr.	l Adjt, & Qr. Mr.	1 Adjt. & Qr. Mr.	l Adjt. & Qr. Mr.,	l Adjt. & Qr. Mr.	1 Adjt. & Qr. Mr.	Qr. Mr. & Inter.	1 Qr. Mr. & Inter.	l Qr. Mr. & Inter.	l Qr. Mr. & Inte
						ļ		l Subadar Major,	1	l Subadar Major,	l Subadar Major l Native Adjutar
									Native Adjutant,	l Havildar Major,	I Native Adjuta
	i							<u> </u>	ļ	l Drill Havildar,	
										l Drill Naigue,	
Librariau,		1 Librarian,	1 Librarian,	l Librarian,		l Librarian,	1 Librarian,			2 Bugle Majors,	
	l Hospital Scrjt.			1 Eurpn. Butcher,	1 Hospital Scrjt.						
	l Rending Muster,				<u> </u>				l———	ļ	
	t Writing and Cy- phering Master,	}									
	paering staster,					l Camp Colorman,					
						2 Pay Havdrs, for Gun Lascars.				2 PayHavldrs. for Gun Lascars.	
ADJUTAN	T AND QR. I	IR.'S DEPA	RTMENT.	ADJUTAN	TANDOR. 1	MR.'S DEPAR	TMENT.	ADTITUAN	I IT AND QR. I	•	TMENT
	1 Moonshee,		(————		1 Moonshee,		(1) Moonshee,		r
						l Pundit,		I Pundit,		I Pundit,	ĺ
Tindal,			No alteration in	l Tindul,			No alteration in	l Moulvie,	I Tindal,		No alteration
Lascars,			this Establish	2 Lascars,			this Establish.		2 Lascara,		this Establis
		5 Sweepers,	ment.			1 Sweeper,	ment except the				ment, exe
							Lascar boys; re- moved to Com-	n D01		2 Bheasties, for Lascars,	theimsearhe
								3 Gunta Pandics,		Lascars,	Companies a
						1 Lamp Boy,				<u> </u>	Bheasties e
			·				<u></u>		30 Recruit Boys,	6 Boys,	celled.
- Norman - Control - Contr					ta Lasenr Hoya,	6 Lasenr Boys,			10 Pension Boys, 1 16 Lascar Boys.	6 Luseur Boys.	

		HORSE ART	HLLERY.			EUROPEAN F	OOT ARTILLERY			GOLUNDAUZ	ARTILLERY.	
	PR	esent Establishme	NT.	Phoposed Assimi- Lated Establish-	1	resent Establishi	MENT.	PROPOSED ASSIMI- LATED ESTABLISH-	Pier	ESENT ESTABLISHME	NT.	C BOPOSED ASSIS
	Bengal.	Madras.	Bombay.	MENT.	Bengal.	Madras.	Bombay,	MUNT.	Bongal.	Madras,	Bombay.	MENT.
	-	MEDICAL D	EPARTMENT			MEDICAL DI	EPARTMENT.			MEDICAL DI	EPARTMENT.	•
	l Surgeon, l Asst. Surgeon,	t Surgeon,		1 Surgeon, I Assist, Surgeon,	l Surgeon,	,, ,	1 Surgeon, 1 Assist. Surgeon,	1 Surgeon, 1 Assist. Surgeon,	l Surgeon,	1 Surgeon, 1 Assist, Surgeon,		l Surgeon, l Assist. Surgeo
1	Vetry, Surgeon,	3 Vetry. Surgeons,	l Vetry, Surgeon,	l Vetry. Surgeon,	- Instant Surgeon,	- Itsoan Dagoon,	1 Apothecary,	- Louis of Cargoon	Thomas Durgeon,	Prosise, Chigeons		
	l Apothecary, l Steward,				1 Steward,		1 Steward,				I Apothecary, I Stoward,	
				No alteration in		1 2d Apothecary, 1 Asst.Apothecary,	I Asst. Apothecary,	No alteration in		1 Asst, Apothecary,	1 Asst, Apothecary,	 No alterati
				these Classes.		1 2d Dresser,		those Classes.	l Native Doctor,	1 2d Dresser,		in these Classes.
			4 Hallalcores.			2 Totics,	2 Hallalcores.			2 Toties.		
1						It Tree mital Writer		11 1	1			11
		Hospital Writer				1 Hos pital Writer.		· ·		1		ען
		BAZAR ESTA	BLISHMENT	•	[BAZAR ESTAI	BLISHMENT.		l	BAZAR ESTA		
Ì	l Choudry, l Mutsuddy,	BAZAR ESTA	•	No alteration in	1 Choudry,	BAZAR ESTAI		No alteration in	l Choudry, l Mutsuddy,		BLISHMENT	n -
Ì	l Choudry,	BAZAR ESTA	BLISHMENT 1 Choudry,	1	1 Choudry,	BAZAR ESTAL	BLISHMENT.		l Choudry,			No alterat
Ì	l Choudry, l Mutsuddy, 3 Flagmen and	BAZAR ESTA	BLISHMENT 1 Choudry,	No alteration in	1 Choudry, 1 Mutsuddy, 3 Flagmen and .	BAZAR ESTAI	BLISHMENT.		1 Choudry, 1 Mutsuddy, 3 Flagmen and	1 Choudry,		No alterat
Ì	l Choudry, l Mutsuddy, 3 Flagmen and	BAZAR ESTA Choudry, Peous. FOLLO	BLISHMENT 1 Choudry,	No alteration in	1 Choudry, 1 Mutsuddy, 3 Flagmen and .	BAZAR ESTAL	BLISHMENT.		1 Choudry, 1 Mutsuddy, 3 Flagmen and	1 Choudry,	l Choudry,	No alterate in these Chases.
Ì	I Choudry, I Mutsuddy, 3 Flagmen and Weighmen,	BAZAR ESTA 1 Choudry, 2 Peous. FOLLO	BLISHMENT 1 Choudry, 1 Peon. 1 Peon. 2 Horsekeepers,	No alteration in these Classes.	1 Choudry, 1 Mutsuddy, 3 Flagmen and .	1 Choudry,	BLISHMENT.		1 Choudry, 1 Mutsuddy, 3 Flagmen and	1 Choudry,	l Choudry,	No alterat
Ì	1 Chondry, 1 Mutsuddy, 3 Flagmen and . Weighmen, 9 Syccs,	BAZAR ESTA 1 Choudry, 2 Peous. FOLLO	BLISHMENT Choudry, Peon. Peon. Horsekeepers,	No alteration in these Classes.	1 Choudry, 1 Mutsuddy, 3 Flagmen and .	1 Choudry,	BLISHMENT.		1 Choudry, 1 Mutsuddy, 3 Flagmen and	1 Choudry,	l Choudry,	No altera
Ì	1 Chondry, 1 Mutsuddy, 3 Flagmen and . Weighmen, 9 Syccs,	BAZAR ESTA 1 Choudry, 2 Peous. FOLLO	BLISHMENT Choudry,	No alteration in these Classes.	1 Choudry, 1 Mutsuddy, 3 Flagmen and .	1 Choudry,	BLISHMENT.		1 Choudry, 1 Mutsuddy, 3 Flagmen and	1 Choudry,	l Choudry,	No altera
Ì	1 Chondry, 1 Mutsuddy, 3 Flagmen and . Weighmen, 9 Syccs,	BAZAR ESTA 1 Choudry, 2 Peous. FOLLO	BLISHMENT Choudry,	No alteration in these Classes.	1 Choudry, 1 Mutsuddy, 3 Flagmen and .	1 Choudry,	BLISHMENT.		1 Choudry, 1 Mutsuddy, 3 Flagmen and	1 Choudry,	l Choudry,	No alterate in these
Ì	1 Chondry, 1 Mutsuddy, 3 Flagmen and . Weighmen, 9 Syccs,	BAZAR ESTA 1 Choudry, 2 Peous. FOLLO	BLISHMENT Choudry,	No alteration in these Classes.	1 Choudry, 1 Mutsuddy, 3 Flagmen and .	1 Choudry,	BLISHMENT.		1 Choudry, 1 Mutsuddy, 3 Flagmen and	1 Choudry,	l Choudry,	No altera

A Comparative Return in one view, of one European Troop, one Natice Troop, one European Company, and one Golun Rank, in each of the Presidencies according to the existing and Proposed Establishments.

	EUROPEA	n Troop.	•				
Ps	RESERT ESTABLISHM	BNT.	Proposed Assimi- lated Establish-	Pi	ESENT ESTABLISHMEN	T.	Proposed Assina
Bengal.	Madras.	Bombay.	ment.	Bengal.	Madras.	Bombay.	- lated Establish- ment.
1 Captain, 2 1st Lieuts, 1 2d Lieut,	OFFIC 1 Captain, 3 1st Lieuts.	2 1st Lieuts.	1 Captain, 2 1st Lieuts. 1 2d Lieut,	1 Captain, 2 1st Lieuts, 1 2d Lieut.	OFFICE 1 Captain, 3 1st Lieuts.	ERS.	11 Captain, 2 1st Licuts. 11 2d Lieut.
1 Staff Serjeant, 2 Rough Riders. 1 Saddler Serjt. 1 Pay or Ord, St.	NON-EFFECT	1 Serjt Najor, 1 Qr. Mr. Serjt. 1 Rid. Mr. Serjt. 1 Rough Rider. 1VE STAFF. 1 Saddler Serjt. 1 Pay or Ord. St.	1 Saddler Serjt. 1 Pay or Ord. St. 1 Drill Corporal, 2 Rough Riders.	1 Staff Havildar, 1 Payor Ord. Hr.	3 Serjeants, 3 Serjeants, 1 Troop Hv. Maj. 1 Drill Havildar, 1 Drill Naigue, NON-EFFECTI		1 Troop Qr. Mr 1 Staff Serjeant 1 Troop Hv. Ma 1 Saddler Serjt. 1 Payor Ord. Hr 1 Drill Naigue, 2 Rough Rizers,
NON-CO 6 Serjeants, 6 Corporals, 10 Bombardiers, 2 Trumpeters, 2 Half-pay do. 2 Farriers, 80 Gunners,	6 Serjeants, 6 Corporals, 12 Bombardiers, 2 Trumpeters, 3 Farriers, 84 Gunners,	6 Serjeants, 6 Corporals, 10 Bombardiers, 3 Trumpeters, 2 Farriers, S0 Gunners, 1 Boy.	6 Serjeants, 6 Corporals,	1 Subadar, 1 Jemadar, 6 Havildars, 6 Naigues,	MMISSIONED, NO RANK AND 1 Subadar, 2 Jemadars, 6 Havildars, 6 Naigues, 2 Trumpeters, 3 Farriers, 54 Troopers,) FILE.	1
1 Havildar, 2 Naigues, 24 Privates. TROO 2 Puckallies, 1 Bheasty,		ASCARS. 1 Havildar, 24 Privates. STER'S DEPAR' 4 Bheastice,	No alteration.	1	QUARTER MAST		No alteration.
2 Sweepers, 1 Native Farrier,	-	1 Lascars, 1 Native Farrier, CICERS.	6 Store Lascars, No alteration,		2 Lascars, 8 Recruit and Fension Ecys, ARTIFICE	ERS	Store Lascars. No alteration.
1 Mistry Smith, 1 Do. Carpenter, 2 Carpenters, 2 Firemen, 3 Filemen, 2 Hammermen, 1 Moochy.	2 Carpenters, 2 Carpenters, 2 Armourers, 2 Hammermen, 2 Bellows Boys, 1 Chuckler,	1 Mistry Smith, 1 Do. Carpenter, 2 Smiths, 2 Carpenters, 2 Hammermen, 2 Bellows Boys, EPARTMENT.	No alteration in Artificers,	2 Firemen, 2 Filemen, 2 Hammermen,	2 Smiths. 2 Carpenters, 2 Armourers, 2 Hammermen, 2 Bellows Eoys, 1 Chuckler, MEDICAL DEP2	ARTMENT.	+ No altration in Artshare,
1 Native Doctor,	1 Asst. Surgeon, 1 Asst. Apothy. 1 2d Dresser, FOLLO	Asst. Surgeon, Asst. Apoiny, WERS, Muccodums off	Ars Surp Madi Bot Bot Cana	1 Native Doctor,	Asst. Surgeon, Asst. Apathy, Vety. Pupil, Tety. FOLLOWERS. Horsekeeper Chonaries.		Chommer Assistant Assistant Burgann at Madias Andreas and Burgann at matched
160 Sycos, 160 Grass-cutters, 3 Drivers.	Grass-cutter Choudries,	4 Muccadums of Grass-cutters,	3 Grass-cutter, Choudries, 30 Horsekeeper or Syce Drivers, 109 Horsekeepers 1 20 Grass-cutters 1	.09 Syces, 1	Grass-cutter Choudres, 60 Her: ekcepers 50 Grass-cutters.		Grasseriust Chaudines 50 Hars he per et Syre Impers 11 Harseney ets cal Grasserius uncount it

daux Company of Bengal, Madras, and Bombay, showing the several Ranks, and the number and designation of each

EUROPEAN COMPANY.			Golundauz	Company.	
PRESENT ETABLISHMENT.	Proposed Assimi- lated Establish-	PR	esent Çstablishmi	ent.	Proposed Assimi- lated Establish-
Beng J. Madras. Bombay		Bengal.	Madras.	Bombay.	ment.
OFFICERS.		•	OFFI	CERS.	
1 Captain, 1 Captain, 1 Captain, 2 1st Lieutenants, 2 1st Lieutenants, 2 1st Lieutenant. 1 2d Lieutenant. 1 2d Lieutenant.	1 Captain, nants, 2 1st Lieutenants, nant, 1 2d Lieutenant.	1 Captain, 2 1st Lieutenants, 1 2d Lieutenant.	1 Captain, 2 1st Lieutenants, 1 2d Lieutenant.	1 Captain, 2 1st Lieutenants, 1 2d Lieutenant.	1 Captain, 2 lst Lieutenants, 1 2d Lieutenant.
EFFECTIVE STAFF			EFFECTI	VE STAFF.	
Staff Serjeant, 1 Staff Serjeant, 1 Staff Serje	ant, I Staff Serjeant,				
	_				
				<u> </u>	
NON-EFFCETIVE STA	FF.		NON-EFFECT	IVE STAFF.	
	-	l Brigade Havlr.	1 Brigade Havlr.	1 Brigade Havlr.	1 Brigade Havir.
Payor Or. Serjt. 1 Payor Or. Serjt. 1 Payor Or.	Serjt. 1 Payor Or. Serjt.	1 Pay or Or Hav.	l Pay or Or. Hav.	1 Pay or Or. Hav.	l Pay or Or. Hav.
•					
5	- 1	NAME OF		NON CONTROL	
NON-COMMISSIONED AND RANK	AND FILE.	NATIVE CO		NON-COMMISSI ND FILE.	ONED, AND
		1 Subadar, 2 Jemadars,	1 Subadar, 2 Jemadars,	1 Subadar, 2 Jemadars,	1 Subadar, 2 Jemadars,
6 Serjeants, 6 Serjeants, 4 Serjeant 5 Corporals,	s, 6 Corporals,	6 Havildars, 6 Naigues,	8 Havildars, 8 Naigues,	6 Havildars, 6 Naigues,	6 Havildars, 6 Naigues,
6 Bombardiers, 6 Bombardiers, 10 Bombard 2 Buglers, 2 Buglers, 2 Haif Pay do. 2 Haif Pay do.		2 Buglers,	2 Buglers,	2 Buglers,	6 Bombardiers, 2 Buglers,
3) Gunners, 60 Gunners, 80 Gunners 1 Boy.	_ 1	88 Privates,	92 Privates,	70 Privates,	60 Privates,
GUN LASCARS,				ASCARS.	
Subadar, ½ Subadar, ½ Subadar, ½ Jemadar, ½ Jemadar, ½ Jemadar, 2 Havildars, 2 Havildars, 2 Havildars,	1 Jamaday		l 3 Subadar, 3 Jemadar, 2 Havildars,	d Subadar, d Jemadar, l Havildar,	‡ Subadar, ‡ Jemadar, ‡ Havildar
2 Naigues, 1 Privates. 30 Privates. 20 Privates.	Naigue,		20 Privates.	15 Privates.	7 Naigue, 11 Privates
STAFF SERJEANT'S ESTABI				ISHMENT.	
Puckallies, 2 Puckallies, 4 Bheasties		1 Bheasty,	1 Puckally, Bheasty,	2½ Bheasties,	No alteration. 1 Bengal, 1 Bom.
Sweepers, 4 Lascars, 1 Sweeper,	No Alteration,	l Lascar, l Sweeper,	1 Lascar,	3 Lascars,	No alteration.
	1 Lascar Boy,	}			1 Lascar Boy, Mad. & Bom.
ARTIFICERS.	Mad, & Bom.	,	ARTI	FICERS.	I t mad. or from.
Mistry Smith, Do. Carpenter, 1 Maistry, 1 Do. Car	mith,	l Mistry Smith, l Do. Carpenter,	} l Maistry,	1 Mistry Smith, 1 Do. Carpenter,	l sept
2 Carpenters, 2 Carpenters, 2 Carpenters, 2 Carpenters, 2 Carpenters		2 Carpenters.	2 Smiths, 2 Curpenters,	2 Smiths, 2 Carpenters,	Armoff 3.
2 Firemen,	No alteration in	z riremen,	3 Armourers,		ation as 2.
Filemen, Hammermen, 2 Hammermen, 2 Bellows Boys, 2 Bellows	men,	2 Filemen, 2 Hammermen,	2 Hammermen, 2 Bellows Boys,	2 Hammermen, 2 Bellows Boys,	No alteration except in Madras 2 Armour- ers instead of 3.
MEDICAL DEPARTMENT.			1 Chuckler. MEDICAL DE		N. E. S.
	_				
FOLLOWERS.	- 1		FOLLO	OWERS.	·
	_				
	_				
	_				
Bourbar 1 Assistant Anotherary as in Europea					

TABLE 3.

A Comparative Return in one view, of one Horse Field Battery and one Bullock Battery, of Bengal Madras and Bombay, showing the several Runks, and the number and designation of each rank in each of the Presidencies according to the existing and proposed Establishments.

	Horse fiel	.D BATTERY.			BULLOCK B	ATTERY.		
- 	Parennt Establishment				Present Estadlishment,			REMARKS.
Bengal,	Madras.	Bombay.	PROPOSED ASSIMILATED ESTABLISHMENT.	Bengal.	Madras.	Bombay.	ESTABLISHMENT.	
	Effective,	Staff, &c.				Establis	HMENT.	
1 Rough Rider & Farrier Serit,	1 Staff Scrjeant,	1 Staff Serjeant,	1 Staff Serjeant,	*1 Bullock Serjt. 4 Sirdars,	1 Darogah, " -		- Bullock Serjt.	Non-Effective.
1 Assist. Farrier and Saddler, 1 Native Farrier,	2 Nativo Farri-	1 Native Farries	1 European Far- rier & Saddler, 1 NativeFarrier,	59 Drivers,	3 Choudries, -	1	86 Drivers, 1 Bheasty.	In Bombay 1 Darogah and 3 Choudries as at Madras.
33 Havildars, 3 Naigues, 60 Drivers, 3 Bullock Driv- ers,	ers, 2 Havildars, 2 Naigues, 44 Drivers,	2 Havildars, 2 Naigues, 40 Drivers,	3 Havildars, 3 Naigues, 60 Drivers,	,				
	Non-Effective.	1 Eurp. Farrier,						
1 Moochy, .	ESTABLISHMENT. 1 Monchy, 1 Puckally, 4 Recruit Boys.	1 Moochy, 1 Bheasty,	1 Moochy,	·			·	s
73 Syees, 123 Grass cutters	FOLLOWERS. 1 Horsekeeper Choudry, 1 Grass-cutter Choudry, 1 Horsekeepers	1 Muccadum of Grass-cutters, 36 Horsekeepers	Choudry.					

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TABLE 4.

A Comparative General Return giving at one view an Abstract of the monthly cost of the present Establishment, compared with that of the proposed one, with a Statement of the distribution of Officers, the number of Brigades and Battalions, and the number of European and Native Troops and Companies; the number of each description of Battery, and the number of Pieces of Ordnance for the present Establishment, being compared with those of the proposed one.

		Co	5T A	CCOR	DIN	g to	tur	PE	ESE)	A T	ND :	Рног	РОВЕ	n Es	radli	BUM	ENT.			Dı	atri	BUTI	on c	OF O	FFIC	ERS L	вни ФСС	ORDI ENT,	NG 2	10 1	ur I	PE8	ENT	Евт	AB-	O	ffice	ribu	ccor	din		
		P	rese	ent E	Stal	lisi	raen	t.				Pro	ров	ed E	stabl	ishn	ent.				В	enga	I.]	Mad	ras.			:	Bon	ıbay	•		1	to Esta	prop blist	me	d nt.		REMARKS.
	Ber	ngal.		М	adrí	ıs.		Bon	ibay.		Be	ngal	ı. —	M	adra	9.	Воз	nbay	7.	Colonels.	Lieut, Colonels.	Majors.	Laptains.	2d Lieutenants.	Colonels.	Lt. Colonels.	Majors.	Captains.	1st Lieutenants.	2d Lieutenants.	Lt. Colonels.	Majors.	Captain.	1st Lieutonants.	2d Lieutenants.	Colonels.	Lt. Colonela.	Majors.	Captains.	1st Lieutenants.	tu remensions.	
Horse Artillery.						1																						ĺ													-	
	8732 7123 5623																												2 1 3 3	0	1 1 0 0 0 0	1 0 0	1 1 0	2	1	Ì	٠	0 0			1 1 1	or a Brigade consisti of 4 Troops.
Head Qrs. of a European Battalion complete, - uropean Company com- plete, - lead Quarters of a Go-	5496 3805	2	5	3 68	5	1	42	81	3	43	624	3	4	3651	6	2	3667	0	9	0	0	0	1	2 1	0	0	0	1	2	1	0 0	0	1	2		0	0	1 0	0	0 2	0 ,	Battalion of Artill consists of Commissi ed Officers as follow 1 Colonel, 1 Lieut. Colonel, 1 Major, 5 Captains, 9 First Lieutenants, 5 Second Lieutenan
plete,	5435 2445	9 13	9	576 261	9	9 9	56: 24:	52 39	4 0	5 5 6 2	357 397	2 6	10 8	5713 240(9 14	9 6	5673 2405	13 7	5 8	0	0	1 0	0	0 0 2 1	0	0	1	0	0 2	0	1 1	0	0	0 2	0	1	0	0	0	0 2	0 G	uropean Battalion co sists of 4 Companies olunduuzBattalion co sists of 6 Compani
Iorse Battery complete, BullockBattery.complete	1940 403	0	8	191 58	4 8	5 10	15:	38	13	31	931 547	$\frac{0}{12}$	5	2435 704	11 13	4	233 <u>4</u> 704	14	5	0	0	0	o	0 0	0 0	0	0	0	0	0	0 0		0	0		0	0	0	0	0		i.

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SECTION V. Table 4 continued.

			DIS	TRI	BUT	ION	OF	BRI	3ADI	es a	ND	BAT	(ALI	ONS.												BAT		ES.											
						BENT	ENT.			Est	PROT							PRE	SENT	г Езт	ABI	Tehn.	ENT							Pac	POSI	ed E	STAI	BLISI	IMEN	т.			REMARKS
				Tro	pa			om- nies.		Tro	ps.		Co pan	m- ies.	Hor B	seArt atteri	illery es.	Lt.	Field es bo	Bat-	Lt.	Field ries w	Bat- rith ks.	Ro	servo Panie	Com	Hor	seAri latter	illery ies.	Lt. ter	Field ies ho	Bat-	Lt.	Field ries s Bulloc	Bat- vith	Re	serve panies	Com-	-
			Brigades.	European.	Native.	Battal,ons.	European.	Native.	Brigades.	European.	Native.	Battalions.	Earopean.	Native.	No. of Batte-	No. of Guns	No. of Howtes.	No. of Batte-	No. of Guns	No.of Howtzs.	No. of Batte.	No. of Guns 9 Pounders.	No. of Howtzs.	No. of Batte-	No. of Guns	No. of Howtes. 24 Pounders.	No. of Batte-	No. of Guns 6 Pounders.	No. of Howtzs.	No. of Batte.	No. of Guns 9 Pounders.	No. of Howtza.	No. of Batte-	No. of Guns 9 Pounders.	No. of Howtes.	No. of Batto-	No. of Guns 9 Pounders.	No. of Howtzs.	
Bengal,		-	3	9	4	a 9	24	18	3	8	4	12	28	20						-		-	-	- -	3 11:	-		60	12	24	120			60	ļ —	12		 -	*Includes on Camel Bat
Madras,	-	1	1	4	2	6	5 10	6	2	4	4	8	20	12	6	24	12	2	8	3 <mark> 4</mark>	1:	48	24	3	8 3	2 10	8	40	8	16	80	16	8	40	8	8	40	8	tery.
Bombay,			1	4	(، مار	1 8	12]	a	2	5	12	8	4	20	10	9	36	18	٠	7 28	14	١.	4 1	6 8	5	25	5	10	50	10	5	25	5	5	25	5	
	Total		5	17	-	1	8 48	36		15	10	25	60	40	2:	109	35	23	104	34	20	5 111	4!	3	5 16	3 47	25	125	25	50	250	50	25	125	 25	25	125	25	
					a b	3 1 2	Gol	anda do do	٠.				****									<u></u>					•		<u>-</u> -		,,,,,		1. 11.				1.20	POI	

N. B. Any increase in the number of Troops or Batteries, it is presumed, would be in the 1796 and 1824 proportions of,

Bengal. Madras. Bombay. 15 10

> A. F. OAKES, Captain, Madras Horse Brigade,
> Director Artillery, Depot.

SAINT THOMAS' MOUNT, 24th December, 1819.

APPENDIX.

(REFERRED TO IN PAGE 2, PARA. 7-MISCELLANEOUS.)

In the detailed Statements (dated 21st December, 1849,) furnished by the Madras Military Board to His Excellency Lieutenant General Sir George Berkeley, K. C. B., relating to the estimated cost of Army Equipments, &c. for the years 1836-37 and 1845-46, to which I have been permitted to have access, it will be observed, that the different descriptions of Arms and Accourrements and other Stores, appertaining to the Establishment of a Brigade and Battalion of Artillery, are severally charged at certain fixed rates, and that each article is assumed to last a certain number of years,—for example, Arms and Accourrements 10 years, Guns 22 years, and Gun Carriages 11 years; and the original cost of each article when divided by the number of years, gives a sum, which is denominated the "annual charge for Wear and Tear." Now it is obvious that any error either as regards quantity, price, or period, must materially affect the result, and I would observe that the "period" assumed does not appear to be grounded on sufficiently well established experience.

- 2. With respect to the charge of "Wear and Tear" of Saddlery and Harness entered in these statements it is not unlikely that it may have occasioned a double charge in the Public Accounts against the mounted Corps of the Madras Presidency. Where the allowance of 13 Rupees provides for the repair and keeping up of Saddlery and Harness; whereas in Bengal and Bombay, Government besides granting a pecuniary allowance for repairing, also renew the Saddlery, &c. periodically.
- 3. By these statements it will also be seen that the expense of feeding the horses of the Horse Brigade in 1845-46, was nearly double that incurred in 1836-37, although no great difference existed in the number of horses.
- 4. The charges for the Golundauz Battalion in 1845-46 are also nearly double those in 1836-37—although the Organization and Establishment were exactly alike at both periods.
- 5. The cost of the Gun Carriages in 1845-46 appears to be nearly double that of 1836-37, merely owing to the different mode of keeping the accounts of the Gun Carriage Manufactory; and by a recent statement from Bengal, the Annual charge for "Wear and Tear" of the Carriages of that Presidency is shown to be only half of that charged for ours. Whilst the charge for Wear and Tear of our Ordnance (obtained from the same Foundry which supplies Guns for the Bengal Army) is exactly double the amount entered in the Bengal Statement.
- 6. Many more instances might be adduced to justify the omission of the several items under Miscellaneous charges in the comparative tables of cost of the three Artilleries, and I think it will be admitted that had I, under existing circumstances, attempted, to deduce any results, from imperfect and contradictory data, I should have rendered my tables useless. Undoubtedly most valuable information relative to the Economical Working of the three Artilleries may be obtained from Tables showing the Wear and Tear of the Artillery materiel if compiled from exact data, but any omissions would necessarily vitiate all comparative calculations; as for instance, in the Bengal and Bombay Tables where the expense of repairing Arms and Gun Carriages is shown by the contingent allowance which simply and efficiently provides for their repair, whilst no such charge appears in the Madras accounts, the repairs being executed by Government by whom the requisite Stores and Artificers are supplied.

Saint Thomas' Mount, 24th December, 1849.

A. F. OAKES, Captain,

Madras Horse Brigade,

Director Artillery Depôt.

(Not Published.)

MEMORANDUM

RY

· CAPTAIN A. F. OAKES, Madras Horse Artillery,

AND

Director of the Artillery Dep8t of Instruction,

ON THE

ESTABLISHMENTS, SYSTEMS OF PAY AND ALLOWANCES.

AND

Nature of Equipments of the Three Indian Artilleties,
WITH SUGGESTIONS FOR EFFECTING ASSIMILATION THEREIS
EESPECTFULLY SUBMITTED FOR THE CONSIDERATION

OF

His Excellency General SIR CHARLES NAPIER,

G. C. B.

&c. &c.

Commander-in-Chief of the Army of India.

MADRAS ARTILLERY HEAD QUARTERS, St. Thomas' Mount, 24th December, 1849.

(NOT PUBLISHED.)