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THE RUSSIAN TRAIN ACCORDING TO THE NEW ORGANIZATION.

By Major-General M. A. HAZENKAMPF.

(Translated from the "Russian Military Magazine" by Captain J. WOLFE MURRAY, R.A., D.A.Q.M.G.)

Is order to form a comprehensive idea of the purport of the following article and for facility of reference, the following brief notes as to the organization of the Russian Army are given :—

Infantry.

An Infantry Division consists of 2 brigades, each of 2 regiments : a regiment is composed of 4 battalions (roughly of 1,000 men each) of 4 companies.

Artillery.

To each Infantry Division there is attached a brigade of artillery, consisting of 6 batteries of 8 guns each. Generally speaking, 2 of these are heavy, and 4 are light field batteries.

To each Cavalry Division, 2 horse artillery batteries, of 6 guns each, are attached.

Cavalry.

A Cavalry Division is composed of 2 brigades of 2 regiments each ; the cavalry regiment has 6 squadrons, except in the Cuirassier regiments of the Guards, which have 4 squadrons. The first brigade of each Army Cavalry Division comprises 2 dragoon regiments ; the second brigade 1 dragoon and 1 Cossack regiment. The strength of a 6-squadron regiment may be taken approximately at 1,000 men.

Rifle Brigades.

These consist of brigades of 4 battalions, each battalion 1,000 strong. They are not attached to any particular Division or corps during peace ; but are distributed as required in war.

Engineer Troops.

The following are the principal units :—Sapper battalion, 1,000 men ; pontoon battalion, 594 men ; telegraph park, 250 men ; field engineer park, 200 men. Engineer troops are distributed among the corps as required in war.

Army Corps.

Army Corps consist of two or three Infantry Divisions, with their corresponding artillery brigades (there is no corps artillery), and one Cavalry Division. Engineer troops, &c., are allotted as required.

THE NEW ORGANIZATION OF THE RUSSIAN TRAIN.

The new regulations for the regimental and Divisional train, with their appended tables and establishments, were submitted to the Military Council on the 11th April, 1885, and after receiving the Imperial sanction, were promulgated in General Order No. 188 of 19th July, 1885.

These regulations were worked out by a special Committee on the organization of the troop trains, consisting of Officers of all branches of the Services and of officials of all the departments, selected by the War Minister from those who had taken part in the Russo-Turkish War, under the presidency of Lieutenant-General Baron Zedeler.¹ Before being submitted to the Military Council, these regulations were repeatedly revised by the various departments at headquarters and in the military districts, and in addition they were considered in some districts by special Committees of representatives of all arms of the Service. The fundamental principles of the projected regulations, as well as the essential outline of the tables and establishments, were at once received with almost unanimous expressions of favour.² Beyond this, a few alterations were required to bring the proposals of the Committee into accord with the changes which were being effected by the Artillery Department, and by the chief Committees on military hospitals and on the organization and training of the troops; this last Committee has since been abolished. Lastly, a few changes were made in accordance with the final instructions of the Military Council on the 11th April.

All this required 3½ years. Meanwhile the technical section of the Committee carried out experiments with new types of vehicles, and in 1884 it finally adopted the new pattern of two-wheeled cart and of two-horsed wagon on Colonel Nikiforov's system.

The essence of the new regulations is as follows:³

The troop trains are divided into *regimental* and *Divisional* trains. The regimental train will carry only the most necessary stores, which the troops cannot possibly do without in action and in bivouac, even when in close contact with the enemy. Everything else is carried in the Divisional train.

I. Regimental Train.

Two conditions were taken as the measure by which to determine the nature and quantity of the stores to be carried in the regimental train, viz.: (a) Readiness for action, and (b) the possibility of sparing the troops from useless privations.

In accordance with these conditions, it was laid down in accurate detail for each independent unit what articles and how many of them should be carried in the train, and what the weight of the articles so carried should be. Accordingly all the stores of each independent unit are divided into two categories, viz.:—(1) Those belonging to the company or squadron, and (2) those forming part of the general regimental stores. In order to render the supplying of the troops thoroughly secure in case of the administrative units being broken up into fractions, the regimental train is so organized that each company, squadron, or battery has its own special vehicles; so that when any portion of the regiment is detached, its corresponding portion of the transport is detached with it.

The number of vehicles was calculated upon the quantity and weight of the stores carried, and on the dead weight⁴ of each vehicle, the two together forming the limit of weight.

¹ General Hazenkampf, a well-known authority upon military administration, and Professor of that subject at the Russian Staff Academy, was Secretary to the Committee.—*TR.*

² Of 60 answers received, 57 were favourable.

³ There are appended to the regulations for the regimental train (1) instructions; (2) list of Officers' Luggage; (3) 19 detailed tables and establishments for the train of all staffs and of all independent units. There are special regulations for the Divisional train; and there are appended to them also detailed tables and establishments for the train of all infantry and cavalry Divisions and of rifle brigades.

⁴ The dead weight of each vehicle is thus calculated:—(1.) The weight of the

	Useful weight.	Dead weight.	Weight of system.
	cwts.	cwts.	cwts.
1. For a two-wheeled cart.....	4½	6½	10½
2. For a two-horsed wagon, pattern 1894—			
(a.) For cavalry and horse artillery	7 to 7½	10½	17½ to 18½
(b.) For other corps	8½ to 9	10½	19½ to 19½

For well-grown, well-fed, and fresh horses doing harness work in peacetime, this limit of weight may seem to be extremely moderate. But it has been made a *sine qua non*, because of (1) the want of strength of the majority of the horses which are handed over for the transport service upon the horse conscription, (2) the wear and tear of the service in the transport caused by the irregular times at which the horses are fed, the insufficiency of their food, the injury done to the roads, and the other general severe conditions of warfare. Without a very strict attention to the conditions of the limit of weight, no organization will make the transport mobile.

But even when these conditions are observed, the mobility of the train will not be ensured unless the horses are sufficiently fed. Hitherto our train horses have received the smallest ration (8½ lbs. oats and 18 lbs. hay), although their work is very severe, and though in order to bring them up in condition they require abundant feeding. Accordingly, in addition to improving the construction of the vehicles, and in addition to lessening the weight carried in them, it was considered necessary to increase the ration of the train horses from 8½ lbs. of oats to 13½ lbs., at the same time diminishing the quantity of hay from 18 lbs. to 13½ lbs. per day.

Four-horsed and three-horsed vehicles are not admitted in the regimental train as they are exceedingly cumbersome and heavy. But there are the following exceptions to this rule:—(1) Hospital conveyances (*linéika*) in all arms of the Service; (2) Battery wagons of a special type, one per battery; and (3) Vehicles of the engineer train which—with the object of combining, in the most advantageous possible manner, mobility and capacity, and also with a view to diminishing their number—are drawn partly by teams of four horses, and partly by three-horse teams. These exceptions were determined on beforehand by the special departments, and were thus adopted by the Committee for the organization of the train.

To ensure the correct performance of the duties and for the maintenance of strict discipline, responsible Commanding Officers are appointed to the train of each independent unit as a whole, each section also being under a responsible head; the sphere of the duties and responsibilities of each being

vehicle itself with all its appurtenances, and the tarpaulin. (2.) Oats for three days, at the rate of 13½ lbs. per horse per day, and hay for two days, at 13½ lbs. per horse per day, for the draught horses. (3.) Spare shoes and nails, and horse gear. (4.) Weight of driver and of his kit (160 lbs., including 27 lbs. for kit). In addition to the above the general dead weight of the train of each independent unit, consisting of spare wheels, poles, wares, swingletrees, according to the particular scale, and the picketing gear. This general dead weight is placed upon those vehicles which are not loaded up to the normal limit. Its weight is different for the different units, depending upon the total number of the vehicles. Thus, for instance, in an infantry regiment it is nearly 14½ cwt., in a cavalry regiment 8½ cwt., in a rifle battalion about 5½ cwt. Compared with the former state of affairs, the quantity of spare articles has been diminished by nearly one-half.

accurately defined. In order to develop the training in peace, a programme of instruction for the rank and file of the train has been drawn up, and a system of inspection has been established; exercises in the train service, to be practised at the summer manœuvres, have also been sketched out.

The order of march, the method of bivouacking and of taking up quarters, the disposal and duties of the train during action, have all been accurately defined by special instructions. The train is divided into two categories¹ for purposes of movement when in the proximity of the enemy.

Before setting forth the details of the organization of our regimental train, it is to be noted that important divergencies from the general principles have been permitted in the case of the engineer troops. They have no brigade (corresponding to the Divisional) train whatever; in their battalion (or park) train they carry everything which, in other branches of the Service, is distributed between the regimental and Divisional trains. This exception is caused by the peculiarities of the engineer service: as it is found that the engineer troops are frequently, and for long periods (sometimes for the whole campaign), split up into small fractions, and are scattered over the whole theatre of war. While securing the supply of the engineer troops in such cases, these exceptions are by no means a hindrance to the mobility of the train; for the commanders of corps, of Divisions, of independent columns, or of detachments have the power, in case of necessity, to detach from the engineer train, and to attach to the Divisional train, those vehicles which contain such stores as are carried in the Divisional train in other branches of the Service.

Nature of Stores Carried in the Regimental Train.

The following are to be carried in the regimental train:—(1) Small-arm ammunition; (2) Provisions; (3) Camp kettles, cooking vessels and appliances; (4) Officers' baggage; (5) Treasury; (6) Office stores; (7) Church stores; (8) Medical stores for giving first aid to sick and wounded and for the establishment of dressing stations; (9) Veterinary stores; (10) Tools and materials for shoeing horses, for repair of arms, of boots, of vehicles, and of harness; (11) Spare stores and train appliances.

In the special branches of the Service there are carried in addition—

In the Artillery.—Artillery stores, spare stores and tools, and one-and-a-half day's rations of oats for the gun, ammunition wagon, and riding horses.

In the Engineers.—Intrenching and other tools, appliances for constructing passages of rivers, and for mines, telegraph stores, &c.

In the Cavalry.—(1) Appliances, (a) for pack transport, (b) for swimming across rivers (bladders); (2) Pack-saddles with tools and materials, (a) for destroying railways and telegraphs, (b) for constructing bridges and ferries; (3) Intrenching tools.

(1.) *Small-arm Ammunition.*—The number of rounds to be carried for each armed man in the ranks is laid down at 48 in the infantry, 36 in the cavalry, and 23 in the engineers. The ammunition will be carried in special two-wheeled carts, the number of which is calculated at two per company² in the infantry, and at one per company or squadron in the engineers or cavalry respectively. In the infantry half of the small-arm ammunition carts, and in the other troops all the carts, belong to the company or squadron train; the remaining half of the carts in the infantry form part of the general regimental (or battalion) reserve.

¹ Hitherto the regimental train has been divided into three categories. Now that a Divisional train has been formed it will form the third category.

² With regard to infantry regiments this is not quite correct, as there are 33 two-wheeled carts in all, that is 2 per company and 1 additional.

(2.) *Provisions.*—The regulation quantity to be carried is as follows:—

	Infantry and field artillery.	Cavalry and horse artillery.	Engineer troops.
1. Biscuits, at 1·8 lbs. per man per day.	for 1½ days. ¹	for 2½ days.	for 5½ days. ¹
2. Groats, at 4·8 oz. per man per day...	" 3 "	" 2 "	" 6 "
3. Salt:			
(a.) For cooking, at 0·9 oz. per man per day	" 4 "	" 4 "	" 8 "
(b.) For eating, at 0·75 oz. per man per day	" 2 "	" 2 "	" 4 "
4. Tea, at 0·225 oz. per man per day ...	" 4 "	" 2 "	" 8 "
5. Sugar, at 0·45 oz. " " ...	" 4 "	" 2 "	" 8 "
6. Preserved provisions	nil	" 1 "	nil
7. Various eatables, at the discretion of the Officer commanding; weight per company or battery not to exceed.....	72 lbs.	..	81 lbs.

Beef is not to be carried, as this is only possible in cold weather; otherwise it gets fly-blown and goes bad very quickly. Thus it is not worth while to maintain *special vehicles* in case of its being possible to carry beef; this would increase the train and the expense of maintaining it, and consequently the cost of the beef also. It is much more practical to allow a reserve of live store cattle to be with the troops in such numbers as circumstances render possible or advantageous. Driving live cattle costs nothing; the cattle can always arrive in time at the bivouac, and ordinarily the length of the column is not increased thereby, as they are driven alongside of the roads.

But cavalry and horse artillery, from the character of their operations and the rapidity of their movements, can hardly reckon on being able often to have live cattle with them. Accordingly, one day's rations of preserved provisions is laid down for them.

The whole quantity of the supplies of provisions is calculated by weight for the number of men on the establishment, taking into account the weight of bags and simple packing material. The provisions are packed in the company, squadron, or battery vehicles. In the general regimental vehicles, provisions are only carried for the rank and file of the regimental staff.

All Officers are allowed in war a free regulation soldier's ration of biscuit, groats, and salt.

(3.) Camp kettles, cooking vessels, and utensils for cooking hot meals are thus carried; in the infantry, field artillery, and engineers, large camp kettles at the rate of three per company and battery; in the cavalry and horse artillery section kettles of a lighter pattern at the rate of four per squadron or battery. The most necessary cooking appliances are carried with the camp kettles. All this weighs rather more than 2½ cwt. per company and field

¹ This includes half a day (i.e., 0·9 lb. per man) out of the 3 days of reserve provisions which the man carries, and which it has been decided to reduce to 2½ days, so as to lessen the weight carried by the soldier. This is the case only in the infantry and engineers; it does not apply to the whole of the artillery or to the cavalry.

battery, and nearly 1 cwt. per squadron and horse artillery battery. One additional pair-horsed vehicle is required for each battalion and for each cavalry regiment specially for the transport of the camp kettles, cooking vessels and utensils, if these are to be carried together.

Thus of course it would be very advantageous and would diminish the train if there were no large pattern camp kettles, and if we could do with the small kettles only, as they do in foreign armies. But on mature consideration it was decided that it would be premature to renounce the large pattern camp kettles at present, as the troops have become too much accustomed to them. We must gradually root out this habit by training in peace, we must insist upon the rank and file habituating themselves to cooking in the small kettles, and Commanding Officers must be convinced that this is both necessary and possible. At present only solitary voices are lifted up against the large camp kettles, while the mass stands up for them might and main. When the majority of Commanding Officers shall have become convinced, by means of experiments in peace, of the possibility of doing without the large camp kettles, then only will the time come to do away with them in the train.

(4.) *Officers' baggage* is subject to the following limits of weight: Officers below field rank 108 lbs., Field Officers 126 lbs.

The baggage must be in canvas bags and in trunks of the regulation pattern, on Diterich's system, fitted both for transport in the vehicles and on pack saddles. The limit of weight includes a folding bedstead of the ordinary pattern. In addition to the 108 or 126 lbs. for each Officer there is further laid down (a) for every two Field and other Officers one field tent, and (b) for every *infantry* Officer, required to be mounted by regulation, transport for two days' supply of oats and one day's supply of hay for one horse. In the artillery the supply of oats and hay for the Officers' horses is in the general battery reserve, and in the cavalry no forage whatever is carried in the train (but only on the saddle of each mounted man), as it is impossible to carry it for the whole mass of the horses.

Commanding Officers of regiments and other independent units are allowed 3·84 cwt. of baggage, which includes a tent and forage.

A portion of the Officers' baggage is carried in special two-wheeled carts in the train of the 1st line, and in the cavalry and horse artillery on pack saddles on the led riding horses. The greater portion, however, is carried with the Government stores of their companies, squadrons, or batteries in the train of the 2nd line. The baggage of Officers of the regimental staff is in the general regimental train (2nd line). Commanding Officers of artillery brigades and independent battalions have each their own special two-wheeled cart. Officers commanding batteries have no special two-wheeled carts, but in the matter of baggage they are placed on the same footing as Officers commanding regiments, being allowed 3·84 cwt.

(5.) *Treasury*.—The weight of the treasury and its chest is fixed according to the amount of money required for the interior economy of the body, viz. :—

	Total weight with chest.	Weight of money.
For an infantry regiment	3½ cwt.	2½ to 3 cwt.
For an independent battalion...	2 "	1½ to 1½ "
For a cavalry regiment	2½ "	1½ to 2 "
For a battery	1½ "	1 "

The hundredweight includes about 39,062 roubles in gold and 2,344 roubles in silver. Hence it may be concluded that the above normal limit is sufficient even when the whole of the treasury is in hard cash. The chest for the treasury will be of a new pattern, fitting closely into the body of the vehicle.

(6.) The field office comprises the most necessary regulations, orders, books,

documents, and correspondence connected with the combatant and non-combatant branches, maps of the theatre of war, office appliances, folding furniture, and office tent. Where there are bands the music is carried. All documents, &c., required on a campaign are set forth in the table attached to the general order. Nothing else is taken on a campaign, as the system of correspondence and accounts will be much simplified in war time. Company or squadron offices are never to be taken on a campaign: the Officer commanding should have with him only two documents, viz: (1) A general cash book of any form he pleases, and (2) a nominal roll in which he will enter all casualties.

In consequence of this simplification of correspondence and accounts on a campaign the weight of the field office is limited—

For an infantry regiment.....	to 3½	cwt.
For an independent battalion	to 2½	—2½ "
For a cavalry regiment.....	to 3½	"
For a battery	to 1½	"

This weight includes the weight of the chest of a new pattern, which also will fit closely into the body of the vehicle, and which is divided by a partition into two compartments. In one of these compartments are the correspondence of the combatant branch and the music, and in the other are the correspondence of the non-combatant branch and the office appliances. Each compartment can be opened and closed separately, and that too without taking the box out of the vehicle.

(7.) Church stores are limited to those which are most required for the performance of religious services in the field (thanksgivings, sacrament, and funerals). The limit of weight is 1 cwt., including the weight of the chest. Where there is no priest on the establishment, only the regimental *ikon* is carried. Companies, squadrons, and batteries may have their own *ikons*, but they must not be more than 9 lbs. in weight, and must be of folding form.

(8.) *The medical stores of each body of troops consists of—*

- (a.) A field pharmacy.
- (b.) Appliances for dressings.
- (c.) Surgical instruments.
- (d.) Everything requisite for the formation of a receiving lazaret of 16 beds in an infantry regiment, of 6 beds in a cavalry regiment and in an artillery brigade, and of 4 beds in an independent battalion.
- (e.) Stretchers at the rate of 2 per company, squadron, or battery.
- (f.) Medical comforts for sick and wounded.

Detailed catalogues of the field pharmacy and of the medical stores were drawn up by the Committee in 1882, and were included in the first edition; but, on the question being further worked out, they were excluded as the Chief Military Medical Administration and the Chief Committee on Military Hospitals did not agree with the proposals of the Committee, and took upon themselves the compilation of the catalogues.

The stores of the hospital dressers are carried together with the medical stores. Special pharmacy two-wheeled carts are detailed for the transport of the medical stores, as well as hospital wagons or two-wheeled carts. The sick and wounded are transported in special hospital conveyances (*linéika*).

(9.) *Veterinary Stores.*—Horse medicines, drugs, vessels, stores, and veterinary instruments are carried in a special chest for each unit. The quantity is calculated approximately at a three months' proportion for 2 per cent. of the establishment of horses. In the cavalry the veterinary pharmacy chest will be carried in a special two-wheeled cart; in other units it will be carried

together with the general regimental stores. Its greatest weight, in a cavalry regiment, is about $3\frac{1}{2}$ cwt.; its least weight, in a rifle battalion, is about $\frac{1}{2}$ cwt.

(10.) *Tools and Materials.*—For infantry there are carried in the train—

- (1.) Blacksmiths' tools, with field forge, and materials for smiths' work, and for repairs to the train.
- (2.) Carpenters' tools.
- (3.) Collarmakers' tools and materials for the repair of harness.
- (4.) Armourers' tools and materials for the armourer's shop, and spare parts of rifles and revolvers.
- (5.) Sickles and scythes.

For cavalry, in addition to the above.

- (6.) Saddlers' tools.
- (7.) Reserve of shoes and nails for horses in the ranks.

For artillery and engineers, in addition to above, their own special tools and materials.

With the aid of all these tools and materials, each unit is able to maintain its train, horses, and arms (and in the special services all their matériel) in constant and perfect fitness. The special reserve of horse-shoes and nails in the cavalry (at the rate of two shoes for the fore feet and 0.45 lb. of nails for each combatant horse) independently of the field forges, is considered indispensable to ensure the shoeing of the horses.

In the infantry, field artillery, and engineers there is carried besides a reserve of tools and materials for the repair of boots, reckoning for four shoemakers per company and battery ($\frac{1}{2}$ cwt.). In the cavalry and horse artillery there are none of these articles, as their boots last much longer owing to the nature of their service. The reserve of ready-made boots is all in the Divisional train.

(11.) *Reserve stores and appliances for the train*, independently of those which form the dead weight of each vehicle, are carried so as to avoid delay in exchanging damaged or broken parts. These consist of swingletrees, nares, poles, axles, wheels, and also picketing gear. The quantity of articles of each sort is fixed proportionately to the number of horses and vehicles in the train of each unit. Thus, for instance, the quantity of picketing gear is calculated at one heavy picket for every five horses, and at $3\frac{1}{2}$ feet of rope for every horse. In the cavalry (regular only) picketing gear is carried not only for the draught horses but also for all combatant horses, as there have been instances where the horses in a panic have broken away from the light pickets. Spare harness (collars and breeching) for half the number of reserve horses of each unit are carried on the horses themselves.

(12.) *Articles carried only in the Train of the Cavalry.*—In the cavalry there are carried in addition—

- (a.) Pack saddle fittings, four pairs per squadron and regimental staff. By means of these, each squadron can at once transfer to pack-saddle transport 5 cwt. of gear, that is $1\frac{1}{2}$ cwt. per pack saddle, and a whole cavalry regiment can so transport 35 cwt. The Commanding Officer of the regiments details the baggage to be placed on the pack saddles.¹
- (b.) Appliances for swimming across rivers (bladders, six pairs per squadron).
- (c.) Tools for destroying railways and telegraphs on pack saddles, one per squadron.

¹ In other branches of the Service pack-saddle fittings are carried in the Divisional train.

- (d.) Tools for constructing bridges and ferries, one set for each squadron.
- (e.) Intrenching tools, four shovels and four axes per squadron.
- (f.) Supply of pyroxiline.

All the articles from *c* to *f* are carried together in a special two-wheeled cart. In case of necessity, the pack saddles with the tools for the destruction of the railways and telegraphs are put upon the spare horses.

Distribution of Stores between the Company, Squadron, and Battery Trains, and the actual Regimental Train.

In explaining the general principles of the organization of the train, it has been stated that all stores are divided into company, squadron, or battery, and general regimental stores, and that the packing and also the number of vehicles is so arranged that when each portion of the regiment becomes detached, its corresponding train can be detached with it.

To carry out this fundamental condition, the stores carried in the regimental train are thus distributed :—

A. In the Infantry.

(1.) In the *company train* of each company are carried :—

- (a.) Nearly half the small-arm ammunition (at the rate of twenty-three rounds per man) in a special two-wheeled cart.
- (b.) The whole supply of provisions.
- (c.) Camp kettles and cooking appliances.
- (d.) Reserve of materials and tools for repair of boots.
- (e.) Scythes and sickles.
- (f.) Officers' baggage.
- (g.) Stores of the company hospital dresser.

All these (from *b* to *g*) are packed in two pair-horsed wagons. As the total weight of all the stores does not reach the limit of weight laid down, the spare room is used up for the baggage of Officers commanding battalions, Adjutants, Surgeons, and for certain general reserve stores and appliances for the train.

Consequently the train of each company consists of one small-arm ammunition cart, and two pair-horsed wagons.

(2.) The regimental train carries all the other stores, the small-arm ammunition and field pharmacy in special two-wheeled carts, the medical stores in a special pair-horsed wagon in an infantry regiment, and on a special two-wheeled cart in other independent units. The other impedimenta are carried in pair-horsed wagons. The four-horsed conveyance (*linika*) for the sick, also belongs to the regimental train.

B. Engineers.

(1.) In the *company train* the same stores are carried as in the infantry, but with the addition of all the engineer train—and besides this *all* the small-arm ammunition is carried and not the half only.

As the supply of provisions in the engineers is much greater than in the infantry (being the regimental and Divisional supply combined), so the company train is also much greater. Thus for instance the composition of the train of each sapper company is as follows :—

Supply train	{ 1 S.A.A. cart.
	{ 1 Officer's cart.
	{ 4 pair-horsed wagons.
Engineer train	{ 1 four-horsed wagon.
	{ 2 three-horsed wagons.

Total..... 9 vehicles.

With these nine vehicles a sapper company can be detached anywhere and for any length of time without being in want of anything.

(2.) The *battalion train* carries all the other stores.

C. Cavalry.

Besides the division of the train into squadron and actual regimental train, there is a further subdivision of the squadron train into first and second line. The squadron vehicles of the first line go always and everywhere with the squadron; those of the second line only accompany the squadron when circumstances permit or require them to do so, when this is not the case they form the general column with the regimental train.

The *squadron train of the first line* consists of:—

S.A.A. carts } One per squadron.
Squadron pair-horsed wagons

In the S.A.A. carts there is the whole regulation quantity of small-arm ammunition: in the squadron wagons there are carried a portion of the provisions (biscuits at the rate of 0·9 lb. per man and salt for cooking for two days), all the preserved provisions, camp kettles and appliances, picketing gear, sickles and scythes, pack-saddle fittings, bladders, and Officers' tents (and in Cossack regiments all the Officers' baggage, as there is room for it owing to the absence of picketing gear). The most necessary articles for the Officers (36 lbs. per head) are carried on pack saddles on the led horses.

(2.) In the *squadron train of the second line* (which consists of one pair-horsed wagon per squadron) the remainder of supply of provisions is carried, the field forge with a supply of coal, and the remaining portion of the Officers' baggage. In Cossack regiments there are no vehicles belonging to this line.

(3.) In the *regimental train* everything else is carried.

Thus the *squadron train* consists of—

	S.A.A. carts.	Squadron pair-horsed vehicles.		Total vehicles.
		1st line.	2nd line.	
Regular cavalry	1	1	1	3
Cossack regiments ...	1	1	—	2

D. Artillery.

The organization and division of the train in the artillery is based upon that of the infantry or cavalry.

Composition of Train of a Battery.

		Field.	Horse.
Artillery train	{ 4-horsed wagon	1	1
	{ Pair-horsed wagons	4	4
	{ Pair-horsed wagons	3	4
Supply train	{ Pharmacy cart	—	1
	{ 4-horsed conveyance (<i>linéika</i>)	—	1
	{ for the sick	—	—
		8	11

In the field artillery the pharmacy carts and conveyances (*linéika*) for the sick form part of the train of the brigade staff, *i.e.*, form part, so to speak, of the general regimental train of the whole brigade. In the horse battery there is one wagon more than in the field battery, because the loads have to be lighter. A part of the Officers' baggage in horse batteries is to be on pack saddles as in the cavalry.

Thus the principle of the individuality of the company, squadron, and battery, and of the general regimental stores, is carried out in all arms of the Service. In gens d'armes squadrons—which, according to the nature of their service, are nearly always broken up into sections—each section has its own special vehicle.

On the introduction of the new organization and of the vehicles of the new pattern the regimental train will be composed as follows:—

(1.) *Corps Headquarters*.—8 pair-horsed wagons with 19 horses (including 2 spare and 1 riding horse), and 10 trained soldiers. In addition to these there are 2 pair-horsed wagons for the staff of the Officer commanding the artillery of the corps.

(2.) *Headquarters of an infantry Division*.—4 pair-horsed wagons with 10 horses (1 spare and 1 riding) and 4 train soldiers.

(3.) *Infantry regiment*.—33 S.A.A. carts (including 16 company carts), 4 pharmacy carts, 1 cart for Commanding Officer, 5 Officers' carts of the first line (1 per battalion and 1 for regimental headquarters); total, 43 carts. 32 company wagons and 7 regimental wagons (including medical wagon); total, 39 pair-horsed wagons. Four hospital conveyances (*linéika*). Grand total, 86 vehicles, 153 horses (137 draught, 14 reserve, and 7 riding) and 103 rank and file.

(4.) *Staff of a rifle brigade*.—2 pair-horsed wagons.

(5.) *Rifle battalion*.—8 S.A.A. carts (including 4 company carts), 1 pharmacy cart, 1 medical cart, 1 Commanding Officer's cart, 1 Officer's cart of first line, 1 for the treasury and office; total, 13 carts. 11 pair-horsed wagons, one hospital *linéika*. Grand total, 25 vehicles, 45 horses (39 draught, 4 spare, and 2 riding), and 30 rank and file.

(6.) *Headquarters of an artillery brigade*.—2 pharmacy carts, 1 medical cart, 1 for Officer commanding the brigade, 2 for administrative services; total, 6 carts; 3 hospital *linéikas*. Grand total, 12 vehicles, 27 horses (24 draught, 2 spare, 1 riding), and 16 rank and file.

(7.) *Battery* (heavy and light). (a.) Artillery train: one 4-horsed wagon and 4 pair-horsed wagons. (b.) Supply train: 3 pair-horsed wagons. Grand total, 8 vehicles, 21 horses (18 draught, 2 spare, and 1 riding), 10 train soldiers.

Consequently in the whole artillery brigade (headquarters and 6 batteries) there are 6 carts, 45 pair-horsed wagons, 9 four-horsed wagons; total, 60 vehicles, 153 horses, and 77 rank and file.

(8.) *Headquarters of cavalry Division*.—6 pair-horsed wagons, including 3 for the conveyance of the clerks and other rank and file at headquarters, so that it can always keep up with the Division; 13 horses, 6 train soldiers.

(9.) *Cavalry regiment*.—6 S.A.A. carts, 1 pharmacy cart, 1 medical cart, 1 veterinary cart, 1 for Officer commanding regiment, and 1 for regimental headquarters; total, 11 carts. Six squadron wagons of first line, 6 of the second line; regimental wagons—14 for various stores, 3 for conveyance of dismounted non-combatants; total, 29. 2 hospital *linéikas*. Grand total, 42 vehicles, 85 horses (including 8 spare), 48 train soldiers. In a Cuirassier regiment (4 squadrons) there are 34 vehicles (viz.: 9 carts, 23 pair-horsed wagons, and 2 hospital *linéikas*), 69 horses (including 6 spare), and 39 train soldiers.

(10.) *Cossack regiment* (of 6 squadrons).—6 S.A.A. carts, 1 pharmacy cart, 1 medical cart, 1 veterinary cart, 1 for Commanding Officer; total 10. 20 pair-horsed wagons, 2 hospital *linéikas*. Grand total, 32 vehicles, 64 horses (6 spare), and 37 train soldiers. In a four-sotnia regiment there are 25 vehicles (8 carts, 15 pair-horsed wagons, and 2 *linéikas*), 51 horses (5 spare), 29 train soldiers.

(11.) *Horse artillery battery*.—(a.) Artillery train: 1 four-horsed wagon, and 4 pair-horsed wagons; (b.) Supply train: 1 pharmacy cart, 4 pair-horsed wagons, and 1 *linéika*. Grand total, 11 vehicles, 23 horses (25 draught 2 spare, 1 riding), 14 train soldiers.

(12.) *Headquarters sapper brigade*.—6 pair-horsed wagons, 52 horses (including 40 of the general horse reserve of the brigade), and 26 train soldiers.

(13.) *Sapper battalion*.—(a.) Engineer train : 8 three-horsed, and 4 four-horsed wagons. (b.) Supply train : 4 S.A.A. carts, 1 pharmacy cart, 1 medical cart, 1 for Commanding Officer, 5 Officers' carts (1 per company and battalion staff); total, 12 carts. 21 pair-horsed wagons, 1 hospital *linéika*. Grand total, 46 vehicles, 114 horses (98 draught, 10 spare, 6 riding), and 61 train soldiers.

(14.) *Pontoon battalion*.—(a.) Pontoon train : 58 fourgons, 372 horses (24 spare), and 144 drivers. (b.) Supply train : 2 S.A.A. carts, 1 pharmacy cart, 1 medical cart, 1 for Commanding Officer; total, 5 carts. 14 pair-horsed wagons, 1 hospital *linéika*; total, 20 vehicles, 14 horses (4 spare), and 24 train soldiers. Grand total train, 78 vehicles, 413 horses, 168 rank and file.

(15.) *Field Telegraph park*.—(a.) Telegraph train : 4 four-horsed station carriages, 24 four-horsed wagons for telegraph stores; total, 28 vehicles, 62 horses¹ (including 4 spare and 2 riding), and 44 train soldiers. (b.) Supply train : 1 cart for Officer commanding park and 14 pair-horsed wagons; total, 15 vehicles, 32 horses (including 3 spare), and 16 train soldiers. Grand total, 43 vehicles, 94 horses, 60 train soldiers.

(16.) *Field Engineer park*.—(a.) Engineer train : 80 pair-horsed wagons, 196 horses (including 20 spare and 16 riding), and 103 train soldiers. (b.) Supply train : 1 cart for Commanding Officer of park, 5 pair-horsed wagons; total, 6 vehicles, 11 horses, and 6 train soldiers. Grand total train, 86 vehicles, 207 horses, 109 train soldiers.

(17.) *Gens d'Armes squadron*.—7 pair-horsed wagons (1 per section, and 2 general), but in the guard squadron 1 cart and 5 pair-horsed wagons (1 per section and 1 general). The commander and Officers are granted allowance for the purchase of their own single-horse vehicles, harness, and horses, 1 for each Officer, and they are granted forage allowance. In return they are bound to carry in their vehicles the kits and supplies for the *gens d'armes* who are attached to them when on detached duties.

Private train is only allowed to the higher Commanding Officers, commencing with Officers commanding independent bodies of troops, according to the scale laid down in a special table. This table will be appended to the Regulations for Allowances in Time of War, which is now being drawn up afresh to replace the regulations in 1876.

Division of Regimental Train into Lines.

When marching in proximity to the enemy, the regimental train is divided into two lines; the 1st always follows after its own unit, and the 2nd is detached to the rear of the whole marching column.

The 1st line is made up so as to ensure the supply of the most pressing requirements of the troops. It comprises—

(a.) Half the company S.A.A. carts in the infantry, and all the S.A.A. carts in the cavalry and engineers. The supply of ammunition for each man on the establishment is thus :—12 rounds in the infantry, 36 in the cavalry, and 23 in the engineers. But as the establishment will never be complete, it may be reckoned that there will be at least 16 rounds per man in the infantry, 40 in the cavalry, and 25 in the engineers; that is, together with the supply carried on the person, there will be 100 rounds per man in the infantry, 76 in the cavalry, and 85 in the engineers. This is enough for a very obstinate fight, all the more so as, if there is the prospect of such a struggle, the Commander of the force may increase the number of S.A.A. carts of the first line for the infantry.

¹ This is so in the original : therefore either the number of horses is too small, or the wagons are only pair-horsed.—Tr.

(b.) *All the hospital train, i.e., all the pharmacy carts, medical wagons (or carts), and hospital lineikas.* These will be most of all in an infantry regiment, viz., nine vehicles. This is a large number, but they are indispensable for giving aid to the sick on the march, and to the wounded on the field of battle.

(c.) *A portion of the Officers' baggage, viz.:*—In the infantry, engineers, and field artillery, for the regimental (or brigade) Commander all his baggage (3½ cwt.) in a special two-wheeled cart, for the other Officers 15½ lbs. baggage each, in canvas bags, a portion of the field tents, and part of the forage for the horses. All this—for infantry in the special two-wheeled carts, one for headquarters and for each battalion—for artillery in a four-horsed wagon of the artillery train, which will always be in the 1st line.

In the cavalry and horse artillery 36 lbs. for each Officer, on pack saddles on the led riding horses.

The 2nd line comprises all the remaining vehicles. The engineer train is detailed for the 1st or 2nd line, according to circumstances, at the discretion of the commander of the force.

When the train is divided, the 1st line follows after its own units under the command of the Officer in charge of the arms, while the 2nd line, belonging to each unit, remains under the command of its regular commander, and forms a general train column, the head of which is 500 paces from rear of the main body. This distance in the sphere of probable conflict with the enemy may be increased to 5½ miles, but not more; otherwise the train will not arrive at the halting-place in sufficient time.

For facility of reference, the following tables give the train of each of the principal units, with the line to which the different vehicles belong, and the depth of column:—

1. Infantry Regiment.

	Vehicles.	Horses (exclusive of riding).	Depth of column in paces. ¹
1st Line.			
1st echelon of Company S.A.A. carts	8	8	36
Pharmacy carts.....	4	4	18
Medical wagon	1	2	12
Hospital lineikas	4	16	48
Officers' carts (1 for C.O., 1 for regimental H.Q., and 1 per battalion).....	6	6	27
Spare horses	—	4	6
Total 1st line.....	23	40	147
2nd Line.			
2nd echelon of Company S.A.A. carts	8	8	36
Regimental S.A.A. carts	17	17	77
Company pair-horsed wagons.....	32	64	384
Regimental train	6	12	72
Remainder of spare horses.....	—	10	15
Total 2nd line	63	111	584
Total infantry regiment	86	151	731

¹ The basis of calculation is as follows:—Carts go two abreast, and cover a depth of 9 paces; pair-horsed and 4-horsed wagons, in single file, occupy 12 paces. In order to allow for opening out on the march 3 paces are added for each vehicle.

2. *Artillery Brigade.*

	Vehicles.	Horses (exclusive of riding).	Depth of column in paces.
1st Line.			
Carts—2 pharmacy, 1 medical, 1 for O.C. brigade	4	4	18
Hospital <i>linčikas</i>	3	12	36
Artillery wagons, 1 per battery	6	24	72
Total in 1st line	13	40	126
2nd Line.			
Vehicles for brigade staff { Carts	2	2	18
Pair-horsed wagons	3	6	36
Battery { Artillery train, pair-horsed wagons ..	24	48	288
vehicles { Supply " " " " ..	18	36	216
Spare horses	—	14	21
Total 2nd line	47	106	579
Total artillery brigade.....	60	146	705

3. *Cavalry Regiment (Six Squadron Establishment).*

	Vehicles.	Horses (exclusive of riding).	Depth of column in paces.
1st Line.			
S.A.A. carts	6	6	27
Pharmacy and medical carts	2	2	9
Hospital <i>linčikas</i>	2	8	24
Squadron vehicles of 1st line.....	6	12	72
Officers' led horses—one for every Officer and official on the establishment (with the most necessary articles on pack saddles).....	—	40	60 ¹
Grooms with them, one man to every pair of Officers' horses	—	20	
Total 1st line.....	16	88	192
2nd Line.			
Squadron vehicles	6	12	72
Regimental train—pair-horsed wagons	17	34	204
carts—veterinary, C.O., and H.Q. of regiment.....	3	3	18
Spare horses	—	8	12
Total 2nd line.....	26	57	306
Total cavalry regiment.....	42	145	498

¹ Horses three abreast.

4. *Cossack Regiment (Six sotnias).*

	Vehicles.	Horses (exclusive of riding).	Depth of column in paces.
1st Line.			
S.A.A. carts	6	6	27
Pharmacy and medical carts	2	2	9
Hospital <i>linéikas</i>	2	8	24
Squadron vehicles of 1st line	6	12	72
Led Officers' horses	—	22	33
Grooms with them ¹	—	11	
Total 1st line.....	16	61	165
2nd Line.			
Regimental train—pair-horsed wagons	14	28	168
" " carts for the C.O. and veteri- nary stores.....	2	2	9
Spare horses	—	6	9
Total in 2nd line	16	36	186
Total Cossack regiment	32	97	351

5. *Battery of Horse Artillery.*

	Vehicles.	Horses (exclusive of riding).	Depth of column in paces.
1st Line.			
Pharmacy cart	1	1	9
Hospital <i>linéika</i>	1	4	12
Artillery train—special pattern wagon	1	4	12
Led Officers' riding horses, 1 per Officer and official on establishment	—	7	11
Grooms for above, 1 man per pair of Officers' horses.....	—	4	
Total 1st line.....	3	20	44
2nd Line.			
Artillery train—pair-horsed wagons	4	8	48
Supply " " "	4	8	48
Spare horses	—	2	3
Total 2nd line	8	18	99
Total battery horse artillery..	11	38	143

¹ At the same rate as in a cavalry regiment, but the number of Officers on the establishment is less.

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charge of the train and its sections, so that they may be able really to control the train and to maintain the strictest order in it.

If the 1st section is detached the Officer in charge of the arms takes command of it. As the warlike stores are in his charge, it is most natural that he should command this portion of the train. If the troops come into action he is bound to organize and maintain a regular supply of ammunition. The hospital train and the Officers' carts, or pack-animals of the 1st line, remain in his charge only until the dressing station has been set up; after this has been done they pass under the orders of the senior surgeon. It is considered more convenient to concentrate the Officers' carts, or pack-animals, with their servants, during the action at the dressing station, because, if an Officer is wounded, his kit and servant are then at hand. The servants can make themselves generally useful at the dressing station, while at all other points of the field they will only be in the way.

The regular commander of the train, when it is split up, always remains with the 2nd line, as this forms the greater portion; and besides, on account of the distance which separates it from the troops, it is more necessary to have with it a commander whom the men know, and who knows them.

Duties and Powers of the Personnel of the Train.

The duties and powers of the personnel of the train have hitherto not been accurately and fully laid down anywhere. Now this omission is rectified. All the duties of the commander of the train for each independent unit are accurately defined, and he is given the powers of a company commander if he is an Officer, of a sergeant if he is of lower rank. All ranks marching with the train, although they may not be under the command of the commander, are obliged to carry out his orders. No one except the commander may dare to give orders regarding the train, and the commander takes orders only from the Officer charged with the interior economy of the corps, or from the commander of the unit himself. The duties of the commander of each train-section are accurately laid down, and he has the powers of a sectional non-commissioned officer. Finally, a detailed list of the duties of each train soldier has been made out. All the details of service in the train are laid down in the special instructions, which consist of three main divisions, viz.:—(1) Order of march; (2) Order of bivouacking or billeting; (3) Disposal and duties of the train during action. The train is to be guided by these instructions in peace time as well.

II. Divisional Train.

The Divisional train is laid down in war time for each infantry and cavalry Division (a rifle brigade has a brigade train). Its object is threefold: (1) Unity of administration of all transport composing the general impedimenta of the whole Division, as well as of the transport which is detached from the regiment to form part of the general Divisional column; (2) The uninterrupted and systematic maintenance of a reserve for the regimental train; (3) The organization of a connecting link between the regimental train and the nearest stores and magazines.

Hitherto the transport temporarily relegated to the general train of the Division (such, for instance, as regimental wagons with the four days' reserve of provisions) had no regular system of administration, and that which belonged, or was attached temporarily to the whole Division (as, for instance, the Divisional hospitals, artillery parks, sections of engineer parks) had no general commander. Accordingly there was no unity or agreement in the train, and consequently there was no order.

Strictly speaking the normal basis of the Divisional train should be its complete individuality, independent cadres in peace, special training, separate

stores, special establishments and tables. But as the formation of a special category of train troops would be very expensive, and would increase the military budget, an organization has been worked out which gives rise to the least expenditure in peace, and which at the same time is sufficiently well suited to a rapid transition to the war footing.

In peace there are neither separate cadres, nor separate stores. All the articles carried in the Divisional train are to be kept with the regiments and artillery brigades, and only a very small portion will be in charge of the district intendants' administrations. The personnel—Officers and officials—is appointed beforehand by the commander of the Division from those under his command, whether on the active or reserve lists, provided that they are well known to the Divisional Commander as trustworthy persons. The rank and file are detailed in the lists of the headquarter staff.

The Divisional train consists of a commander and three permanent sections: (1) The general; (2) The supply; and (3) The sanitary sections. In addition to this there may be two more temporary sections: (4) The artillery section—consisting of the artillery parks, which may be attached to the Divisions (ordinarily the parks form part of the whole army corps); and (5) The engineer section, in case of a section of a field engineer park, or of a telegraph park being attached to a Division. The last three sections forming a part of the Divisional train, are completely organized according to their own special regulations, and are under the orders of the commander of the Divisional train only as regards discipline on the march and at the halt, and also as regards quarters and marches. The first two sections (the general and the supply), which have received a new organization by the present regulations, are placed under the orders of the commander of the Divisional train in all respects.

The composition of the sections is as follows:—

(1) *General Section.*—(a) Vehicles of the staff of the Divisional train; (b) Vehicles of all the troops composing the Division, detached from the regimental train either permanently or temporarily (with the exception of the vehicles with provisions); and (c) The special horse reserve for the immediate supply to meet losses of draught and of artillery horses.

(a.) The vehicles of the staff of the Divisional train and of the general section carry, for the use of the personnel, the same stores, in the same quantity, as are carried in the regimental train, *i.e.*, supplies, kettles and appliances, Officers' baggage, &c.

(b.) The regimental vehicles, which form part of the permanent portion of the Divisional train, carry all those stores belonging to the separate units which there is no immediate necessity to have in the regimental train, *viz.*, the field church, intrenching tools, reserve of boots (thirty-two pairs per company and battery), reserve of made-up clothing (four sets per company and battery), with materials for their renewal and repair, pack-saddle gear (the number of pack-saddles is equal to the number of pair-horsed vehicles of each separate unit), and a reserve of horse-shoes and nails for the number of horses on the establishment (at the rate of two fore-shoes and $\frac{1}{2}$ -lb. nails per horse).

(c.) The horse reserve is calculated at about 3 per cent. of the total number of artillery and draught horses in the Division.

The composition of the general section is of the same nature for infantry Divisions and for rifle brigades. In cavalry Divisions there is this difference, that there are no intrenching tools and pack-saddle gear (for they are both in the regimental train) and there are no materials for the renewal and repair of clothing, inasmuch as cavalry has no time for this.

For Cossack regiments and batteries only a reserve of shoes and nails is carried, as the representatives of Cossack troops considered a reserve of boots and clothing unnecessary.

The field church is only in the general section of the train of an infantry Division.

If it should be necessary to diminish the dimensions of the regimental train, all the vehicles which are temporarily detached by it should also form part of the general section of the Divisional train, with the exception of the vehicles with provisions and kettles, which are attached to the supply section. But if it is necessary to march without any train, the regimental train remains in rear as an organized body, either independently of the Divisional train, or forms part of it for a time, as is most convenient. In both cases order is assured.

(2.) *The Supply Section* consists—for infantry Divisions and rifle brigades—of two sets of transport—the expense, and the reserve: for cavalry Divisions of one set—the expense. The expense transport carries a four days' reserve of biscuits and groats, eight days' salt, and ten days' tea and sugar for the establishment of the whole Division. The reserve transport carries a similar quantity, and serves to feed the expense transport with supplies from the nearest magazines, and forms a reserve of means of transport for the Division in general. No reserve transport is laid down for a cavalry Division, because, from the nature of its service, it cannot be fed by transport, but must subsist on the means of the country. Reserve transport is also not laid down unconditionally for infantry Divisions and rifle brigades. If from the character of the operations, or from the conditions of the theatre of war, all or some Divisions can do without train, reserve transport is not supplied to them, but it forms a portion of the transport of the army: i.e., a general reserve of its means of transport.

(3.) *The Sanitary section* exists only in infantry Divisions, and consists of a Divisional lazaret, which serves to give aid to the sick on the march, and to the wounded on the battle-field (for the formation of the dressing station), and of two Divisional hospitals, each of 200 beds, which can be opened for the treatment of the sick and wounded, wherever required. Each of these mobile medical establishments forms an administrative unit: the administration of all three is united in the person of the Divisional surgeon, but in all matters relating to allotment of quarters, marching, and discipline on the march, all the medical establishments are under the orders of the Commander of the Divisional train. It has already been stated above that the commanders of artillery park brigades and of field engineer and telegraph parks have the same relations towards him, if these bodies are temporarily attached to the Division.

Speaking in general terms the command and supervision is concentrated in the person of the commander of the Divisional train, but the immediate control of the portions of the train and the supervision of their interior economy is the duty of the commanders of the various sections. A complete centralization of all the branches of administration of the Divisional train in all its parts and in all its relations would be impracticable: the commander of the Divisional train would be quite powerless to deal with so large, so complicated, and so varied a system of economy, which would in addition have to be carried out under exceedingly difficult circumstances.

Accordingly it was deemed more practical to grant the commanders of sections of the Divisional train the powers of Officers commanding independent units, with all the resultant responsibilities and duties. But the Commander of the whole Divisional train, while exercising a general superintendence over the whole service of the train, is only obliged to carry out a general supervision in matters of interior economy, which are in the hands of his subordinates. This obligation is rendered the more easy by his not being personally interested in the interior economy of the train.

The organization of the separate portions of the Divisional train and the method of control must now be considered.

This organization is based upon the same principle of the individual supply of each independent unit (of convenience in dividing the Divisional

train in case the parts of the Division are separated), as held good in the case of the organization of the regimental train. In the case of the regimental train it was taken as a rule that each company, squadron, or battery should have its own vehicles; here special vehicles are allotted to each regiment (or rifle battalion), artillery brigade, and horse battery, both in the general section, and in the expense and reserve transports. In the train of an infantry Division, on account of the large number of vehicles, the vehicles of each regiment and artillery brigade form a special subdivision both in the general section and in each transport. The vehicles forming the special train of the section or transport, as well as those in which the reserves of all sorts for the Divisional train and for the Divisional Staff are carried, are grouped into a special subdivision. Thus, the general section, and the expense and reserve transports of the train of an infantry Division, are each divided into six subdivisions. The first four belong to the corresponding regiments, the 5th to the artillery brigade, and the 6th belongs specially to the Divisional train and to the Divisional Staff. In the general section the horse reserve forms part of the 6th subdivision. The subdivisions of the general section are commanded by non-commissioned officers. In the expense and reserve transports the subdivisions are so large that it is deemed necessary to group each pair of subdivisions (1st and 2nd, 3rd and 4th, 5th and 6th) under the command of an Officer, who has the powers of a company commander.

Thus, the commanders of the general section and of the expense and reserve transports in the train of infantry and cavalry Divisions are guided in the exercise of their functions by the regulations for the administration of a regiment, while the commanders of each pair of subdivisions of the expense and reserve transports are guided by the regulations for the economy of a company. In the train of a rifle brigade, on account of its numerical inferiority, the commander of the whole train enjoys the powers of a commander of an independent unit in all respects, and, at the same time, superintends the general section as well—while each transport of the supply section is in charge of an Officer with the powers of a company commander.

This organization gives the power, in case regiments or batteries are detached from a Division (or in case a rifle brigade is broken up), of detaching with the troops the corresponding portions of the train.

Example 1. The 3rd infantry regiment of a Division with two batteries are detached to form a special force. At the same time the train detaches the 3rd subdivisions of the general section of the expense and reserve transports, in their entirety, and the number of vehicles corresponding to the two batteries from the 5th subdivision. The Commander of the non-combatant company of 3rd infantry regiment takes the general command over the whole of the train so detached.

Example 2. A special force is formed of a brigade of cavalry with a horse artillery battery. The Divisional train detaches the corresponding special vehicles from the general section and from the expense transport, and they are attached to the regimental train of the 2nd line.¹

Example 3. A special force is formed of two infantry regiments of different Divisions, of a rifle brigade, of three field batteries of different brigades, and of a Cossack regiment. The Divisional (and brigade) transport detaches the corresponding subdivisions and special vehicles of the general section, of the expense and reserve transports, and they are concentrated in a train for the force. The senior subdivisional commander takes command, or a special Officer may be appointed to the command of the train. If there is no necessity for the force to divide its whole train into three lines, the portions which have been detached from the Divisional train may be united with the corre-

¹ The men and horses, with the vehicles of each regiment and battery, are attached for rations to the troops to which they correspond.

sponding regimental train of the second line, and a general commander of the whole train column need only be appointed.

In one word, the organization is so pliant that it is possible to form all sorts of combinations as may be found most convenient.

If it is not necessary to attach to the force detached all the corresponding portions of the Divisional train, it is only requisite to order what portion is to be detached and what is to remain behind. The organization is thereby in no way thrown out.

When a detached force is broken up, the sections and vehicles which were attached to it are likewise broken up and return to the portions of the train to which they regularly belong.

We will now explain the method of keeping the stores, mobilization, the duties of the divisional train, and the rules for its disbandment.

It has already been stated that the Commander of the whole train and the Officers of the general and supply sections are nominated in peace-time by the Divisional Commander. The officials of the sanitary section are appointed in accordance with the regulations for the medical establishments. All the material is kept by subdivisions, with the corresponding bodies of troops. The stores of the 6th subdivisions (for the Divisional staff and Divisional train) is kept at special points, selected by the Chief Intendance Department.

On mobilization being ordered, the subdivisions (or separate vehicles) are put on the war footing by the troops to which they correspond, at the points at which the stores are kept, and are then sent off to the points of concentration. The rank and file of horses are despatched to the place of mobilization according to the lists kept by the Headquarter Staff, and the Officers according to the orders of the Divisional Commanders. The commander and all Officers are appointed in army corps orders; they retain their uniform, and during the whole of the war they are shown as being "on command;" but when the train is broken up, they return to their regiments. Thus the train service is performed by no temporary outsiders, taken here, there, and everywhere, or from the retired list, for the time of the war, but is entrusted to Officers belonging to the corps, who are known to the authorities and to their comrades, and who feel secure as to their fate on the termination of the campaign. If any Officer is found unfit for the train service, the Officer commanding the corps of his own authority can remove him, and can appoint another Officer recommended by the Divisional Commander.

As the portions of the Divisional train arrive at the point of concentration, the commander of the Divisional train inspects them in detail, and then the whole train is inspected by the Officer commanding the Division, and takes the field with it.

The method of supplying the regimental trains from the Divisional train is settled by the Divisional Commander himself in accordance with circumstances. He orders the troops either to send their demands through the Divisional staff, or straight to the Commander of the Divisional train. It is only necessary that the method of supply which the Divisional Commander prescribes (and any subsequent alterations) should be promulgated in Divisional orders, and not verbally. The staff of the Division is obliged to (a) make known to the troops the distribution of the Divisional train, and (b) to despatch in sufficient time to the commander of the Divisional train all routes, dispositions, and other written orders relating to movements or to possible actions. If these rules are accurately observed, it may be regarded as certain that the transport service will be accurately performed.

All formalities, which might cause loss of time, are forbidden by the regulations as far as possible. If the troops have to draw anything from the Divisional train, in extreme cases the requisition may be made with the signature of any Officer of the regimental staff; and the requisition is to be at once complied with, and it serves as a voucher for the Divisional train.

The issue of the stores required is considered to be entirely vouched for if there is a receipt entered against the issue in the store account.

The method of delivery of stores from the Divisional train to the troops is not laid down beforehand; consequently, the empty vehicles belonging to the troops may either be sent to the Divisional train to be filled, or *vice versa*, as most convenient. It is only required that in the latter case the troops should not detain the vehicles of the Divisional train, and should send them back immediately; the Divisional Commander only is able to alter their destination. If this is done in his name, it must be done in writing.

Supplies issued from the expense transport must be immediately replenished from the reserve transport. The commander of the expense transport is responsible for this: he must, without delay, require the corresponding quantity of stores to be brought from the reserve transport, and the commander of the latter must at once despatch what is wanted. The method of making demands and of vouching for them is the same as that explained above. The reserve transport in its turn is replenished from the nearest magazines, or by other means according to the orders of the Corps Intendant.

The interior economy, correspondence, and accounts of the various parts of the Divisional train are carried out according to the rules and forms laid down for independent units, or in accordance with the regulations for the economy of a company, as the case may be. The only special articles of correspondence and accounts are:—(1) The store account, in which are entered the issues and receipts of stores conveyed for the troops, with the acknowledgments of the recipients against the issues; (2) the route book, which is kept only in the reserve transport. As this transport is always moving between the Divisional train and the nearest magazines, and consequently as it is without the immediate control of the commander of the Divisional train, it is necessary to have some documentary record of its service from day to day, so that it may be clearly seen what it was doing; and if it was delayed, the reason for such delay. So that this can be done, and so that it can be seen from the records, the regulations give exact instructions as to the entries to be made in it. Accuracy in keeping the route book, while enabling the service of the reserve transport to be verified, at the same time protects the commander from undeserved accusations and imputations.

On the conclusion of the war, the Divisional train is only broken up when the troops return to their permanent stations. A special committee, nominated by the Divisional Commander, takes stock of the stores remaining on hand, draws up lists and reports, and gives orders for the stores to be handed over to those troops and magazines which are entrusted with their custody. Moneys remaining over after the stock-taking are handed over to the nearest treasury chests, and receipts are taken for them. The Officers return to their corps, and the rank and file are dismissed to the reserve. The horses are sold or are told off for other duties, according to the orders of the War Minister.

Tables and Establishments of the Divisional Train.

The articles to be carried in the Divisional train were mentioned above. We must now state the number of vehicles and horses of which it should consist.

First, a few general explanations.

(1) *Vehicles of the Divisional Train.*—As the troops have an immense number of light pair-horsed vehicles of the 1876 pattern, which are eventually to be replaced by wagons and carts of the 1884 pattern, it would be impossible to do away with these vehicles, which are quite serviceable. When the proper limit of weight has been fixed, they may serve quite well for a long time. Accordingly, it has been decided to transfer them from the regimental to the Divisional train, in which they will remain till they become unserviceable; consequently, the Divisional train will still for a long time consist of vehicles

of the 1876 pattern. In view of this, its dimensions are calculated upon the capacity and limit of weight of the vehicles of the 1876 pattern; and the number of horses and men is fixed in accordance with their numbers.

It has also been decided to fit these vehicles for three-horsed draught so as to increase the useful weight, and consequently to diminish the number of vehicles in the Divisional train. The experience of the sapper battalions—(the engineer train consists almost entirely of three-horsed vehicles of the 1876 pattern)—has already proved that this can be done very simply, conveniently, and cheaply. From their construction and capacity, the vehicles of 1876 pattern are able to carry even more than the limit of weight.¹ The Divisional train of a Cavalry Division and the brigade train of a rifle brigade is to be composed of pair-horsed vehicles of the same pattern. This is considered more advantageous on account of the quantity and weight of the baggage.

The limit of weight of the whole system is fixed as follows:—For three-horsed draught at 25 cwt. (8½ cwt. per horse), and for pair-horsed draught at 21 cwt. (10½ cwt. per horse). The quantity of useful weight is then: for three-horsed draught, 11·5 cwt.; for pair-horsed, 8 cwt. The limit of weight is somewhat greater than in the regimental train (1½ cwt. more for a pair-horsed vehicle), as less mobility is required of the Divisional train. But even this limit of weight is much less than formerly: hitherto a loaded *wagon* of the 1876 pattern, harnessed with two horses, weighed 25½ cwt. in the regimental train; now it will weigh not more than 21 cwt. (or 4½ cwt. less) in the Divisional train. And for three-horsed draught 1½ cwt. less is ordered to be carried than was formerly carried with two-horsed draught.

Hence it is evident what decisive steps have been taken to increase the mobility of our train.

(2.) *Personnel of the Divisional Train.*—Special tables and establishments for the Divisional train have been drawn up. (1), for an infantry Division (with deviations to meet the peculiarities of the composition of the train of the Divisions numbered from 42 to 65²); (2), for the 1st Guard Cavalry Division; (3), for the 2nd Guard Cavalry Division; (4), for the remaining Cavalry Divisions; and (5), for a rifle brigade.

For each Division (and rifle brigade) there have been drawn up separately: first, the tables and establishments of the Staff and general section, and then those of the expense and reserve transports, and finally the total number of all ranks, of the vehicles and horses of the whole Divisional train. The hospital section is not included, as its establishments and tables will be fixed by the special regulations for the medical establishments.

Each table of establishments shows separately the personnel, vehicles, and horses of each subdivision, and where there are no subdivisions—the special vehicles, with the men and horses belonging to them for each regiment, independent battalion and battery.³ The duty of each person is shown, so that it can at once be seen what he is wanted for.

(3.) *Horses.*—The ration for the horses is fixed at the same rate as in the regimental train, i.e., at the rate of 13½ lbs. oats and 13½ lbs. hay per day. In addition to the draught horses there are also detailed: (a), spare horses 10 per cent.; (b), horse reserve of the Division, ten horses per regiment and per battery; (c), Government riding horses for all Officers and officials, and for some non-commissioned officers.

The principal data of the tables and establishments are given below.

¹ During the war of 1877-78 many corps harnessed their vehicles with 4 horses, and then loaded them with as much as they would hold. The vehicles stood it.

² i.e., Reserve Divisions.—Te.

³ The nature and quantity of the stores are shown in the tables, also for each independent unit separately.

I. *Divisional Train of an Infantry Division.*(1.) *Staff of the whole Train and General Section.*

	Subdivisions of the General Section. ¹					
	1st.	2nd.	3rd.	4th.	5th.	6th.
	cwt.	cwt.	cwt.	cwt.	cwt.	cwt.
1. Field church.....	16	—	—	—	—	—
2. Intrenching tools, viz., 160 shovels, 48 picks, 48 mattocks, 38½ axes, and 16 crowbars per regiment. In the artillery the tools are with the batteries. In the 6th Subdivision they are on the train men: half with axes, half with shovels.....	31	31	31	31	—	—
3. Made-up clothing, 68 suits per regiment, 2½ per artillery brigade, and 40 for Divisional train	7½	7½	7½	7½	2½	4½
4. Field tailor's shop (material for repair and renewal of clothing).....	2½	2½	2½	2½	1	1
5. Boots, 5½ pairs per regiment, 192 per artillery brigade, and 96 for Divisional train ...	15½	15½	15½	15½	5½	2½
6. Material and tools for repair of boots.....	In the regimental train					½
7. Pack saddle gear (Diterich's system), 40 per regiment, 2½ per artillery brigade	9½	9½	9½	9½	5	—
8. Reserve horse-shoes and nails for 150 horses per regiment, and artillery brigade, and for 1,200 horses per Divisional train	7½	7½	7½	7½	7½	57½
9. Horse reserve of the division (10 horses per regiment and battery), total 100 horses. Spare harness on half of them.....	..	..	..	..	..	(100 horses)
10. Picketing gear for horse reserve.....	..	..	..	..	..	2½
11. Baggage of personnel of Staff of Divisional train and general section ².....	..	..	..	..	..	35½
Total.....	89	73	73	73	21½	104½
Vehicles—3-horsed	9	7	7	7	2	9
„ 2-wheeled carts ³ .....	..	..	..	..	..	3
Horses—Draught	27	21	21	21	6	30
„ Spare.....	2	2	2	2	..	102 ⁴
„ Riding.....	..	..	..	..	..	8
Officers and officials ⁵.....	..	..	..	..	..	6

¹ It is to be recollected that the 1st to 4th subdivisions are for the corresponding regiments, the 5th for the artillery brigade, the 6th for the whole of the Divisional train and for the Divisional staff.

² Viz.: Supplies, kettles, treasury, office, field companion and medical appliances, veterinary field companion, tools, and materials for shoeing horses, for repair of train and harness, reserve of boots and Officers' baggage.

³ Apothecary's cart, sanitary cart, and cart for Commander of Divisional train.

⁴ Including 100 horses for the horse reserve of the Division.

⁵ The Commander of the Divisional train, Adjutant, official for correspondence, Commander of general section, and two Surgeons (one of them a Veterinary Surgeon).

Staff of the whole Train and General Section—continued.

	Subdivisions of the General Section.					
	1st.	2nd.	3rd.	4th.	5th.	6th.
Rank and file—						
Sergeant-major and quartermaster sergeant ...	..	..	..	..	..	2
Sectional N.C.O.	1	1	1	1	..	1
Dressers, 5; clerks, 4; artificers, 10; for interior economy, 2. Total .....	..	..	..	..	..	21
Train soldiers	10	8	8	8	2	63

The Staff of the Divisional train and the general section thus comprises 433½ cwt. of baggage, 44 vehicles (including 3 two-wheeled carts), 214 horses, 3 Officers, 3 officials, and 127 rank and file.

(2.) Expense Transport.

	Subdivisions.					
	1st.	2nd.	3rd.	4th.	5th.	6th.
(a.) Provision supplies of the troops of the Division	<div>For 4,000 men for 1,500 men</div> <div>in each subdivision.</div>					
Biscuits and groats for 4 days, salt for 8 days, tea and sugar for 10 days; total weight	<div>351½ cwt. 132 cwt.</div> <div>in each subdivision.</div>					
(b.) Baggage of personnel of the transport ...	cwt. 5½	cwt. 2	cwt. 5½	cwt. 2	cwt. 1	cwt. 29½
Total cwt.....	357½	353½	357½	353½	133	161½
Vehicles, 3-horsed	31	31	31	31	12	14
Horses—Draught	93	93	93	93	36	42
„ Sparo	9	9	9	9	4	4
„ Riding	2	1	2	1	1	5
Officers and officials	1	..	1	..	..	3
Rank and file—						
Sergeant-major and quartermaster-sergeant..	1	..	1	..	..	2
Sectional N.C.O.	1	1	1	1	1	1
1 hospital dresser, 2 farriers, 3 clerks.....	..	..	..	..	..	6
Privates for interior economy	3	..	3	..	..	4
Artificers	1	1	1	1	1	12
Train soldiers	35	35	35	35	14	16

Total of the expense transport: 1,718 cwt. of baggage, 150 vehicles, 506 horses, 4 Officers, 1 official, and 213 rank and file.

As has been explained, each pair of subdivisions is commanded by an Officer with the powers of a company commander. The Officers are borne on the strength of the 1st, 3rd, and 6th subdivisions, hence the difference in the weight of baggage, the number of men, and of riding horses, compared with the 2nd, 4th, and 5th subdivisions. The commanders of the 1st and 2nd, 3rd and 4th subdivisions have under their orders 78 rank and file, 62 vehicles, and 207 horses; the commander of the 5th and 6th subdivisions 57 rank and file, 26 vehicles, and 92 horses.

(3.) *Reserve Transport.*

	Subdivisions.					
	1st.	2nd.	3rd.	4th.	5th.	6th.
(a.) Similar provisions in similar quantity and for the same number of men as in the expense transport	351½ cwt.			132 cwt.		
	in each subdivision.					
(b.) Three days' reserve of oats for the establishment of horses of the transport itself, to feed them on the way to the expense magazine and back (besides a 3 days' supply, which is laid down to be carried in each vehicle)	36 cwt. in each subdivision.			13 cwt.	19½ cwt.	
Baggage of the personnel.....	6	2	6	2	1	31½
Total cwt.....	303½	389½	393½	389½	146	183½
Vehicles, 3-horsed.....	34	34	34	34	13	16
Horses—Draught	102	102	102	102	39	48
" Spare.....	10	10	10	10	4	4
" Riding.....	2	1	2	1	1	6
Officers and officials	1	..	1	..	..	4
Rank and file—						
Serjeant-major and 3 quartermaster-sergeants.....	1	..	1	..	..	2
Sectional N.C.O.	1	1	1	1	1	1
1 dresser, 2 farriers, 3 clerks.....	..	..	..	..	..	6
Privates for interior economy	3	..	3	..	..	4
Artificers.....	1	1	1	1	1	12
Train soldiers	39	39	39	39	15	18

Total in the reserve transport baggage 1,895½ cwt., vehicles 165, horses 556, Officers 4, officials 2, rank and file 232.

Command of subdivisions as in the expense transport.

(4.) *Total Divisional Train of an Infantry Division.*

	Staff and general section.	Expense transport.	Reserve transport.	Total.
Field Officers	1	..	..	1
Officers	2	4	4	10
Surgeons	1	..	..	1
Veterinary Surgeons	1	..	1	2
Officials	1	1	1	3
Total	6	5	6	17
Rank and file	126	213	232	571
Vehicles	44 ¹	150	163	359
Horses	241	506	556	1306

The sanitary section is not included in this, as the establishments and tables, although ready, are not yet finally sanctioned. It consists of—

(a.) A Divisional lazaret of 3 two-wheeled carts, 15 two-horsed and 9 four-horsed (8 hospital *linfika*s and 1 large wagon for tents) wagons; total, 27 vehicles and 71 horses (including 2 riding horses).

(b.) Of two Divisional hospitals, each of 200 soldiers, and 10 Officers' beds. In both there are 4 carts, 36 pair-horsed and 4 four-horsed wagons; total, 44 vehicles and 100 horses (including 6 spare and 2 riding).

Consequently in the whole medical section there are 71 vehicles and 171 horses.

To give a concrete idea of the dimensions of the train and of the depth occupied by a whole infantry Division marching on one road, the following table is appended :—

	Vehicles.	Horses.	Depth in paces.
I. Troops and train of 1st line—			
Leading battalion of 1st Regiment .....	..	..	350
Interval .....	..	..	50
First heavy battery, with all wagons, reserve carriage, and train of 1st line ..	2 ²	8	600
Interval .....	..	..	50
Remaining 3 battalions of 1st Regiment (and two intervals of 50 paces each) ...	..	..	1,200
Interval .....	..	..	25
Train of 1st line of 1st Regiment	23	40	150
Interval .....	..	..	100
2nd Regiment with train of 1st line, having the 2nd heavy battery with train of 1st line in rear of leading battalion..	25	48	2,425

¹ Including 3 two-wheeled carts.

² One hospital *linfika* and artillery wagon.

	Vehicles.	Horses.	Depth in paces.
<i>Troops and train of 1st line, continued—</i>			
Interval between brigades .....	..	..	200
3rd Regiment, with train of 1st line.....	23	40	1,725
Interval.....	..	..	100
Four light batteries with brigade staff and train of 1st line	9 ¹	24	2,150
Interval .....	..	..	100
4th Regiment and train of 1st line.....	23	40	1,725
Total of Division and train of 1st line....	103	200	10,950 (5 miles)
II. <i>Interval according to regulation for the regimental train .....</i>	..	..	500
III. <i>Train of 2nd line—</i>			
Of Divisional Staff and of Commander of 1st Brigade (with interval of 25 paces)..	6	14	100
Of 1st Regiment.....	63	111	600
Interval.....	..	..	25
Of 1st heavy battery	7	16	90
Interval.....	..	..	25
Of 2nd Regiment	63	111	600
Interval.....	..	..	25
Of 2nd heavy battery.....	7	16	90
Interval.....	..	..	25
Wagon of Commander of 2nd Brigade ...	1	2	15
Of 3rd Regiment.....	63	111	600
Interval.....	..	..	25
Of Staff of Artillery Brigade and of 4 light batteries.....	33	74	400
Interval.....	..	..	25
Of 4th Regiment.....	63	111	600
Total train of 2nd line of Infantry Divi- sion.....	312	566	3,245 (over 1½ miles)

Consequently a Division with all the regimental train will occupy in depth (infantry in sections or in fours, artillery in column of route, train in column of route, carts two abreast) $6\frac{3}{4}$ miles, and allowing for drawing out 10 miles, or half a day's march.

¹ The remaining 4 artillery wagons, and 1 *linéika* and 4 carts (viz., 2 pharmacy, 1 medical, and 1 cart for the Officer commanding the brigade).

	Vehicles.	Horses.	Depth in paces
<i>IV. Order of March and Depth of Column of Divisional train—</i>			
Train of 3rd line—			
Divisional lazaret	27	71	300
Interval.....	..	..	25
Two Divisional hospitals (25 paces interval between them).....	44	100	550
Interval.....	..	..	25
Staff and general section of Divisional train	44	244	700
Interval.....	..	..	25
Expense transport.....	150	506	1,900
Interval.....	..	..	25
Reserve transport	165	556	2,100
Total train of 3rd line of Infantry Division (Divisional train)	430	1,477	5,650 (nearly 2½ miles)

Consequently an infantry Division with all its transport will occupy $9\frac{1}{2}$ miles in depth, if the train of 3rd line can follow immediately after the 2nd line, but on the march it will draw out to $14\frac{1}{2}$ miles, i.e., a whole march. But the train of the 3rd line need not follow nearer than one day's march; if it always marches a day in rear of its Division, this is more than is required on the march.

In the majority of cases the train of the 3rd line will be less than above given. In the first place the Divisional lazaret and one mobile hospital will be, when an action is impending, at the head of the train of the 2nd line, and sometimes in that of the 1st line. Secondly, the reserve transport may not be with the Division at all, and if it is, it will be so very rarely all together. The greater portion of it will be always engaged in transporting sick and wounded to the rear, or in bringing up supplies from the magazines. Both causes will diminish the depth of the train of the 3rd line of the Division by nearly 2 miles, i.e., by nearly one-half; while the depth of the train column of the 1st or 2nd line will be increased by the Divisional lazaret and one mobile hospital by only 600 paces.

II. Divisional Train of a Cavalry Division.

(1.) Staff and General Section.

(1.) Reserve of made-up clothing, 4 sets per squadron (none for a Cossack regiment), 4 per battery, and 10 for the whole Divisional train and Divisional Staff.

(2.) Made-up boots, 10 pairs per squadron (none for a Cossack regiment), 10 pairs per battery, and 20 for the whole Divisional train and Divisional staff.

(3.) Supply of horse-shoes and nails for 700 horses for each cuirassier regiment, for 1,000 horses for each dragoon and Cossack regiment, and for

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To carry this baggage there are : for a cuirassier regiment, 7 pair-horsed vehicles ; in other regiments, 10 ; for a battery, 2 ; and for the whole Divisional train and Divisional staff, 4 pair-horsed vehicles. The personnel of the transport consists of a Commander (Captain or Staff Captain), official for correspondence, sergeant-major, quartermaster-sergeant, train non-commissioned officers in command of the regimental vehicles (according to the number of regiments of the Division), and 1 non-commissioned officer in charge of the vehicles of the batteries, of the Divisional staff, and of the whole Divisional train, 1 medical dresser, and 1 farrier, 2 clerks, 2 privates for purposes of interior economy, 5 artificers, and train soldiers according to the number of vehicles and horses. Total:—

	Officers and officials.	Rank and file.	Vehicles.	Horses.
In 1st Guard Cavalry Division	2	81	58	137
In 2nd	2	99	72	167
In 1st to 14th Cavalry Divisions	2			
In Caucasus Cavalry Division, in 1st and 2nd Caucasus and Don Cavalry Divi- sions, each		72	48	113

3. Total Divisional Train of a Cavalry Division.

	Officers and officials.	Rank and file.	Vehicles.	Horses.
In 1st Guard Cavalry Division	8	183	87	297
In 2nd " " " "	8	210	108	312
In 1st to 14th Cavalry Divisions	8	157	73	240
In Caucasus Cavalry Division	8	153	74	242
In 1st and 2nd Caucasus and Don Cavalry Divisions	8	154	70	234

The dimensions of the train and the depth of column is only given here for an army cavalry Division (being sufficient by way of example).

	Vehicles.	Horses.	Depth in paces.
I. Troops with train of 1st line.—			
1st Dragoon Regiment in threes.....	—	—	1,330
Interval	—	—	25
Train of 1st line ¹	16	88	190
Interval	—	—	50
1st Horse Battery in column of route, with 6 wagons and spare carriage, numbers in rear of guns	—	—	400
Interval	—	—	25
Train of 1st line	3	20	45
Interval	—	—	100
2nd Dragoon Regiment with train of 1st line	16	88	1,545
Interval between brigades	—	—	200
3rd Dragoon Regiment with train of 1st line	16	88	1,545
Interval	—	—	50
2nd Horse Battery with train of 1st line..	3	20	470
Interval	—	—	100
Cossack regiment	—	—	1,330
Interval	—	—	25
Train of 1st line	16	61	165
Total of Division with train of 1st line..	70	365	7,595 (3½ miles)
II. Interval in accordance with regulations for regimental train			
—	—	—	500
III. Train of 2nd line of Divisional Staff and Commander of 1st Brigade.....			
—	9	19	110
Interval	—	—	25
Of 1st Dragoon Regiment	26	57	310
Interval	—	—	25
Of 1st Horse Battery	8	18	100
Interval	—	—	25
Of 2nd Dragoon Regiment.....	26	57	310
Interval	—	—	25
Of Commander of 2nd Brigade.....	1	2	15
Of 3rd Dragoon Regiment	26	57	310
Interval	—	—	25
Of 2nd Horse Battery.....	8	18	310
Interval	—	—	25
Of Cossack regiment	16	36	190
Total train of 2nd line of Cavalry Division	120	264	1,805 (nearly 1½ miles)

Consequently a cavalry Division with all its regimental train will occupy a length of 9,900 paces, or nearly 4½ miles, and when extended on the march as much as 6½ miles.

¹ Pair-horsed vehicles in column of route, 2-wheeled carts two abreast, led riding horses in threes (with the men in charge between each pair of horses).

	Vehicles.	Horses.	Depth in paces.
IV. <i>Train of 3rd line</i> (Divisional) one march in rear.—			
Staff of Divisional train and general section	25	127	300
Interval	—	—	25
Expense transport	43	113	575
Total train 3rd line	73	240	900

i.e., rather more than $\frac{1}{2}$ mile, and when extended $\frac{1}{2}$ mile.

III. *Brigade Train of Rifle Brigade.*

(1.) *Staff and General Section.*

(1.) Intrenching tools : for each battalion, 40 shovels, 12 picks, 12 mattocks, 96 axes, and 4 crowbars.

(2.) Made-up clothing : 16 sets per battalion, and 4 for the brigade train.

(3.) Materials for the renewal and repair of clothing for each battalion and for the brigade train.

(4.) Made-up boots : 128 pairs per battalion, and 10 pairs per brigade train.

(5.) Materials and tools for repair of boots, only for brigade train, at the same rate as for a company.

(6.) Supply of horse-shoes and nails : for 50 horses for each battalion, for 250 horses for the brigade train.

(7.) Pack-saddle gear, Diterich's system : 11 pack-saddle sets per battalion, according to the number of pair-horsed carts.

(8.) Horse reserve of the brigade, consisting of 12 horses, with spare harness on half of them.

(9.) Baggage of the personnel of the staff of the brigade train and of the general section.

Total : 16 $\frac{1}{2}$ cwt. per battalion, and 23 $\frac{1}{2}$ cwt. for the brigade train. To carry this there are 2 pair-horsed vehicles per battalion, and 3 for the brigade train.

Total establishment : 1 Officer, 1 official for correspondence, 28 rank and file, 11 vehicles, 39 horses (including 12 forming the horse reserve of the brigade, 2 spare, and 3 riding).

(2.) *Expense Transport.*

Biscuit and groats for 4 days, salt for 8 days, tea and sugar for 10 days for 1,000 men for each battalion, and for 100 men of the brigade train. In addition to this there is the baggage of the personnel. Total : 88 cwt. per battalion, and 13 $\frac{1}{2}$ cwt. for the brigade train. To carry this there are 11 pair-horsed vehicles per battalion, and 2 for the Divisional train. Total establishment : 1 Officer, 59 rank and file, 46 vehicles, and 105 horses (including 8 spare and 5 riding).

(3.) *Reserve Transport.*

This transport is capable of conveying a similar quantity of provisions, and an additional 3 days' supply of oats for the horses of the transport itself, to

feed them on the way to the expense magazines and on the return journey. Total : 96 cwt. per battalion, and (together with the baggage of the personnel) 16 cwt. for the brigade train. To carry the above there are 12 two-wheel vehicles per battalion, and 2 for the brigade train. Total establishment : 1 Officer, 63 rank and file, 50 vehicles, and 113 horses (including 8 spare and 5 riding).

(4.) *Total Brigade Train of a Rifle Brigade.*

3 Officers, 1 official, 150 rank and file, 107 vehicles, and 257 horses.
This train will occupy a depth, with intervals, of nearly 1,000 paces, or $\frac{1}{2}$ mile, and when extended on the march, $\frac{2}{3}$ mile.

The remainder of the article contains details of the temporary organization of the regimental and Divisional trains, which will hold good pending the transformation from the present system to that above described ; but as these are of mere temporary interest, it is needless to give them here. The regulations published in August, 1885, give full particulars of the new organization, and the translator will be happy to answer any questions which those interested in the matter may desire to address to him.