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Issued with Army Circulars dated August 1875.

TABLES

SHOWING THE WAR STRENGTH AND COMPOSITION OF A

BATTALION OF INFANTRY.
REGIMENT OF CAVALRY.

Artillery.

BATTERY OF HORSE ARTILLERY.
BATTERY OF FIELD ARTILLERY.
DIVISIONAL AMMUNITION RESERVE.
ARMY CORPS AMMUNITION RESERVE.

Engineers.

COMPANY OF ENGINEERS.
FIELD PARK.
TROOP OF PONTOON TRAIN.
TROOP OF TELEGRAPH TRAIN.

Medical Department.

AMBULANCE EQUIPMENT.
FIELD HOSPITALS.

ARMY SERVICE CORPS.

BRIGADE OF CAVALRY.
BRIGADE OF INFANTRY.

DIVISION.

ARMY CORPS.

36728.

INDEX.

INFANTRY.

War Establishment of a Battalion in the Field.

Ranks.	Officers, N.C. Officers, and Men. Officers.	Staff Sergeants and Sergeants.	Drummers.	Rank and File.	Total.	Horses.
Lieutenant Colonel	1					2
Majors	2					4
Captains	8					
Subalterns	16					*1
Adjutant	1	—		—	31	1
Paymaster	1					
Quartermaster	1					1
Medical Officer	1					1
Serjeant Major		1				
Quartermaster Serjeant		1				
Band Serjeant		1				
Drum Major		1				
Orderly Room Clerk		1				
†Armorer Serjeant		1				
Paymaster Serjeant		1		—	59	
Regtl. Transport Serjeant		1				
Serjeant Cook		1				
Color Serjeants		8				
Serjeants		32				
Pioneer Serjeant		1				
Drummers			16		16	
Corporals				40		
Pioneers and Artificers				13		
Band				20	1,000	
‡Privates				903		
‡Drivers				24		
Totals	31	50	16	1,000	1,097	10

Summary of Transport, Arms, and Ammunition.

Transport.	Number.	Drivers.	Draught Horses.
Without Tentage.			
Carts: company	8	8	16
Carts: intrenching tools	1	1	2
Carts: small arm ammunition	3	3	6
Wagons, general service	2	4	8
Spare	—	2	4
Total	14	18	36
For Tentage, &c.			
Wagons, G.S.	3		
Grand Total	17	24	48

Arms.		
Swords: staff serjeants		8
Swords: band 20, drummers 16		36
Swords: pioneers		14
Pistols		25
Rifles: long		943
Rifles: short		40
Total		1,066

Ammunition.			Per Man
Cartridges, ball: Martini-Henry: with the soldier: serjeants			40
Cartridges, ball: Martini-Henry: with the soldier: rank and file			70
Cartridges, ball: Martini-Henry: in reserve			50
Cartridges, ball: pistol: in possession			50
Cartridges, ball: pistol: in reserve			200

Total Rounds of Ammunition per Battalion.

Description.	In possession.	Reserve.
Rifle	64,880	28,800
Pistol	750	5,000

* For Transport Officer.
† Armorer-serjeant to remain at base of operations.
‡ If tents are not carried, the detail will be, privates, 909; drivers, 18; with draught horses, 36.
No bât animals allowed.

INFANTRY.

War Establishment of a Battalion in the Field.

Transport.—Table I.

Transport required by the Regimental Staff of a Battalion in the Field for Camp Equipment, Light Baggage, Books, Small Arm Ammunition, Quartermasters' Stores and Intrenching Tools.

Articles to be conveyed.	Numbers.	Total Weight. lbs.	Numbers required. Carts.	Numbers required. Wagons.	Drivers.	Draught Horses.	Detail. Total.	Officers.	N. C. officers and men.	Horses. Chargers.	Horses. Draught.	Drivers.	Rank and file.	Band.	Pioneers.	Staff sergeants, including transport sergeant.	Other officers, including transport officer.	Field Officers.
First Line.																		
Axes, hand, handled	6	12																
Blankets, grey, field	66	241																
Buckets, canvas	10	6																
Forge, portable	1	212																
Hooks, reaping	5	5																
Kettles, camp, Flanders	10	86																
Lanterns, brass, globular	2	4																
Ropes, picket 16 yards	4	32																
Sacks, corn	6	25		1	2	4												
Shoes, horse, sets	4	28																
Tools, { collarmakers' / wheelers'	1 / 1	61 / 281																
Regimental Books		100																
Officers' baggage. { field officers / mounted officers / transport officer	3 / 4 / 1	240 / 200 / 40																
Cooking pots, officers'		60																
Kits, staff serjeants'	9	180																
Total		1,818																
Small Arm Ammunition.	28,800	3,840	3		3	6												
Quartermaster's Stores		2,240		1	2	4												
Intrenching Tools — **Axes,** helved, felling, 4½ lbs.	25	150																
Bars, crow { 5' 0" / 4' 0"	2 / 2	62 / 50																
Hooks, bill	50	90																
Picks, light	150	420	1		1	2												
Shovels, light	150	435																
Spades	10	60																
Total		1,267																
Add for spare		—	—	—	2	4												
Total, first line		9,165	4	2	10	20												
Second Line.																		
Blankets, horse	50	466																
Pads and **Surcingles**	50	50	—	3	6	12												
Tents, complete	20	8,160																
Total, second line		8,616	—	3	6	12												
Grand total		—	4	5	16	32												

INFANTRY.

War Establishment of a Battalion in the Field.

Transport.—Table II.

Transport required by a Company in the Field for Equipment and Light Baggage.

Articles to be conveyed.	Numbers.	Total Weight. lbs.	Carts.	Drivers.	Horses.	Detail of a Company.
Axes, hand, handled	6	12	1	1	2	Total.
Blankets, field service	125	475				Officers 3
Buckets, canvas	10	6				
Kettles, camp, Flanders	16	136				*N.C.O. and Men:*—
Ropes, 8 yards	1	8				Serjeants 5
Sacks, corn	1	4½				Drummers 2
Shoes, horse, sets	2	14				Rank and File 117 } 125
Officers' baggage	3	120				Driver 1
" cooking pots	—	20				
Total		795½				

For Tentage, see Table I.

Transport.—Table III.

Recapitulation of Transport for a Battalion.

Services.	Weight in lbs.	Carts. Small Arm Ammunition.	Carts. Stores and Intrenching Tools.	Wagons.	Drivers.	Horses. Chargers.	Horses. Draught.
First Line, without Tents.							
Equipment with Head Quarters (Table I.)	—	3	1	2	10	11	29
For Eight Companies at each (Table II.)	—	—	8	—	8	—	16
Total	—	3	9	2	18	11	56
Second Line, Tents, &c.	—	—	—	3	6	—	12
Grand Total	—	3	—	5	24	11	48

CAVALRY.

ESTABLISHMENT of a REGIMENT in the FIELD.

Officers, Non-commissioned Officers, and Men.	Nos.	Horses. Chargers.	Troop.	Draught.
Officers.				
Lieutenant Colonel	1	4		
Majors	1	4		
Captains	8	24		
Subalterns	16	48		
Adjutant	1	3		
Paymaster	1	3		
Quartermaster	1	3		
Medical Officer	1	3		
Veterinary Surgeon	1	3		
Total	31	91		
Serjeants				
Serjeant Major	1			
Quartermaster Serjeant	1			
Band Serjeant	1			
Paymaster Serjeant	1			
*Armorer Serjeant	1			
Saddler Serjeant	1			
Farrier Serjeant	1			
Serjeant Cook	1			
Trumpet Major	1			
Orderly Room Clerk	1			
†Transport Serjeant	1			
Troop Serjeant Majors	8			
Serjeants	24			
Artificers.				
Farriers	8		480	
Saddlers	4			
Shoeing Smiths	8			
Wheelers and Saddletree makers	2			
Total Serjeants and Artificers	65			
Trumpeters	8			
Rank and File.				
Corporals	32			
Bandsmen	15			
†Privates	480			
†Drivers (Transport)	22	—	—	44
Total Rank and File	549	91	480	44
Total of all Ranks	653	615		

Summary of Transport, Arms, and Equipment.	Carriages.	Drivers.	Draught Horses.
—			
Without Tentage.			
Wagons, forge	1	2	4
Do. general service	6	12	24
Total	7	14	28
For Tentage, &c.			
Wagons, general service	4	8	16
Grand Total	11	22	44

Arms.	Other than Lancers.	Lancers.
—		
Carbines, B.L.	550	—
Lances	—	540
Pistols	41	591
Swords	622	622

Tools, Artificers.	Sets
Farriers	8
Saddlers	4
Smiths	1
Wheelers and Saddletree makers	1

Ammunition.		Other than Lancers.	Lancers.
—			
Cartridges, ball. Martini-Henry	in possession (20 rounds per man).	11,000	—
	with divisional reserve (20 rounds per man).	11,000	—
	pistol in possession (10 rounds per man).	410	5,910

* Armorer Serjeant to be left at base of operations.

† If tents are not carried this detail will be, privates, 488; drivers, 14; draught horses, 28. No Bât-animals allowed.

CAVALRY.

ESTABLISHMENT OF A REGIMENT IN THE FIELD.

Transport.—Table I.

TRANSPORT required by the REGIMENTAL HEAD QUARTERS in the FIELD for conveyance of CAMP EQUIPMENT LIGHT BAGGAGE, BOOKS, and QUARTERMASTER'S STORES.

Articles to be conveyed.	Numbers.	Weight, lbs.	Wagons.	Drivers.	Horses.	Detail.
Axes handled, hand	3	10	2	4	8	*Officers.* Total
Axes helved, felling	3	11½				Field 2 } 7
Axes helved, pick	3	51				Others 5 }
Bars, crow 5' 6"	1	31				Drivers 6
Bars, crow 4' 6"	1	22				*Horses.*
Blankets grey field service	6	24				Chargers 19 } 31
Blankets horse (if taken)	(28)	(208)				Draught 12 }
Buckets, canvas	16	72				
Hooks, reaping						
Kettles, camp	2	17				
Lanterns, brass, globular	1	2				
Picketing implements, mauls	2	18				
Picketing implements, posts, picket	18	99				
Picketing implements, ropes, 16 yards	4	33				
Shoes, horse, sets of 4	12	84				
Sacks, corn	6	8				
Shovels	3	13				
Spades	3	16				
Tents, circular (if taken)	(8)	(720)				
Tools, artificer's sets, smiths	1	208				
Tools, artificer's sets, wheelers and saddletree makers	1	281				
Officers' baggage, field officers	2	160				
Officers' baggage, others	3	250				
Officers' cooking pots		60				
Regimental Books		100				
Kits, dismounted men						
Quartermaster's Stores		2,000				
Total			2	4	8	
Forge wagon			1	2	4	
Total			3	6	12	

N.B.—The Band and Intrenching Tools included in Table II. Each G.S. wagon to carry three or four dismounted men. Small-arm ammunition provided for in "Divisional Ammunition Reserve."

CAVALRY.

ESTABLISHMENT OF A REGIMENT IN THE FIELD.

Transport.—Table II.

TRANSPORT required by a SQUADRON in the FIELD for CAMP EQUIPMENT and LIGHT BAGGAGE.

Articles to be conveyed.	Numbers.	Weight, lbs.	Wagons.	Drivers.	Horses.	Remarks.
Axes handled, hand	6	12	1	2	4	
Axes helved, felling	2	11				
Axes helved, pick	6	51				
Blankets, grey, field	154	616				
Buckets, canvas	4	3				
Forge, portable	1	212				
Hooks, reaping	16	13				
Kettles, camp, Flanders	19	161				
Lanterns, brass, globular	2	4				
Picketing implements: mauls	3	24				
Picketing implements: posts	70	385				
Picketing implements: ropes, 16 yards	16	130				
Sacks, corn	32	54				
Shoes, horse, sets of 4	4	28				
Shovels	12	58				
Spades	2	11				
Officers' baggage	6	300				
„ cooking pots	—	40				
Total	—	2,113	1	2	4	
2nd Line for Tentage, &c.						
Blankets, horse	134	1,005	1	2	4	
Buckets, canvas	6	5				
Pads and **Surcingles**	130	150				
Shoes, horse, sets of 4	4	28				
Tents, circular	14	1,200				
Total	—	2,428	1	2	4	
Grand Total	—	4,541	2	4	8	

Detail of a Squadron.

			Total
Officers			6
Non-commissioned Officers and Men.	Troop sergeant-major and serjeants	8	154
	Artificers	4	
	Trumpeters	2	
	Rank and file	128	
	Drivers (transport)	4	
Horses	Chargers	19	147
	Troop	120	
	Draught	8	

NOTE.—Three or four dismounted men to be carried on each G.S. wagon.

Transport.—Table III.

RECAPITULATION of TRANSPORT for a REGIMENT.

Distribution.	Total Weight, lbs.	Wagons. Forge.	Wagons. General Service.	Drivers.	Horses.	Remarks.
Regimental head quarters (Table I.)	—	1	2	6	12	
Four squadrons, at each (Table II.)	—	—	8	16	32	
Total	—	1	10	22	44	

ROYAL ARTILLERY.

DETAIL **of Horse and Field rifled Muzzle-loading Batteries.**

WAR ESTABLISHMENT.

Officers and Men.	R.H.A.	Field. 16-pr.	Field. 9-pr.
OFFICERS.			
Horse and Field Major	1		
Captain	1		
Lieutenants	3		
Assist.-Surgeon	1		
Veterinary-Surgeon	1	7	7
NON-COMMISSIONED OFFICERS AND MEN.			
Serjeant-Major	1	1	1
Quartermaster Serjeant	1	1	1
Serjeants	6	6	6
Corporals	6	6	6
Bombardiers	6	6	6
Gunners	70	87	72
Drivers	70	73	62
Trumpeters	2	2	2
ARTIFICERS.			
Farrier	1	1	1
Shoeing Smiths	5	4	4
Collarmakers	2	2	2
Wheelers	2	2	2
Totals	179	198	172

Horses, Saddlery, and Harness.	R.H.A.	Field. 16-pr.	Field. 9-pr.
RIDING.			
Officers	15	*8	*8
Staff-Serjeants	2	2	2
Non-Com. Officers	12	12	12
Farrier	1	1	1
Shoeing Smiths	3	1	1
Trumpeters	2	2	2
Gunners	36	—	—
Spare	6	4	4
Total	77	30	30
DRAUGHT.			
Guns	36	48	36
Wagons: gun ammunition	36	48	36
Wagons: forge and general service	18	18	18
Spare	12	10	8
Total Horses	179	154	128
SADDLERY, SETS.			
Officers	—	6	6
Non-Com. Officers and Gunners	62	22	22
HARNESS.			
Double sets: lead	30	42	30
Double sets: wheel	21	20	19

Equipment.	R.H.A.	Field. 16-pr.	Field. 9-pr.
ORDNANCE.			
Rifled M.L. guns	6	6	6
CARRIAGES.			
Gun	6	6	6
Wagons: ammunition	6	6	6
Wagons: general service store and forge	3	3	3
Total	15	15	15
AMMUNITION.			
Rounds per gun	148	160	148

ARTIFICERS' TOOLS.

Collarmakers, sets	2	per battery.
Farriers „	2	
Smiths „	1	
Wheelers „	1	

MATERIALS FOR REPAIRS.

Collarmakers, Smiths and Wheelers	Sufficient for 3 months.

* 2 private property, Veterinary Surgeons.

SMALL ARMS.

Articles.	R.H.A.	Field. 16-pr.	Field. 9-pr.
Carbines, rifled B.L. complete with cleaning rods	12	12	12
Carbines, rifled B.L. parts of: sword bayonets	—	86	71
Carbines, rifled B.L. parts of: scabbards for	—	86	71
Caps, snap, complete	12	12	12
Swords, cavalry	107	37	37
Scabbards, for ditto	107	37	37
Wrenches, nipple, with cramp	6	6	6

All repairs to arms that cannot be performed by the battery artificers are to be carried out in accordance with clauses 38 and 180 Army Circulars, 1870, any materials required being specially demanded by the corps executing the repairs.

SMALL ARM AMMUNITION.

Articles.	Number. R.H.A.	Number. Field.
SERVICE.		
Cartridges, S.A. ball B.L. ·577 for Snider rifles	240	240

* 1 store, 1 forge, and 1 general service, the two first of the same pattern.

ROYAL ARTILLERY.

Detail of **Divisional and Army Corps Reserves,** the latter in 3 Divisions.

Officers and Men.	Divisional.	Army Corps, One Division.
Officers.		
Major	1	—
Captain	—	1
Lieutenants	2	2
Quartermaster	1	1
Assist.-Surgeon	1	1
Veterinary-Surgeon	1	1
Non-Commissioned Officers and Men.		
Serjeant-Major	1	1
Quartermaster Serjeant.	1	1
Serjeants	6	6
Corporals	6	6
Bombardiers	6	6
Gunners	59	59
Drivers	121	87
Trumpeters	2	2
Artificers.		
Serjeant Farrier	1	1
Shoeing Smiths	6	6
Collarmakers	3	3
Wheelers	3	3
Totals	212	178

Horses, Harness, and Saddlery.	Divisional.	Army Corps, One Division.
Riding.		
Officers	*7	*7
Staff-Serjeants	2	2
Non-Com. Officers	9	9
Farriers	1	1
Trumpeters	2	2
Spare	2	2
Total	23	23
Draught.		
Carriages, gun, spare, with limber: 16-pr.	4	4
Carriages, gun, spare, with limber: 9-pr.	4	4
Carts, S. A. ammunition.	58	—
Wagons, Ammunition, Gun limber, 16-pr.	24	—
Wagons, Ammunition, Gun limber, 9-pr.	18	—
Wagons, Ammunition, general service.	78	116
Wagons, forge and store and general service	18	16
Wagons, rocket	6	—
Spare	20	20
Total Horses	253	183
Saddlery, Sets.		
Officers	5	5
Universal	16	16
Harness.		
Double, lead sets	50	35
Double, wheel sets	65	45

Equipment.	Divisional.	Army Corps, One Division.
Ordnance.		
Carriages, Gun, 16-pr.	1	1
Carriages, spare, 9-pr.	1	1
Carts, small arm	29	—
Wagons, Ammunition, Gun limber, 16-pr.	4	—
Wagons, Ammunition, Gun limber, 9-pr.	3	—
Wagons, Ammunition, general service.	13	29
Wagons, forge and store	2	5
Wagons, general service	1	1
Wagons, rocket	1	—
Total Carriages	55	35
Ammunition.		
Number of rounds per gun, 16-pr	72	108
Number of rounds per gun, 9-pr.	108	44
carried per rifle	40	40
Artificers' Tools.		
Collarmakers, sets	2	3
Farriers	2	4
Smiths	1	2
Wheelers	1	2
Materials for Repairs.		
Collarmakers, Smiths, and Wheelers	Sufficient for 3 months.	

* 2 private property, Veterinary Surgeon.

Small Arms.

Articles.	Divisional.	Army Corps, One Division.
Carbines, rifled B.L. complete	24	24
Carbines, rifled B.L. parts of, bayonets with scabbards	62	62
Caps, snap, complete	24	24
Swords, with scabbards	23	23
Wrenches, nipple, with cramps	8	8

Small Arm Ammunition.

Description.	Divisional.	Army Corps, One Division.
Cartridges, rifle B.L. ball	480	480

ROYAL ENGINEERS.

Detail of **One Company and Field Park.**

War Establishment.

Officers and Men.	Company.	Field Park.	4 Co.'s and Field Park.
Officers.			
Major	1	.	4
Captain	1	.	.
Lieutenants	3	1	17
	5	1	21
Non-Commissioned Officers and Men.			
Serjeants	7	1	29
Corporals	7	1	29
2nd Corporals	7	1	29
Sappers: Carpenters	32		
Sappers: Masons	28		
Sappers: Bricklayers	14		
Sappers: Smiths	14		
Sappers: Wheelwrights	4		
Sappers: Coopers	2		
Sappers: Painters	6		
Sappers: Tailors	4		
Sappers: Collar Makers or Shoemakers.	4		
Sappers: Clerks	3		
Sappers: Printer	1		
Sappers: Telegraphers	2		
Sappers: Photographer	1		
Sappers: Miners and Quarrymen.	22		
Sappers	137	.	548
Drivers	16	18	82
Buglers	2	.	8
Spare Men, Batmen, &c.	10	2	42
Total	186	23	767

Horses, Saddlery, and Harness.	Company.	Field Park.	4 Co.'s and Field Park.
Horses.			
Riding.			
Officers	10	2	*42
Non-Com. Officers	3	3	15
Buglers	1	.	4
Spare	.	2	2
Total	14	7	63
Draught.			
Wagons, General Service	24	20	116
Wagons, Office	.	4	4
Wagons, Miners'	.	4	4
Wagons, Printing	.	4	4
Wagons, Photographic	.	4	4
Pack Equipment	4	.	16
Spare	4	2	18
Total Horses	46	45	229
Saddlery, Sets.			
Officers'	5	1	21
Non-Com. Officers'	4	5	21
Pack Saddle, sets	4	.	16
Harness.			
Double sets, wheel R.E. pattern.	14	19	75

Equipment.	Company.	Field Park.	4 Co.'s and Field Park
Carriages.			
Wagons, General Service	6	5	29
Wagons, Office	.	1	1
Wagons, Miners'	.	1	1
Wagons, Printing	.	1	1
Wagons, Photographic	.	1	1
Total	6	9	33
Artificers' Tools, Sets.			
Painters as approved 12th June 1867, 54 (Engrs.), 2818.	1	1	5
Materials for Repairs.			
Collarmakers, Saddletree Makers, Smiths, Wheelers and Carpenters, Miscellaneous	Sufficient for three months.		

* All private property.

Small Arms.

Articles.	Company.	Field Park.	4 Co.'s and Field Park.	Remarks.
Arms for Train Equipment. **Carbines,** rifled B.L. Complete, with cleaning rods	4	.	16	To pack drivers.
Arms for Train Equipment. **Carbines,** rifled B.L. parts of sword bayonets	4	.	16	To pack drivers.
Arms for Train Equipment. **Carbines,** rifled B.L. parts of scabbards for	4	.	16	To pack drivers.
Arms for Train Equipment. **Caps,** snap, complete	26	23	127	
Arms for Train Equipment. **Swords,** cavalry	26	23	127	
Arms for Train Equipment. **Scabbards** for cavalry	.	.	.	
Arms for Train Equipment. **Wrenches,** nipple, with cramps	155	.	620	
Arms for Company Equipment. **Carbines,** rifled B.L. Complete with cleaning rods	155	.	620	
Arms for Company Equipment. **Lancaster,** oval bore parts of sword bayonets	155	.	620	
Arms for Company Equipment. parts of scabbards, leather, for	155	.	620	
Arms for Company Equipment. **Caps,** snap, complete	1	.	4	
Arms for Company Equipment. **Scabbards,** leather, buglers'	1	.	4	
Arms for Company Equipment. **Swords,** buglers'	18	.	72	
Arms for Company Equipment. **Wrenches,** nipple, with cramps	.	.	.	

All repairs to arms that cannot be performed by the company artificers are to be carried out in accordance with clauses 58 and 180 Army Circular, 1870, any materials required being specially demanded by the corps executing the repairs.

ROYAL ENGINEERS.

Pontoon Troop.

Detail of **One Pontoon Troop.**

War Establishment.

Officers and Men.	No.
Major (Director of Bridging).	1
Captain - } Assistants	1
Lieutenants } ditto.	4
Quartermaster - -	1
Surgeon - - -	1
Veterinary Surgeon -	1
	9
Non-Commissioned Officers and Men.	
Troop Serjeant-Major -	1
Troop Quartermaster-Serjeant.	1
Serjeants - - -	10
1st Corporals - -	12
2nd Corporals - -	12
Pontoniers - -	190
Drivers - - -	150
Trumpeters - -	2
Artificers.	
Farrier and Carriage Smith.	1
Serjeant Artificer -	1
Corporal Artificers -	3
Shoeing and Carriage Smiths.	8
Collarmakers - -	4
Wheelers - -	4
Carpenters - -	4
Total -	322

Horses, Saddlery, and Harness.	No.
Horses.	
Riding.	
Officers - - -	*18
Staff Serjeants - -	2
Non-Com. Officers -	12
Farrier - - -	1
Shoeing Smiths - -	2
Trumpeters - -	2
Spare - - -	1
	38
Draught.	
Wagons - Pontoon -	120
Trestle -	24
Store - -	30
Office - -	4
Forge - -	6
Spare - - -	24
Total Horses -	246
Saddlery, Sets.	
Officers - - -	87
Non-Com. Officers -	20
Harness.	
Double sets, wheel, R.E. pattern.	104

Equipment.	No.
Carriages.	
Wagons - Forge - -	1
Office - -	1
Pontoon -	20
Trestle -	4
Store - -	5
Total -	31
Artificers' Tools.	
Carpenters' - sets	2
Collarmakers' - „	4
Farriers' - - „	1
Painters' - - „	3
Smiths', G.A.S., with 36 lb. vice - sets	1
Tinman's - - „	1
Tools, shoeing, in leather case - - sets	4
Wheelers' and saddle-tree makers' - sets	1
Whitworth stocks and dies, 1½" to ¼" with tray - - sets	1
Materials for Repairs.	
Carpenters, Collar-makers, Saddletree makers, Smiths, Tinsmiths, and Wheelers - }	Sufficient for 3 months.

* All private property. † The Veterinary Surgeon provides his own saddlery.

Small Arms.

Articles.	No.
Carbines, rifled B.L. complete, with cleaning rods	134
Carbines, rifled B.L. parts of sword bayonets	134
Carbines, rifled B.L. parts of scabbards for	134
Caps, snap, complete	134
Swords, cavalry	179
Scabbards, for cavalry	179
Wrenches, nipple, with cramps	22

All repairs to arms that cannot be performed by the Troop Artificers are to be carried out in accordance with clauses 38 and 180, Army Circulars, 1879, any materials required being specially demanded by the corps executing the repairs.

Small Arms Ammunition.

Articles.	No.
Cartridges, S.A. ball, B.L. ·577, for Snider rifles	2,680

ROYAL ENGINEERS.

Detail of **One Telegraph Troop.**

War Establishment.

Officers and Men.	Right Half Troop.	Left Half Troop.	Total for One Troop.
Officers.			
Major - -	1	—	1
Captain - -	—	1	1
Lieutenants -	2	2	4
Quartermaster -	1	—	1
Surgeon - -	1	—	1
Veterinary - Surgeon.	1	—	1
	6	3	9
Non-Commissioned Officers and Men.			
Troop Serjeant-Major.	1	—	1
Troop Quartermaster Serjeant.	1	—	1
Serjeants - -	4	6	10
1st Corporals -	5	4	9
2nd Corporals -	4	5	9
Sappers - -	45	45	90
Drivers - -	64	61	125
Trumpeters -	1	1	2
Artificers.			
Farrier and Carriage Smith.	1	—	1
Serjeant Artificer	—	1	1
Sergeant Telegrapher.	1	—	1
Corporal Artificers	1	1	2
Corporal Telegraphers.	2	2	4
Shoeing and Carriage Smiths.	2	3	5
Collar Makers -	2	1	3
Wheelers -	2	1	3
Carpenters -	1	2	3
Telegraphers -	6	6	12
Totals -	149	142	291

Horses, Saddlery, and Harness.	Right Half Troop.	Left Half Troop.	Total for One Troop.
Horses.			
Riding.			
Officers - -	*12	*6	*18
Staff Serjeants -	2	—	2
Non-Com. Officers	6	8	14
Signallers -	12	12	24
Farrier - -	1	—	1
Shoeing Smiths -	—	1	1
Trumpeter -	1	1	2
Total -	34	28	62
Draught.			
Wagons - Wire -	36	36	72
Office -	8	8	16
Store -	8	8	16
Boat -	4	4	8
Forge -	4	4	8
Spare - -	8	8	16
Total Horses -	102	96	198
Saddlery, Sets.			
Officers - -	†5	3	8
Non-Com. Officers and Signallers.	22	22	44
Harness.			
Double sets wheel, R.E. pattern.	34	34	68
Pack - -	1	1	2

Equipment.	Right Half Troop.	Left Half Troop.	Total for One Troop.
Carriages.			
Wagons - Wire -	6	6	12
Telegph. Office R.E. Pattern	2	2	4
Store -	2	2	4
Boat -	1	1	2
Forge -	1	1	2
Total -	12	12	24
Artificers' Tools.			
Carpenters, sets	1	1	2
Collarmakers, „	2	2	4
Farriers, „	1	1	2
Painters, „	1	1	2
Smiths, „	1	1	2
Telegraphers, „	9	8	17
Wheelers and saddletree makers, sets.	1	1	2
Whitworth's stocks and dies, sets.	1	1	2
Materials for Repairs.			
Carpenters - Collarmakers - Smiths - Wheelers and Saddletree Makers -			Sufficient for three months.

* All private property. † Veterinary Surgeon provides his own saddlery.

Small Arms.

Articles.	Right Half Troop.	Left Half Troop.	Total for One Troop.
Carbines, rifled B.L. Complete with cleaning rods -	63	62	125
Carbines, rifled B.L. parts of sword bayonets -	63	62	125
Carbines, rifled B.L. parts of scabbards for -	63	62	125
Caps, snap, complete -	63	62	125
Swords, cavalry -	80	77	157
Scabbards for ditto -	80	77	157
Wrenches, nipple, with cramp -	7	7	14

All repairs to arms that cannot be performed by the troop artificers are to be carried out in accordance with clauses 38 and 180 Army Circular, 1879, any materials required being specially demanded by the corps executing the repairs.

Small Arm Ammunition.

Articles.	Right Half Troop.	Left Half Troop.	Total for One Troop.
Cartridges, S.A. ball B.L. ·577 for Snider rifles - -	1,260	1,240	2,500

A Half Troop to be attached to an Army Corps.

ARMY SERVICE CORPS.

These Companies are calculated on a footing which will allow of their being divided at once, upon entering upon active service, into two companies each, and to be augmented with rank and file and horses locally, or otherwise as may be found expedient, there being sufficient trained officers and non-commissioned officers in each company for the purpose.

Establishment of a Company of Transport.				Establishment of a Company of Supply.	
Establishment.	Nos.	Horses.		Establishment.	Nos.
		Riding or Draught.	Draught.		
Deputy Commissary	1	1	—	Deputy Commissary	1
Assistant Commissary	2	2	—	Assistant Commissary	1
Officers	3	—	—	Officers	2
2nd-class Staff Serjeant acting as Company Serjeant Major.	1	1	—	1st-class Staff Serjeants	3
3rd-class Staff Serjeant acting as Company Quartermaster Serjeant.	1	—	—	2nd-class Staff Serjeants	3
3rd-class Staff Serjeant acting as Company Wheeler Serjeant.	1	—	—	3rd-class Staff Serjeants	8
3rd-class Staff Serjeant acting as Company Farrier and Carriage Smith.	1	1	—	Serjeants	12
3rd-class Staff Serjeant acting as Company Saddler Serjeant.	1	—	—	Corporals	10
Serjeants	7	6	—	2nd Corporals	10
Corporals	7	—	—	Buglers	1
„ acting as Wheeler	1	—	—	Privates	77
„ „ Saddler	1	—	—		
„ „ Farrier, &c.	1	—	—		
„ „ Carriage Smith	1	—	—		
2nd Corporals	4	—	—		
Rank and File Shoeing and Carriage Smiths.	3	—	—		
Trumpeter	1	1	—		
Privates	100	—	79		
All Ranks	133	12	79	All Ranks	126
Horses	91	—	—		

MEDICAL DEPARTMENT.

Field Hospitals are formed to contain 200 beds.
Such a Field Hospital is composed of the following,—

Personnel.			
Medical Officers	7	Hospital waggons	4
Captain of orderlies	1	Surgery do.	2
	8		6
Army Hospital Corps Men	37		
Drivers	12		
	49	Horses	24
General total	57		

Such a Hospital is composed of the following detail,—

Medical Officer in charge	1	Wardmasters (Colour Serjeants).	2	Steward (Serjeant-Major)	1
Senior Surgeons	2	Compounder in charge do.	1	Assistant-Steward (Colour-Serjeant).	1
Surgeons	4	Compounder (Serjeant)	1	Storekeepers (Serjeants)	2
Captain of Orderlies	1	Principal Medical Officer's Clerk (Serjeant).	1	Cooks (Serjeants)	2
	8	2nd Corporals	4	Assistant Cooks (Privates)	4
Drivers	12	Privates	18		10
			27		

Medical Department with an Army Corps.

—	Medical Officers.	Other Officers.	Total Officers.	Army Hospital Corps.	Drivers.[1]	Total of all ranks.	Ambulance Waggons.	General Service Waggons.	Total Carriages.	Draught Horses.
Cavalry Brigade.										
Ambulances	4	—	4	17	17	38	17	—	17	34
1 Field Hospital	7	1	8	37	12	57	—	6	6	24
Total Cavalry Brigade	11	1	12	54	29	95	17	6	23	58
Infantry Brigade.										
Ambulances	4	—	4	27	27	58	27	—	27	54
2 Field Hospitals	14	2	16	74	24	114	—	12	12	48
Total Infantry Brigade	18	2	20	101	51	172	27	12	39	102
Division.										
2 Infantry Brigades	36	4	40	202	102	344	54	24	78	204
Divisional Ambulances	12	—	12	22	22	56	22	—	22	44
3½ Field Hospitals	25	3	28	130	42	200	—	21	21	84
Total Divisional Medical Department	37	3	40	152	64	256	22	21	43	128
Grand total	73	7	80	354	166	600	76	45	121	332
Army Corps.										
3 Divisions	219	21	240	1,062	408	1,500	228	135	363	996
Cavalry Brigade	11	1	12	54	29	95	17	6	23	58
Corps Ambulances	14	—	14	23	23	60	23	—	23	46
1½ Field Hospitals	11	2	13	56	18	87	—	9	9	36
Sanitary Detachments	12	6	18	1,000	—	1,018	—	—	—	—
Total Corps Medical Department	37	8	45	1,079	41	1,165	23	9	32	82
Grand total	267	30	297	2,195	568	3,060	268	150	418	1,156

ORGANIZATION OF AN ARMY CORPS.

Detail of the Staff of a Brigade of Cavalry.

——	Number.	Staff Clerks.			Horses.
		1st Class.	2nd Class.	3rd Class.	
Major-General Commanding -	1	—	—	—	5
Brigade Major - - -	1	—	—	1	3
Aides-de-Camp - - -	1	—	—	—	3
Total - -	3	—	—	1	11

A Brigade of Cavalry.

	Officers.	Non-Commissioned Officers and Men.	All Ranks.	Horses.				Guns.	Carriages.					Total Carriages.
				Officers' Chargers.	Troop.	Transport.	Total.		Carts.	Small-Arm Ammunition Carts.	Ambulance Wagons.	Wagons.	Forge Wagons.	
Staff - - -	3	1	4	11	—	—	11	—	—	—	—	30	3	33
3 regiments - -	93	1,856	1,949	273	1,440	132	1,845	—	—	—	—	1	1	2
1 battery Horse Artillery	7	172	179	15	164	—	179	6	—	—	—	17	8	33
Medical Department -	12	83	95	12	—	58	70	—	—	—	—	8	1	9
Veterinary „ -	2	3	5	4	—	—	4	—	—	—	—	1	—	1
Chaplain's „ -	1	—	1	1	—	—	1	—	—	—	—	—	—	—
Control „ -	2	26	28	3	—	26	29	—	3	—	—	5	1	8*
	120	2,151	2,271	319	1,604	216	2,139	6	3	—	17	40	4	73

Detail of the Staff of a Brigade of Infantry.

——	Number.	Staff Clerks.			Horses.
		1st Class.	2nd Class.	3rd Class.	
Major-General Commanding -	1	—	—	—	3
Brigade Major - - -	1	—	—	1	3
Aide-de-Camp - - -	1	—	—	—	3
Total - -	3	—	—	1	11

A Brigade of Infantry.

——	Officers.	Non-Commissioned Officers and Men.	All Ranks.	Horses.				Guns.	Carriages.					Total Carriages.
				Officers' Chargers.	Troop.	Transport.	Total.		Carts.	Small-Arm Ammunition Carts.	Ambulance Wagons.	Wagons.	Forge Wagons.	
Staff - - -	3	1	4	11	—	—	11	—	—	—	—	—	—	—
3 battalions - -	93	3,198	3,291	30	—	144	174	—	27	9	—	15	—	51
Medical Department -	20	152	172	12	—	102	114	—	—	—	27	12	—	39
Veterinary „ -	1	—	1	2	—	—	2	—	—	—	—	—	—	—
Chaplain's „ -	1	—	1	1	—	—	1	—	—	—	—	—	—	—
Control „ -	1	26	27	2	—	32	34	—	2	—	—	7	—	9*
	119	3,377	3,496	58	—	278	336	—	29	9	27	34	—	99

* Includes transport for Brigade Staff.

Detail of the Staff of a Division.

——	Number.	Staff Clerks.			Horses.
		1st Class.	2nd Class.	3rd Class.	
Lieutenant-General Commanding.	1	—	—	—	6
Aides-de-Camp - - -	2	—	—	—	6
Assistant Adjutant and Quartermaster Generals.	2	—	2	2	6
Deputy Assistant Adjutant and Quartermaster General.	1	—	—	—	3
Lieutenant-Colonel Royal Artillery.	1	—	—	1	3
Adjutant, Royal Artillery -	1	—	—	—	2
Lieutenant-Colonel, Royal Engineers.	1	—	—	1	3
Adjutant, Royal Engineers -	1	—	—	—	2
Assistant Provost Marshal -	1	—	—	—	1
Principal Medical Officer -	1	—	—	1	2
Staff Veterinary Surgeon -	1	—	—	—	2
Assistant Controller - -	1	—	—	1	2
Senior Chaplain - - -	1	—	—	—	1
Total - -	15	—	2	6	39

A Division.

——	Officers.	Non-Commissioned Officers and Men.	All Ranks.	Horses.				Guns.	Carriages.						Total Carriages.
				Officer's Chargers.	Troop.	Transport.	Total.		Carts.	Small Arm Ammunition carts.	Ambulance Wagons.	Wagons.	Forge Wagons.	Spare Gun Carriages.	
Staff (Division) - - -	15	8	23	39	—	—	39	—	—	—	—	—	—	—	—
2 brigades of Infantry - -	238	6,754	6,992	116	—	556	672	—	58	18	54	68	—	—	198
1 battalion of Rifles - -	31	1,066	1,097	10	—	48	58	—	9	3	—	5	—	—	17
1 regiment of Cavalry - -	31	622	653	21	480	44	615	—	—	—	—	10	1	—	11
3 batteries of Field Artillery (1 9-pr., 2 16-pr. batteries).	21	547	568	24	412	—	436	18	—	—	—	24	3	—	57
1 Infantry and Artillery Reserve Ammunition Column.	6	206	212	7	246	—	253	—	—	—	29	—	21	3	2	55
1 company Royal Engineers -	5	186	191	10	36	—	46	—	—	—	—	—	6	—	—	6
1 troop Military Police - -	2	73	75	—	65	—	65	—	—	—	—	—	—	—	—	—
Medical Department - -	40	216	256	20	—	128	148	—	—	—	—	—	22	21	—	—	43
Veterinary „ - -	—	20	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Chaplain's „ - -	1	—	1	1	—	—	1	—	—	—	—	—	—	—	—	—	—
Control „ - -	7	61	68	12	—	50	62	—	5	—	—	—	10	—	—	—	15*
Total - -	397	9,759	10,156	330	1,239	826	2,395	18	72	50	76	165	7	2	372

* Includes transport for Divisional Staff.

Detail of the Staff of an Army Corps.

——	Number.	Staff Clerks.			Horses.
		1st Class.	2nd Class.	3rd Class.	
General Commanding	1	—	—	—	8
Aides-de-Camp	4	—	—	—	12
Deputy Adjutant and Quartermaster Generals.	2	2	2	2	8
Assistant Adjutant and Quartermaster Generals.	2	—	2	2	6
Deputy Assistant Adjutant and Quartermaster Generals.	2	—	—	—	6
Brigadier-General, R.A.	1	—	—	—	5
Brigade Major, R.A.	1	—	—	1	3
Aide-de-Camp, R.A.	1	—	—	—	3
Colonel Commanding, R.E.	1	—	—	—	5
Brigade Major, R.E.	1	—	—	1	3
Aide-de-Camp, R.E.	1	—	—	—	3
Commandant at Head Quarters	1	—	—	—	3
Provost Marshal	1	—	—	—	2
Principal Medical Officer	1	—	1	—	3
Chief Staff Veterinary Surgeon	1	—	—	1	2
Principal Chaplain	1	—	—	—	2
Deputy Controller	1	—	1	—	3
Total	23	2	6	7	77

An Army Corps.

——	Officers.	Non-Commissioned Officers and Men.	All Ranks.	Horses.				Guns.	Carriages.						
				Officer's Chargers.	Troop.	Transport.	Total.		Carts.	Small Arm Ammunition carts.	Ambulance Wagons.	Wagons.	Forge and Store Wagons.	Spare Gun Carriages.	
Staff (Army Corps)	23	15	38	77	—	—	77	—	—	—	—	—	—	—	—
3 Divisions	1,101	29,277	30,468	999	3,717	2,478	7,185	54	216	150	228	489	27	6	1,116
1 brigade of Cavalry	120	2,151	2,271	319	1,604	216	2,139	6	3	—	17	49	4	—	73
Corps, Artillery :—															
*Regimental Staff	4	2	6	11	—	—	11	—	—	—	—	—	—	—	—
3 batteries Horse Artillery	21	516	537	45	492	—	537	18	—	—	—	21	6	—	27
2 field batteries (16-prs.)	14	382	396	16	292	—	308	12	—	—	—	14	4	—	18
Army Corps Ammunition Reserve, in 3 divisions.	18	516	534	21	528	—	549	—	—	—	—	90	9	6	105
Corps, Engineers :—															
†Regimental Staff	2	1	3	5	—	—	5	—	—	—	—	—	—	—	—
1 company, & Field Park	6	209	215	12	79	—	91	—	—	—	—	15	—	—	15
1 Pontoon Troop	9	313	322	18	228	—	246	—	—	—	—	31	—	—	31
½ Telegraph Troop	6	143	149	12	90	—	102	—	—	—	—	12	—	—	12
1 Troop Military Police	2	73	75	—	65	—	65	—	—	—	—	—	—	—	—
Medical Department	45	1,120	1,165	30	—	82	112	—	—	—	23	9	—	—	32
Veterinary „	10	40	50	20	—	—	20	—	—	—	—	—	—	—	—
Chaplain's „	1	—	1	1	—	—	1	—	—	—	—	—	—	—	—
Control „	26	277	303	50	—	164	214	—	5	—	—	16	10	—	31‡
Bakery Train	2	218	272	—	—	201	201	—	5	—	—	48	—	—	53
Butchery Train		52													
Total	1,509	33,305	36,805	1,027	7,005	3,141	11,863	90	229	150	268	794	60	12	1,513

* 1 Lieut.-Colonel, R.H.A.
1 Adjutant, R.H.A.
1 Lieut.-Colonel, R.A.
1 Adjutant, R.A.
4 Total.

† 1 Lieut.-Colonel, R.E.
1 Adjutant, R.E.
2 Total.

‡ Includes transport for Army Corps Staff.

ARMY CORPS.

The following Table shows the same Army Corps, the Numbers being arranged so as to show more clearly the proportions of each Arm of the Service.

——	Officers.		Non-Commissioned Officers and Men.	All Ranks.	Horses.	Guns.
	Combatant.	Non-Combatant.				
Staff and Departments.						
Army Corps	19	88	1,722	1,829	625	—
3 Divisions	30	159	915	1,104	750	—
1 Cavalry Brigade	3	17	113	133	115	—
6 Infantry Brigades	18	138	1,074	1,230	972	—
Total Staff	70	402	3,824	4,296	2,462	—
	472					
Infantry.						
21 battalions	588	63	22,386	23,037	1,218	—
	651					
Cavalry.						
3 regiments attached one to each Division.	81	12	1,866	1,959	1,845	—
1 brigade (3 regiments)	81	12	1,866	1,959	1,845	—
Total Cavalry	162	24	3,732	3,918	3,690	—
	186					
Artillery.						
Regimental Staff	4	—	2	6	11	—
Horse Artillery — 1 battery, attached to Cavalry Brigade.	5	2	172	179	179	6
Horse Artillery — 3 batteries in reserve	15	6	516	537	537	18
Field Artillery — 9 batteries, attached to Divisions.	45	18	1,641	1,704	1,908	54
Field Artillery — 2 batteries in reserve	10	4	382	396	398	12
3 Infantry and Artillery Reserve Ammunition Columns	12	6	618	636	759	—
1 Army Corps Ammunition Reserve.	12	6	516	534	549	—
Total Artillery	103	42	3,847	3,992	3,631	90
	145					
Engineers.						
3 companies, attached one to each Division.	15	—	558	573	138	—
Regimental Staff	2	—	3	5	5	—
1 company, and Field Park, in reserve.	6	—	209	215	91	—
1 troop, Pontoon Train	6	3	313	322	246	—
½ Telegraph Troop	3	3	143	149	102	—
Total Engineers	32	6	1,224	1,262	582	—
	38					
Military Police.						
3 troops, attached one to each Division.	6	—	219	225	195	—
1 troop attached to Head Quarters.	2	—	73	75	65	—
Grand Total of Army Corps	983	537	33,305	36,805	11,863	90
	1,560					

DETAIL OF AN ARMY CORPS

	Officers.	Non-Com. Officers and Men.	Drivers.	Total, all Ranks.	Guns.	Horses.			
						Draught.	Riding.	Pack.	Total.
Staff.									
Staff of Army Corps	23	15	.	38	.	.	77	.	77
Control Department attached to Head Quarters.	5	16	13	34	.	26	11	.	37
	28	31	13	72	.	26	88	.	114
A Brigade of Cavalry.									
Staff	3	1	.	4	.	.	11	.	11
1 Battery Horse Artillery	7	102	70	179	6	102	77	.	179
3 Regiments	93	1,800	66	1,959	.	132	1,713	.	1,845
Medical Department	12	54	29	95	.	58	12	.	70
Veterinary „	2	3	.	5	.	.	4	.	4
Chaplain's „	1	.	.	1	.	.	1	.	1
Control „	2	13	13	28	.	26	3	.	29
	120	1,973	178	2,271	6	318	1,821	.	2,139
1st Division.									
Staff	15	8	.	23	.	.	39	.	39
1st Brigade — Staff	3	1	.	4	.	.	11	.	11
1st Brigade — 3 Battalions	93	3,126	72	3,291	.	144	30	.	74
2nd Brigade — Staff	3	1	.	4	.	.	11	.	111
2nd Brigade — 3 Battalions	93	3,126	72	3,291	.	144	30	.	174
1 Regiment of Cavalry	31	600	22	653	.	44	571	.	615
1 Battalion of Rifles	31	1,042	24	1,097	.	48	10	.	58
3 Field Batteries — 1 9-pr.	7	103	62	172	6	98	30	.	128
3 Field Batteries — 2 16-pr.	14	236	146	396	12	248	60	.	308
1 Infantry and Artillery Reserve Ammunition Column.	6	85	121	212	.	230	23	.	253
1 Company Royal Engineers	5	170	16	191	.	32	14	.	46
1 Troop Military Police	2	73	.	75	.	.	65	.	65
*Medical Department	80	354	166	600	.	332	44	.	376
Veterinary „	2	20	.	22	.	.	4	.	4
Chaplain's „	3	.	.	3	.	.	3	.	3
†Control „	9	58	55	122	.	114	16	.	130
	397	9,003	756	10,156	18	1,434	961	.	2,395
2nd Division.									
Staff	15	8	.	23	.	.	39	.	39
1st Brigade — Staff	3	1	.	4	.	.	11	.	11
1st Brigade — 3 Battalions	93	3,126	72	3,291	.	144	30	.	174
2nd Brigade — Staff	3	1	.	4	.	.	11	.	11
2nd Brigade — 3 Battalions	93	3,126	72	3,291	.	144	30	.	174
1 Regiment of Cavalry	31	600	22	653	.	44	571	.	615
1 Battalion of Rifles	31	1,042	24	1,097	.	48	10	.	58
3 Field Batteries — 1 9-pr.	7	103	62	172	6	98	30	.	128
3 Field Batteries — 2 16-pr.	14	236	146	396	12	248	60	.	308
1 Infantry and Artillery Reserve Ammunition Column.	6	85	121	215	.	230	23	.	253
1 Company Royal Engineers	5	170	16	191	.	32	14	.	46
1 Troop Military Police	2	73	.	75	.	.	65	.	65
*Medical Department	80	354	166	600	.	332	44	.	376
Veterinary „	2	20	.	22	.	.	4	.	4
Chaplain's „	3	.	.	3	.	.	3	.	3
†Control „	9	58	55	122	.	114	16	.	130
	397	9,003	756	10,156	18	1,434	961	.	2,395

* Includes Brigade Medical Department. † Includes Brigade Control Department.

DETAIL OF AN ARMY CORPS.

	Ambulance Wagons	Ammunition Wagons (R. A. Equipment).	General Service Wagons.*	Small Arm Ammunition Carts.	Carts for Stores and Intrenching Tools.	Forge Wagons.	Store Wagons.	Spare Gun Carriages.	Rocket Carriages.	Water Carts.	Office Wagons.	Pontoon Wagons.	Trestle Wagons.	Photographic Wagon.	Printing Wagon.	Wire Wagons.	Stores Ovens.	Baking Vans.	Bread Vans.	Butchery Wagons.	Total Carriages.
	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	.	.	6	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	7
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	17	6	42	.	3	4	1	.	.	.	.	.	.	.	.	.	.	.	.	.	73
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	.	.	5	3	9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	17
	.	6	1	.	.	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	9
	.	12	2	.	.	2	2	.	.	.	.	.	.	.	.	.	.	.	.	.	18
	.	7	14	29	.	1	1	2	1	.	.	.	.	.	.	.	.	.	.	.	55
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	76	25	137	50	72	5	4	2	1	.	.	.	.	.	.	.	.	.	.	.	372
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	.	.	5	3	9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	17
	.	6	1	.	.	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	9
	.	12	2	.	.	2	2	.	.	.	.	.	.	.	.	.	.	.	.	.	18
	.	7	14	29	.	1	1	2	1	.	.	.	.	.	.	.	.	.	.	.	55
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	.	.	24	.	9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	33
	76	25	137	50	72	5	4	2	1	.	.	.	.	.	.	.	.	.	.	.	372

* The General Service Wagon of R.A. pattern, also called "Lock under, Ammunition and Store Wagon," is of similar construction to the Transport General Service Wagon, but heavier and stronger.

Detail of an Army Corps

	Officers.	Non-Com. Officers and Men.	Drivers.	Total, all Ranks.	Guns.	Horses. Draught.	Riding.	Pack.	Total.
3rd Division.									
Staff	15	8	.	23	.	.	39	.	39
1st Brigade { Staff	3	1	.	4	.	.	11	.	11
1st Brigade { 3 Battalions	93	3,126	72	3,291	.	144	30	.	174
2nd Brigade { Staff	3	1	.	4	.	.	11	.	11
2nd Brigade { 3 Battalions	93	3,126	72	3,291	.	144	30	.	174
1 Regiment of Cavalry	31	600	22	653	.	44	571	.	615
1 Battalion of Rifles	31	1,042	24	1,097	.	48	10	.	58
3 Field Batteries { 1 9-pr.	7	103	62	172	6	98	30	.	128
3 Field Batteries { 2 16-pr.	14	236	146	396	12	248	60	.	308
1 Infantry and Artillery Reserve Ammunition Column.	6	85	121	212	.	230	23	.	253
1 Company Royal Engineers	5	170	16	191	.	32	14	.	46
1 Troop Military Police	2	73	.	75	.	.	65	.	65
*Medical Department	80	354	166	600	.	332	44	.	376
Veterinary „	2	20	.	22	.	.	4	.	4
Chaplain's „	3	.	.	3	.	.	3	.	3
†Control „	9	58	55	122	.	114	16	.	130
	397	9,003	756	10,156	18	1,434	961	.	2,395
Corps Artillery.									
Regimental Staff	4	2	.	6	.	.	11	.	11
3 Batteries Horse Artillery	21	306	210	537	18	306	231	.	537
2 Field Batteries	14	236	146	396	12	248	60	.	308
Army Corps Ammunition Reserve, in 3 Divisions.	18	255	261	534	.	480	69	.	549
	57	799	617	1,473	30	1,034	371	.	1,405
Corps Engineers.									
Regimental Staff	2	1	.	3	.	.	5	.	5
1 Company and Field Park	6	175	34	215	.	70	21	.	91
1 Troop Pontoon Train	9	163	150	322	.	208	38	.	246
½ Telegraph Troop	6	79	64	149	.	68	34	.	102
	23	418	248	689	.	346	98	.	444
1 Troop Military Police	2	73	.	75	.	.	65	.	65
Control Department.									
Attached to Corps Artillery and Engineers.	2	13	13	28	.	26	3	.	29
Bakery Train	2	139	79	272	.	158	12	.	170
Butchery Train		37	15			30	1	.	31
Officers, staff, and spare Horses for 5 Companies of Transport.	15	153	55	223	.	110	32	.	142
Officers, staff, and spare Horses for 2 Companies of Supply.	4	13	1	18	.	2	4	.	6
	23	355	163	541	.	326	52	.	378
Medical Department	45	1,079	41	1,165	.	82	30	.	112
Veterinary „	10	40	.	50	.	.	20	.	20
Chaplain's „	1	.	.	1	.	.	1	.	1
Grand Total	1,500	31,777	3,528	36,805	90	6,434	5,429	.	11,863

* Includes Brigade Medical Department. † Includes Brigade Control Department.

Detail of an Army Corps—*continued*.

Ambulance Wagons.	Ammunition Wagons (R. A. Equipment).	General Service Wagons.*	Small Arm Ammunition Carts.	Carts for Stores and Intrenching Tools.	Forge Wagons.	Store Wagons.	Spare Gun Carriages.	Rocket Carriages.	Water Carts.	Office Wagons.	Pontoon Wagons.	Trestle Wagons.	Photographic Wagon.	Printing Wagon.	Wire Wagons.	Steam Ovens.	Baking Vans.	Bread Vans.	Butchery Wagons.	Total Carriages.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	15	9	27	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	51
.	.	15	9	27	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	51
.	.	10	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	11
.	.	5	3	9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	17
.	6	1	.	.	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	9
.	12	2	.	.	2	2	.	.	.	.	.	.	.	.	.	.	.	.	.	18
.	7	14	29	.	1	1	2	1	.	.	.	.	.	.	.	.	.	.	.	55
.	.	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
76	.	45	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	121
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	24	.	9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	33
76	25	137	50	72	5	4	2	1	.	.	.	.	.	.	.	.	.	.	.	372
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	18	3	.	.	3	3	.	.	.	.	.	.	.	.	.	.	.	.	.	27
.	12	2	.	.	2	2	.	.	.	.	.	.	.	.	.	.	.	.	.	18
.	.	90	.	.	6	3	6	.	.	.	.	.	.	.	.	.	.	.	.	105
.	30	95	.	.	11	8	6	.	.	.	.	.	.	.	.	.	.	.	.	150
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.	.	.	.	.	1	5	.	.	.	1	20	4	.	.	6	.	.	.	.	31
.	.	.	.	.	1	2	.	.	.	2	.	.	.	.	6	.	.	.	.	11
.	.	11	.	.	2	7	.	.	.	4	20	4	1	1	6	.	.	.	.	58
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	5	.	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	8
.	.	5	.	.	.	.	.	.	7	.	.	.	.	.	.	3	14	14	.	43
.	.	.	.	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5	10
.	.	5	.	.	10	.	.	.	.	.	.	.	.	.	.	.	.	.	.	15
.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
.	.	15	.	9	10	.	.	.	7	.	.	.	.	.	.	3	14	14	5	77
23	.	9	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	32
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
268	111	589	150	229	42	28	12	3	7	4	20	4	1	1	6	3	14	14	5	1,513

* See note page 21.

1 Miner's wagon.
1 Boat wagon.

DETAIL OF AN ARMY CORPS

—	Officers.	Non-Com. Officers and Men.	Drivers.	Total, all Ranks.	Guns.	Horses. Draught.	Riding.	Pack.	Total.
Staff.									
Staff of Army Corps	23	15	.	38	.	.	77	.	77
3 Divisional Staffs	45	24	.	69	.	.	117	.	117
1 Cavalry Brigade Staff	3	1	.	4	.	.	11	.	11
6 Infantry Brigade Staffs	18	6	.	24	.	.	66	.	66
Total Staff	89	46	.	135	.	.	271	.	271
Infantry.									
21 Battalions	651	21,882	504	23,037	.	1,098	210	.	1,218
Cavalry.									
3 Regiments attached one to each Division.	93	1,800	66	1,959	.	132	1,713	.	1,845
1 Brigade (3 Regiments)	93	1,800	66	1,959	.	132	1,713	.	1,845
Total Cavalry	186	3,600	132	3,918	.	264	3,426	.	3,690
Artillery.									
Regimental Staff	4	2	.	6	.	.	11	.	11
Horse Artillery — 1 Battery attached to Cavalry Brigade.	7	102	70	179	6	102	77	.	176
Horse Artillery — 3 Batteries with Corps	21	306	210	537	18	306	231	.	537
Field Artillery — 9 Batteries attached to Divisions.	63	1,017	624	1,704	54	1,638	270	.	1,308
Field Artillery — 2 Batteries with Corps	14	236	146	396	12	248	60	.	308
3 Infantry and Artillery Reserve Ammunition Columns.	18	255	363	636	.	690	69	.	759
1 Army Corps Ammunition Reserve.	18	255	261	534	.	480	69	.	549
Total Artillery	145	2,173	1,674	3,992	90	2,864	787	.	3,651
Engineers.									
3 Companies attached one to each Division.	15	510	48	573	.	96	42	.	138
Regimental Staff	2	1	.	3	.	.	5	.	5
1 Company and Field Park with Corps.	6	175	34	215	.	70	21	.	91
Troop, Pontoon train	9	163	150	322	.	208	38	.	246
Half Telegraph troop	6	79	64	149	.	68	34	.	102
Total Engineers	38	928	296	1,262	.	442	140	.	582
Military Police.									
3 Troops attached one to each Division.	6	219	.	225	.	.	195	.	195
1 Troop attached to Head Quarters	2	73	.	75	.	.	65	.	65
	8	292	.	300	.	.	260	.	260
Control Department.									
Head-Quarters Army Corps	5	16	13	34	.	26	11	.	37
3 Divisions	27	174	165	366	.	342	48	.	390
1 Brigade of Cavalry	2	13	13	28	.	26	3	.	29
Corps Artillery and Engineers	2	13	13	28	.	26	3	.	29
Bakery Train	2	139	79	272	.	158	12	.	170
Butchery Train	2	37	15		.	30	1	.	31
Additional Officers, Staff, and spare Horses for 5 Companies of Transport.	15	153	55	225	.	110	32	.	142
Additional Officers and Staff of 2 Companies of supply and spare men.	4	13	1	18	.	2	4	.	6
	57	538	354	969	.	720	114	.	834
Medical Department	297	2,195	568	3,060	.	1,136	174	.	1,310
Veterinary „	18	103	.	121	.	.	56	.	56
Chaplain's „	11	.	1	11	.	.	11	.	11
Grand Total	1,500	31,777	3,328	36,805	90	6,454	5,429	.	11,883

ARRANGED BY ARMS OF THE SERVICE.

Ambulance Waggons.	Ammunition Waggons (R. A. Equipment).	General Service Waggons.*	Small Arm Ammunition Carts.	Carts for Stores and Intrenching Tools.	Forge and Store Waggons.	Store Waggons.	Spare Gun Carriages.	Rocket Carriages.	Water Carts.	Office Waggons.	Pontoon Waggons	Trestle Waggons.	Photographic Waggon.	Printing Waggon.	Wire Waggons.	Steam Ovens.	Baking Vans.	Bread Vans.	Butchery Waggons.	Total Carriages.
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
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.	.	30	.	.	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	33
.	.	60	.	.	6	.	.	.	.	.	.	.	.	.	.	.	.	.	.	66
.	6	1	.	.	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	9
.	18	3	.	.	3	3	.	.	.	.	.	.	.	.	.	.	.	.	.	27
.	54	9	.	.	9	9	.	.	.	.	.	.	.	.	.	.	.	.	.	81
.	12	2	.	.	2	2	.	.	.	.	.	.	.	.	.	.	.	.	.	18
.	21	42	87	.	34	34	6	3	.	.	.	.	.	.	.	.	.	.	.	165
.	.	90	.	.	6	3	6	.	.	.	.	.	.	.	.	.	.	.	.	105
.	111	147	87	.	24	21	12	3	.	.	.	.	.	.	.	.	.	.	.	405
.	.	18	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	18
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.	.	.	.	.	1	2	.	.	.	2	.	.	.	.	6	.	.	.	.	11
.	.	29	.	.	2	7	.	.	.	4	20	4	1	1	6	.	.	.	.	76
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.	.	5	.	.	10	.	.	.	7	.	.	.	.	.	.	3	14	14	.	43
.	.	.	.	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5	10
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.	.	98	.	40	10	.	.	.	7	.	.	.	.	.	.	3	14	14	5	191
268	.	150	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	418
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
268	111	589	150	229	42	28	12	3	7	4	20	4	1	1	6	3	14	14	5	1,513

1. Miner's wagon.
1. Boat wagon.

* See note page 21.

LONDON:
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LP. 19/2a (a

I have considered the papers sent me

If the Scale laid down in page 15 of the army Circular of Aug.st 1875 be retained, the distribution & arrangements laid down in the accompanying papers appears to me the best that can be devised. It is practicable, which that at p. 15 ~~does not say~~ in which the whole medical force is with the Army Corps, is not

LP. 19/2b

a a.

With regard to the arrangements on the line of march the point occurs to me — if all beyond the 2nd portion (sick & wounded) of the Field Hospitals, or Field Hosps ~~in~~ 20 miles in rear of the army marching, be handed over to the Officer in charge of the organization of the line of communication, will not the 3d portion of Field Hospitals practically become ~~an~~ Intermediate Hospitals — that is, Hospitals between the Field Hospitals, properly so called, and the General Hospital at the base of operations. If Intermediate hospitals, they will assume more or less a permanent character, & if wanted in the field, might not be ~~at~~ readily obtainable. Intermediate Hospitals require some differences in equipment from Field Hospitals.

Personally I do not see any objection to them becoming converted into Intermediate Hospitals, as the number with the Army Corps moving in the field appears to me unnecessarily large, but under such circumstances (if the line should be as I imagine ~~the~~) they would be better removed from the Army Corps altogether,

 (La

Hence there [about] 4 5 Sanitary Detacht.s working with the Army Corps. & [It is proposed that] the bearers who seek the wounded in the ranks should carry them to the Bandaging place, or Hd Qrs of the Detachment. But how could so many bandaging places, ~~&c organised? At what I presume [illegible]~~ or dressing stations, be organised? At a dressing station, there must be surgical materials, ~~means of~~ [instruments for] preparing surgical operations, operators [surgeons] ~~and~~ assistants, &c. ~~Hence Sanitary~~ This can be only accomplished by lessening the number of Sanitary Detachments [dressing stations], but making their organization more complete. At present if enquired into ~~from~~ it will be found the organisation is very incomplete.

—

The term "Ambulances" is confusing as at present used — sometimes used for the Ambulance Vehicles [alone] & sometimes for Ambulance Vehicles, plus Medical ~~Off~~ & other Officers, drivers &c. Cannot this be altered?

My remarks to
Colᵉ Home
on his First
Scheme

C

in case of an early fighting, LP. 19/2d

2d. By the arrangement in the papers, the Medical Personnel & Material are so distributed, that they serve the wants of the fighting line, & the space between it & the Field Hospitals, including the latter. ~~It will~~ Questions arise in my mind only as to some of the details

1. Can Ambulance vehicles be expected to work within the line of the enemy's rifle fire as those in the 1st line would appear to be? Should the wounded within the rifle fire zone not be carried on stretchers by bearers to the waggons placed beyond it? And if so, should this not be provided for? The 2 shelters in the Amb.ce Waggon will not ~~suffice for it~~ provide for this!

~~Bandaging~~ Dressing stations have now greatly increased in importance owing to the distance at which F. H.s are usually placed in modern warfare — often opened in villages & towns — & the uncertainty when the wounded may reach them. Through places often blocked & other transport, especially at night. Important ~~Their~~ surgical operations cannot be delayed till the F. H.s are reached, these Dressing stations ought to be ~~applied~~ out of fire as well as rifle fire & require Thorough organization.

By the scheme under notice here are 267 Amb.ce Waggons — Each San.y Detach.t has 6 waggons, 3 in the 1st & 3 in the 2d. Line

LP. 19/3

Army Medical School.
Royal Victoria Hospital.
Netley 187

LP. 19/3

No.		Number of ambulance Detachments	Officers: Medical Officers	Officers: In charge of Sanitary Detachments	Officers: Officers of Orderlies attd to Sanitary Detachments & Field Hospitals	Officers: Total Officers	Men: Army Hospital Corps	Men: Drivers	Men: Total Men	Total all Ranks	Carriages: Ambulance Wagons	Carriages: Genl Service Wagons	Carriages: Total Carriages	Draught Horses	Remarks
	Cavalry Brigade														
1	1st Line of Ambulances	2	4	1	1	6	62	6	68	74	6		6	12	
2	2nd Line of Ambulances	4			1	1	24	12	36	37	12		12	24	
3	1 Field Hospital		7		1	8	37	12	49	57		6	6	24	
	Total Cavalry Brigade	6	11	1	3	15	123	30	153	168	18	6	24	60	
	Infantry Brigade														
4	1st Line of Ambulances	3	4	1	1	6	93	9	102	108	9		9	18	
5	2nd Line of Ambulances	6			1	1	36	18	54	55	18		18	36	
6	2 Field Hospitals		14		2	16	74	24	98	114		12	12	48	
	Total Infantry Brigade	9	18	1	4	23	203	51	254	277	27	12	39	102	
	Division														
	2 Infantry Brigades	{6 / 12}	36	2	8	46	406	102	508	554	54	24	78	204	
7	1st Line Divisional Ambulance	2	12	1	1	14	62	6	68	82	6	.	6	12	
8	2nd Line Divisional Ambulance	5	.	.	1	1	30	15	45	46	15	.	15	30	
9	3½ Field Hospitals	.	25	.	3	28	130	42	172	200	–	21	21	84	
	Total Division	25	73	3	13	89	628	165	793	882	75	45	120	330	
	Army Corps														
	3 Divisions	{24 / 51}	219	9	39	267	1884	495	2.379	2.646	225	135	360	990	
	1 Cavalry Brigade	{2 / 4}	11	1	3	15	123	30	153	168	18	6	24	60	
10	1st Line Corps Ambulances	3	14	1	1	16	93	9	102	118	9	.	9	18	
	2nd Line Corps Ambulances	5		.	1	1	30	15	45	46	15	.	15	30	
	1½ Field Hospitals	.	11	.	2	13	56	18	74	87	.	9	9	36	
	Total Army Corps	89	255	11	46	312	2.186	567	2.753	3.065	267	150	417	1134	
	Recapitulation by Lines & Field Hospitals														
1	1st Line: 1 Cavalry Brigade	2	4	1	1	6	62	6	68	74	6	.	6	12	
4	1st Line: 6 Infantry Brigades	18	24	6	6	36	558	54	612	648	54	.	54	108	
7	1st Line: 3 Divisional	6	36	3	3	42	186	18	204	246	18	.	18	36	
10	1st Line: 1 Army Corps	3	14	1	1	16	93	9	102	118	9	.	9	18	
	Total 1st Line	29	78	11	11	100	899	87	986	1086	87	.	87	174	
2	2nd Line: 1 Cavalry Brigade	4	.	.	1	1	24	12	36	37	12	.	12	24	
5	2nd Line: 6 Infantry Brigades	36	.	.	6	6	216	108	324	330	108	.	108	216	
8	2nd Line: 3 Divisional	15	.	.	3	3	90	45	135	138	45	.	45	90	
11	2nd Line: 1 Army Corps	5	.	.	1	1	30	15	45	46	15	.	15	30	
	Total 2nd Line	60	.	.	11	11	360	180	540	551	180	.	180	360	
3	Field Hospitals: 1 Cavalry Brigade	.	7	.	1	8	37	12	49	57	.	6	6	24	
6	Field Hospitals: 6 Infantry Brigades	.	84	.	12	96	444	144	588	684	.	72	72	288	
9	Field Hospitals: 3 Divisional	.	75	.	9	84	390	126	516	600	.	63	63	252	
12	Field Hospitals: 1 Army Corps	.	11	.	2	13	56	18	74	87	.	9	9	36	
	Total Field Hospitals	.	177	.	24	201	927	300	1227	1428	.	150	150	600	
	Recapitulation														
	1st Line of Ambulances	29	78	11	11	100	899	87	986	1086	87	.	87	174	
	2nd Line of Ambulances	60	.	.	11	11	360	180	540	551	180	.	180	360	
	Reserve Field Hospitals	.	177	.	24	201	927	300	1227	1428	.	150	150	600	
	Grand Total	89	255	11	46	312	2.186	567	2.753	3065	267	150	417	1.134	

Detail of a Sanitary Detachment

	Army Hospital Corps: [illegible]	Army Hospital Corps: [illegible]	Army Hospital Corps: Men	Army Hospital Corps: Total	Drivers	Ambulances	Horses	Remarks
1st Line or Medical Posts	1	3	27	31	3	3	6	
2nd Line of Ambulances	–	3	3*	6	3	3	6	

* One man A.H.C. in O.R. in distinct charge of each ambulance Wagon.

Tabular Statement
Details of A. H. C. &c. by Col. Home

(B)

Confidential Cohe. Arrangt. for Army-Corps next for Foreign Service

Special Army Circ. should be issued showing changes in A.C. 108 of 1875

Army Medical School. Royal Victoria Hospital. Netley 187

Regts. & Cos. &c. to embark complete w. 1st line of Transport.
Wagons other than Ammunition to be embarked packed.
Pioneers of Regts. to be trained to take off wheels. Horse-boats.
Stores at once sent to Points of Concentration.

Despatch of expeditionary force from the country

1. Raise all Batts. at home to War strength by Army Reserve, Militia Reserve, Volunteers from Mil: Batts.
2. 10 districts, furnish Exp'y Batts., embody both Mil'a. Batts
3. In each rem'g district embody 1 Mil'a. Batt'n
4. Complete each Depot Centre to a full Batt'n - training Batt'n for recruits
5. Complete all embod'd. Mil'a. Batts to war strength
6. All enlistments to be for gen'l service in Line or Mil'a Batts of any Brig. District.

"Eiserne Ration". Cohe of Oct. 76

Cadres of Bearer Cos. should be formed at Aldershot, & "the 2 men per Co. who are to be taught to carry stretchers should be also trained at Aldershot"

Surgery & Pharmacy Wags. not being ready, suggest, if these cannot be got ready at Govt. Workshops, built by contract, Savory & Moore prepared to get them ready within short time -

Sir W. Mends & D. G. Munro sub. statem. of the
requisite detail of hosp. arrangemts. transport by sea de

Army Corps for Foreign Service

		Tons
Infy	21 Batts. troopships -	60-000
Cav y.	6 Regts.	42 000

Arty. 4 Batts. of R.H.A.
or - 16 pr. - Batts.
3 - 9 pr D°
3. Divisl. Reserves
1 Army Corps reserve

Engineers, 3 Field Cos. pr Divn
1 Pontoon Troop
½ Telegraph Troop
- 1 Coy & Field Park

Medical, with Transport attached, 2,174 men, 800 horses
(40 in troop ships) in 10 ships of 2000 tons
Tons 20000

Transport & Commissariat, exclusive of medical & local,

Staff - Divl. & Departmental, in largest troopships
of each Divn -
General of Division in Indian troop-ship, one of
which will be attached to each Divn
Head Quarters of Army Corps in 1 ship of 2000 tons
General Cd. to have a despatch vessel

Ships 82. Tons, 216,300

Exclusive of purchased despatch vessels, hospital ships, commissariat transports & Store transports

3

Army Corps for For. Service

Proposed Hospl arrangets

3 Depôt Hospl Ships - hired steamers, one to be attached to each Divn, making up:

100 iron standing cots, swing
100 or 150 canvas cots

One fast relieving steamer of about 2000 tons, making up 50 to 60 beds.

30 iron swing cots
30 canvas

This ship to be employed for the 3 Divns in carrying worst cases to Engd.

2 Despatch Vessels, 30 canvas cots each - carry less severe cases to Port Said or Malta - to meet P & O steamers - special arrangement - small parties to Engd -

Invalids not requiring special accomn could be sent home from time to time in transports -

Each Divl hospl ship wld have a small steam store ship attached, in wh kept necy supplies of provisions & bedding for issue to transports required to supplement hospl ships

On emergency - accomn

3 Divl ships	——	750 beds
1 Relieving ship		60
2 ~~Despatch~~ ships		60
Sick bays of transports		1,100
		1970

Each hospl ship wld have a double set of canvas cots for its own use, & the Divl ships wld each have 400 cots for supply to transports to make up, say 1000 - to 1400

2970

Bonâ fide hosp^l. ships to wear the Geneva Convention flag

Cottee considers all stretchers sh^ld be of the same pattern – stretchers essential – cruel to move badly w^d. men from one stretcher to another – one pattern & interchangeable – Requirements of Dep^t. should be met.

——— (to be delivered at Woolwich prior to embarkation)

Supplies for 12 field hosp^ls. to be opened in England & to equip hosp^ls. Supplies for 13 to be sent in bulk to base of ops.

Police Force. 1 off^r. 1 Ser^t M^r., 7 Serj^s 13 C^ls 54 privates mounted

Waterproof sheets, where straw scarce indispensable

adm. M.O.

H^d 2^d Staff – Divⁿ 5 (2 = 6 11) 6 LP. 19/5

3. Personnel of the Moveable Field Hospitals

4. Personnel of the Intermediate Field Hospitals

5 Personnel of the General Hospital at the base

LP. 19/6.

Cadre of M Os to each arm of Army Corps in the Field.

		Horses	Batmen
Inf^{y} Battn	Surgn - 1	1	1
Cav^{y} Regt	1	2	2
Art^{y} Horse or Fd Batty	1	2	2
Engineer Co	1	2	2
Pontoon Train Troop	1	2	2
Telegraph Troop	1	2	2

Total for Army Corps

21 Inf^{y} Battns.	21	21	21
3 Regts Cav^{y}	3	6	6
4 Batts R.A.	4	8	8
R.E.			
Div^{l} & Reserve 4 Cos.	— 4	— 8	— 8
Pontoon Tr: 1 Troop	1 —	2 -	2
½ Tel Troop	1 —	2 -	2
	34 -	47 -	47

ZP. 19/7

Med^l Admin: Staff for Army Corps on active service

Appt	Rank	No	Horses
Hd Qr Staff ✓	S. G^l —	1	3
Field Insp^r ✓	D. S. G^l	1	2
Sani^y Off^r ✓	D. S. G^l	1	2
Secy to S. G^l ✓	S. M^r	1	1
M. O. in ch. of Hd Qr Staff } ✓	S. M^r	1	1
Staff Off^r under S. G^l }	Capt. O.	1	1
Div^l Hd Qr Staff ✓	D. S. G^l	1	2
In Ch. of Div^l Staff	S. M^r	1	1
Pay^r Adj^t & Qr M^r } under PMO.	Off^r of O.	1	1
Clerks. S G^l's Office	Serg^t	1	
	Pte	1	
" Acts Staff Off^r	Corp^l	1	
Sani^y Off	Corp^l	1	
Off^r of O.	Corp^l —	1	

Riding Horses
Batmen
A. H. C.
as volunteers

LP. 19/8

Field Hospl. 7 Riding Horses – to be private
only 1 Horse & 1 Riding Saddlery supplied –
Why this change? M.Os of this unit have
private horses

Field Hospl
Why 16 Batmen reduced to 8 ?
Are these 8 grooms ?– The old story
about Servants will be repeated –

LP. 19/9

Total Staff	M. Ors	Offrs A. H. C.	Cadres A H C	Reserve of Sick Bearers & Batmen	Riding Horses
Admin: Staff	13	5	30	26	26
Distrib. to diff.t Arms of the service	34	"	"	47	47
4 Bearer Cos. & Amb.ce Columns	32	×16	144	380	60
12 Fld Hosp.ls	84	12	444	192	96
	163	33	618	645	229
13 Fld H.ls at Base	91	13	481	104	—
ie Grand Total	254	46	1099	749	229

× including 4 Transport Offrs.

Admin: Med^l Staff for Stationary H^ls at Base of Op^s & along line of Com^ns

ZP 19/10

App^t	Rank	No.	Horses	Bâtmen
On Staff of G^l Off^r	S. G^l	1	3	3
C. f at base of Op^s Field director	D. S. G^l	1	2	2
San^y Off^r	D S G^l	1	2	2
Sec^y to S. G^l	S. M^r	1	1	1
Ch: of Staff at base	S. M^r	1	1	1
Dir^r of Med^l & Surg^l Stores	S. M^r	1	1	1
G. H. C.				
Staff Off^r Pay M^r & 2^d M^r to Surg G^l	Capt^n of O:	1	1	1
Off^r in Ch: of Hosp^l Equip^t in Expense & Provis^n Stores	L^t of O.	1		
Ch: of Med^l Stores	L^t of O.	1		
Clerk in S. G^ls Office	Serg^t	1		
Clerks in — D^o —	Corp^l	1		
	Pte	1		
Clerk to San^y Off^r	Serg^t	1		
Med^l & Surg^l Stores	Serg^ts	2		
	Pts	4		
Acting S^t M^r & 2^d M^r Serg^t	Act^g Serg^t Major	1		
Clerk, Staff Off^r of Ord^e	N. C^d Off^r	1		
Off^r Ch: of Hosp^l Eq^t	Serg^t	2/		
	Pts	6		

Sketch of Strength of 4 pp. LP. 19/11 1

Medical Officers with an Army Corps in the Field.

1. Strength of Medical Officers with Separate Portions of an Army Corps in the Field.

General Staff

Army Corps Staff. number

S. G^{l} & P. M. O.	1
Field Inspector	1
Sanitary Officer	1
S^{n} M^{rs} Sec^{y} to P. M. O.	1
S^{n} in Med^{l} Charge of H^{s} 2nd	1

Division Staff.

D. S. G^{l}	1
S^{n} M^{rs}	1

Cavalry Brigade Staff

D. S. G^{l} or S. M^{r}	1

Infantry Brigade Staff

D. S. G^{l} or S. M^{r}	1

Infantry Battalion

~~Battalion~~. S. M^{r} or S^{n}	1

Cavalry Regiment

~~Regiment~~. S. M^{r} or S^{n}	1

Artillery Regimental Staff

D. S. G^{l}	1

Artillery (Horse or Field) Battery

S^{n}	1

~~Medical Officers with an Army Corps of 36,000 of all Ranks~~

ZP. 19/11 2

Strength of Medl Offrs with Separate Portions of an Army Corps in the Field — Continued.

Engineers — Company

Sn ——— 1

Pontoon Train, Troop

Sn ——— 1

½ Telegraph Troop

Sn ——— 1

Sanitary Detachment (in service with Ambulance Wagons, Dressing Stations, & all general duties between Troops engaged & Field Hospitals)

Sn Mr ——— 2

Sn ——— 4

Field Hospital

Sn Mr in charge ——— 1

Sn Mr. ——— 2

Sn ——— 4

p. 3.

ZP. 19/11

Medical Officers with an Army Corps of 36. 805 of all ranks

Components of Army Corps	Medical Officers, Description of	Number
~~Head Quarter Staff~~ General		
~~Staff~~ ~~[illegible]~~ Corps Staff	P. M. O. – S. G.l	1
	Field Inspector	1
	Sanitary Off.r	1
	Surgeon Secy to P. M. O.	1
	Surgeon in Med. Charge H.d Q.rs	1
Do – 3 Divisions	P. M. O. D. S. G.l	3
	~~Staff~~ Surgeon Majors	3
D. 1 Cavalry Brigade	D. S. G.l or S. M.r	1
6 Infy Brigades	D. S. G.l or S. M.r	6
Infantry		
21 Battalions	S. M.r or S.n	21
Cavalry		
3. Regts	S. M.r or S.n	3
Artillery		
Regimental Staff	D. S. G.l	1
Horse Arty. 4 Batteries	S.n	4
Field Arty 5 Batteries	S.n	5
Engineers		
4 Companies, Divisional & Reserve	S.n	4
1 Troop, Pontoon Train	S.n	1
½ Telegraph Troop	S.n	1
3 Sanitary Detachments (for Service with Ambulance Waggons, Dressing Stations, & all General ~~[illegible]~~ duties between Troops Engaged & Field Hospitals)	Surgeon Majors	6
	Surgeons	~~18~~ 24
12 Field Hospitals	S. M.r & S.ns	84
Total No of Medl Offrs		~~169~~ 172

(3)

166) 36805 (221
33
360
332
2805
166
119

36805 : 166 :: 1000 :
166
220830
220830
36805
1000) 6109630 (

36805000

36000 : 166 :: 1000

36805 / 166000 (4·5
147220
187800
184025

36805 / 169000 (4·85
147220
217800
220830
184025
33775

36
48
84

36000
144
37/4
140
18
166

36000 : 267 :: 1000

36000 / 267000 (7
252000

37/4
140
18 1/2
166

36000 / 169000 (4·7
144
250

36805 / 172000 (4·6
147220
247800
220830

p. 4. LP. 19/11

Mem^a on Foregoing Sketch – (4

The Compⁿ & Strength of the Army Corps in it are taken from

40116/78 "Tables showing the War Strength & Composⁿ of Troops in the Field, issued with Army Circ^r dated Augᵗ 1875."

The Ranks of the Med^l Offrs with an Army Corps in the foregoing Sketch are as follows:–

Surgeons Gen^l	2		S^n M^r	46
D. S. G^ls	5		S^n M^r or S^ns	24
D. S. G^ls or S. M^rs	7		S^ns	88

But S. M.^s can always take the place of S^ns. Total ~~169~~, 172

The total No. of Med^l Offrs, ~~169~~ 172, with an A. Corps of 36.015 of all ranks is at the rate of ~~about~~ a little more than 4½ Med^l Offrs with each 1000 troops.

It is understood in this calculation that the Principle of evacuating the Field Hosp^ls & clearing the A. Corps of all sick & w^d as rapidly as practicable upon Fixed Hosp^ls in rear of the Army ~~Corps~~ is acknowledged

Sn Genl —	2
D. S. G. —	5
D. S. G. a Sn Mr	7
S. Mr	46
S. Mr a Sn	24
Sn	85
	169

Rough Draft

ZP. 19/12

Strength of Medical Officers with an Army Corps of 36,905 men of all ranks in the Field.

Components of Army Corps	Description of Medical Officers	Number
General Staff.		
Hd Qrs Staff of Army Corps	S.G. & P.M.O.	1
	S.G. Field Inspector	1
	D.S.G. Sanitary Do	1
	S. M.r. Secy to P.M.O.	1
	S.r in med. charge, Hd Qrs Staff &c	1
Staff. 3 Divisions	D.S.G.	3
	S. M.r	3
Staff. 1. Cavalry Brigade	D.S.G. or S.M.r.	1
Staff. 6. Infantry Brigades	D.S.G. or S.M.r.	6
Infantry		
21 Battalions	S.M.r or Sr	21
Cavalry		
3 Regiments	S.M.r. or Sr.	3
Artillery		
Regimental Staff	D.S.G.	1
Horse Artillery. 4 Batteries	Sr	4
Field Art-y 5 Batteries	Sr	5
Engineers		
Divisional & Reserve, 4 Companies	Sr	4
Pontoon Train, 1 Troop	Sr	1
½ Telegraph Troop	Sr	1
3 Sanitary Detachments (for service with the Dressing Stations, Ambulance Transport, & all general duties between Troops engaged & Field Hospitals.) (Each San.y Det.t divisible into 2 Sections)	Sr. M.r.	6
	Sr	24
12 Field Hospitals (Each Field Hosp.l divisible into 2 Sections.)	Sr. M.r.	36
	Sr	48
	Total No. of Medical Officers	172

turn over to next page

Mem^d^ on Foregoing Calculation.

LP. 19/13

The Components, & Strength, of Army Corps, taken from
" 40116/78 Tables showing the War Strength & Composition of Troops in the Field issued with Army Circ^r dated August 1875 "

The Ranks of the Med^l Off^rs with an Army Corps in the foregoing sketch are as follows: —

Surgeons General	2	Surgeons Major	46
Dep^y Surg^ns Gen^l	5	Surgeons Major or Surgeons	24
Dep^y Surg^ns Gen^l or Surgeons Major	7	Surgeons	88

But junior Surgeons Major can always take the place of Surgeons

Total medical officers 172.

The total No. of Medical Officers (172) with an army corps of 36.805 of all ranks, is at the rate of a little more than 4½ medical officers with each 1000 troops.

It is understood in this calculation that the Principle is acknowledged of evacuating the Field Hospitals, & clearing the Army Corps of all Sick & Wounded, as rapidly as practicable upon Fixed Hospitals in rear of the whole army

T. L.

Strength & Ranks
of Medical Officers
with an Army Corps

29

(*For private circulation only*).

Evening Meeting.

Monday, May 3rd, 1875.

MAJOR-GENERAL PATRICK L. McDOUGALL, Deputy Quarter-Master General (Intelligence Branch) in the Chair.

ON THE ORGANIZATION OF THE COMMUNICATIONS OF AN ARMY, INCLUDING RAILWAYS.

By Lieutenant-Colonel R. HOME, C.B., R.E., D.A.Q. M.G.

THE subject upon which I am going to address you this evening is a dry one, but its importance is so great, that I feel it requires no apology for being introduced; although I feel that I should apologise for presuming to deal with so large and so complicated a question.

When I was asked to give a lecture at this Institution, I looked through the various subjects that had recently been brought forward, and I found that no one had taken this special subject up. Feeling deeply impressed with its importance, I determined to try and read a paper on it, hoping that other and more competent persons may be induced to follow my lead. Our language is not rich in military terms, and the expression, *the organization of the communications of an army*, is a clumsy one to express what the Germans call "*étappen*"—a word which they have taken from the French *étape*. I know of no English term which expresses what is meant, and therefore I have used a term which was adopted during the Peninsular, our greatest war, for nearly the same thing. By the words, "the organization of the communications of an army," is meant, therefore, not the maintenance or repair of roads, railways, canals, or telegraphs, so much as the organization which enables an army to obtain the greatest benefit from those means of communication.

When an army advances into a hostile country it has to be supplied with food, ammunition, and other stores; it has to receive reinforcements in men and horses from the rear; and it has to send back sick or wounded men and horses from the front. If an Army of moderate

size, say 50,000 men, simply marches 100 miles, without firing one shot, or seeing an enemy, the number of sick that have to be got rid of is very great. Experience has shown that, in a good climate, with abundant food, easy marches, and fair weather, the waste from ordinary causes in a ten days' march of such a force would be between 2,000 and 2,500 men, while the number of galled, foot-sore, or worn-out horses would also be very large. A few wet days or a sharp engagement would raise the number of both very considerably. An inefficient man or horse at the front is a positive disadvantage; he can do no work, and he consumes food which is difficult to get, and often occupies the time of a sound man by requiring to be looked after; consequently, if an army is to be kept efficient in front, there must be a stream of men and horses passing along the lines of communication from the base of operations in the rear to supply the waste in front, and a succession of depôts where sick men and horses may be tended, cured, and again sent to the front.

Further, an army must be fed, and the magnitude of the operation is what many people rarely consider. The action of an army in the field, its marches and its battles, the lists of killed or wounded are what chiefly strike the eye of the looker on; when a man is killed or wounded, or even when he is taken prisoner, his loss is chronicled; but the man is just as much lost if he dies or is invalided from want of food or medical aid. We read of so many killed, wounded, and prisoners, and of so many guns and standards captured; but who notices the losses from privations and hardships? Yet the losses from the latter causes, far outweigh those from the former. We read much of the fight at Magenta and the battle of Solferino. Volumes have been written in which you will find accounts of both in the greatest detail; but we rarely see an account of the suffering endured by the French Army from the 9th to the 17th June 1859; during the first few days, the troops were ordered to live on the peasants, and latterly, although in a friendly country, the order was repeated, with the words added "even to complete exhaustion"—words never used except in the direst extremity.

We read much of the battles round Metz: of the gallant conduct of the soldiers of two great nations; of the skill displayed by the Generals on this side, of the mistakes made by those on that. We read long lists of killed and wounded, but we hear little of the many human lives lost by fever, cold, hunger, and want round the beautiful city of Lorraine.

Few realise the fact that an army requires as much food as a very large city; each day a large city receives its daily supply of food, there is no stint nor stay for those who can purchase; long custom and gradual improvements have opened up easy means of communication between the consumer and the producer. It is different with an army. An army is a city flung down suddenly in the country, each day moving, each day requiring fresh alterations in the arrangements by which food is conveyed from the producer to the consumer. Yet this portion of the art of war—one of the most important, if not *the most important*—receives but scant notice. "War is the art of being "the strongest at any given place," and that portion of the art of

war that keeps the greatest number of bayonets in the ranks, is surely not to be despised.

It is often asked, why this difficulty about food? The number of mouths in a country is but slightly increased when two armies meet; the total number of mouths in the two countries at war is really diminished. Why then this difficulty? The answer lies here. Suppose there are 10,000 bakeries in England, an addition of ten mouths to be fed by each would make but a slight difference, if distributed. But suppose the additional 100,000 mouths all concentrated in one place, and requiring to be fed all at once, the circumstances are altered.

There are really but three ways by which, or by modifications of which, armies can be fed in the field:—

1st. The soldiers may obtain food by being billeted on the inhabitants, or by living from hand to mouth as they march.

2nd. The whole of the provisions may be carted after the army.

3rd. The army may be fed from magazines.

Let us consider these three methods. In the first case, the Army would soon cease to be a military body; the men would quickly become a mob of marauders, and cease to be an army. In a thinly peopled country moreover the dispersion of the men in search of food would be so great that little or no progress to the front could be made, and the moment a halt took place, the troops having exhausted the district where they were, would simply starve, precisely as a bullock tethered by a string will eat up everything in its circle, and, if not moved, die from starvation, even in the midst of a rich meadow. This was the system generally adopted by the great Napoleon; it is one which we do not read much about in ordinary military histories, and into which we only get an insight by reading personal narratives of the wars at the beginning of this century. And it must be confessed, that the genius of Napoleon as a strategist and tactician appears all the more marvellous when the system under which he made war is considered. The marches made by the French Army Corps to blockade Ulm were made in this manner, and French writers say the men suffered severely for many days. Pillage showed itself in that, the finest Army Napoleon ever commanded. This must be the invariable result of there being no magazines. A victorious army may march on a broad front in a rich country in such a way, but the moment it concentrates to fight, or halt, it is plunged into the greatest difficulties.

After the capture of Berlin in 1808, when the French undertook the winter campaign in Poland, their sufferings were very great; whole corps disappeared, broken up into bands of marauders seeking food in the scattered farms of that inhospitable country.

The serious check received by the French Army at Eylau, was caused by the demoralisation consequent on this system. The resources of a country cannot be utilised by an army marching through it, they are wasted and lost.

We now turn to the second method, that by which an army is fed by provisions carried with it on waggons; this is possible for a very small force, but for a force of any magnitude it is impossible.

The Count de Paris has furnished a remarkable calculation on this subject. He says, one road will suffice for only a limited number of carriages, if several roads are available, the number of waggons must be limited, otherwise the army cannot move.

A six-horse waggon will carry 2,000 lbs.; and the supply for each man per day, medical stores, ammunition and food included, may be placed at 4 lbs. per man.

Such a waggon will supply 500 men for one day, but if the army is a day's march from its base, it will only supply 250 men, for it must go back empty to re-fill at the base. If it is two days from its base, 4 waggons for 500 men are requisite, or 8 per 1,000, or 800 waggons for 100,000 men. But if the army of 100,000 men, includes as it would do, 16,000 cavalry and artillery horses, 200 waggons would be requisite to carry a day's forage, or 800 if the army was two days' march from its base; or 1,600 waggons, horsed with 9,600 horses, but these waggons would be three days away from the base and one day there, consequently they would require 360 more waggons, horsed by 2,460 animals to feed them, these would require 92 additional waggons, and so on, until we arrive at a total of 2,000 waggons, horsed by 12,000 animals, as being absolutely requisite to feed an army of 100,000 men two days from its base of operations. If the army advances one day further, or three days' march from its base, it would require 3,760 waggons horsed by 22,000 animals, a column 38 miles long if the intervals could be kept; but which would extend over 48 miles or the whole four marches, and even this number of waggons does not give a true picture, for there must be a fresh set of waggons to carry the food from the divisional depôts to the regiments. To move ten days from the base of operations, on the basis furnished by the Count de Paris, would require 10,975 waggons, horsed by 65,850 horses. This is a number which it would be practically impossible to deal with, covering no less than 108 miles if the distances be kept, but which would really be more than the whole length of the ten days' march.

The third method, or that of magazines, is consequently the only sure, safe, and possible means of making war, provided it be judiciously combined with a system of requisitions.

Along the roads, railways, or canals forming the line of communication of an army, there must be two distinct streams always flowing, viz., that which supplies the army with fresh or convalescent men and horses, as well as food and warlike stores of all kinds (this stream flows from the base to the army), and that flowing in the opposite direction, which carries back sick and wounded men, horses, and prisoners, either to depôts on the line of communication, or to the base itself, and also the empty waggons returning for fresh supplies

It is manifest that there must be some organisation which shall keep order and discipline amongst the heterogeneous masses which compose these two streams; which shall form depôts in proper places; see to the supply of the sick and wounded; push on what is urgently wanted; economise and utilise the resources of the country whether friendly or hostile; direct those resources to proper places; maintain and repair the telegraphs, roads, railways, and bridges; garrison

important points; protect and patrol the communications; check disorders; look after the dispatch of letters; and lastly, be such that with but a short delay, can direct the whole of the vast traffic into another channel, if the movements of the army necessitate this being done.

This organisation which the Germans term *etappen*, and which I have paraphrased as the "organisation of the line of communications " of an army," is that portion of the military art where study and forethought come most into play. It is that portion of the science of war, where the bright scintillations of genius, the sudden inspirations of the heaven-born leader, can do little or nothing. But it is on that account the more important; as careful, accurate, painstaking, study, and forethought applied to it, will go far to remove many of the indeterminate causes which mar the most brilliant schemes.

In war, there can be nothing absolutely fixed, nothing rigorously systematic. But while this is true, it is equally true that the military machine is composed of many different parts that cannot be made to work for one end, unless they all fit into a well arranged scheme. If all the details of such an organisation be not clearly sketched out, well understood and thought over by every one, no amount of inspiration or feverish excitement will make things go straight when the machine is tried.

I quite concede that such an organisation can only be tried in actual war, cannot be exercised in peace; but granting this, I believe that if the principles of such an organisation be clearly laid down, and the functions of each person well understood by all concerned, the organisation itself will quickly get into working order when wanted.

While then rigidity of form is inadmissible, yet it is desirable to have a standard or model, to reach which every exertion should be made, even although such a standard may never be reached. It is very desirable in this matter, as in everything else, to establish some definite and clear principles of organization; details, however important, quickly arrange themselves if the framework or sketch be based on sound principles.

The first great principle which I believe modern experience has pointed out, is the division of the whole subject of supply into two great branches.

1st. That which works in rear of the army.

2nd. That which accompanies the army.

These two great branches should be perfectly distinct, their functions are different, and the class of men and conveyances to be used, is in each case different.

The function of the first is to look after and forward stores massed in large depôts, and to push them up, as far as possible, after the army. Referring to the illustration of the bakeries in England, it is the duty of the organisation in rear, to seek out, as it were, the food which each soldier would have eaten if he had remained at home, or in garrison, and to send it after him.

The function of the second is to bring up the food from the advanced magazines to the divisional depôts, at every opportunity, more especially during halts, and at the same time to seek to utilise

the resources of the country by requisitions in the immediate neighbourhood of the marching troops.

It is manifest that the service in rear may be of a semi-civil character, the transport may be by rail, hired vehicles, or canals, while the service in the front must be military, and must be performed by bodies having a military organization. As an army advances into a hostile country; the requisitions in the immediate neighbourhood of the line of march will have, to a certain extent, exhausted the country; one object then of the semi-civil organization following in rear, will be to extend the area of requisitions, and to tap fresh supplies. In every case the furthest advanced point of the department working in rear should be as near as possible to the army in front, should follow it, and keep, if possible, within one or two marches of it, relieving the guards and detachments left in rear, completing any work that may have been done by the advance, strengthening bridges, repairing roads, laying telegraphs, and bringing up supplies. The transport working in front must, to prevent confusion, be under perfect military control, and must be able to bring up the supplies from the rear, that is to say, from the head or advanced portion of the rear organization to the divisional depôts.

But the food or supplies have to be carried from those divisional depôts to the regiments themselves, and a fresh organization is requisite for this, which, being responsible for the supply of the units within the division, that is to say, the battalions, batteries, and regiments, must be a part or portion of these battalions, batteries, or regiments themselves.

Thus we are led to a division of transport into three portions, and I beg, gentlemen, to draw attention to this division, for in it I believe lies the key of success in this branch of the art of war, a division of transport into—

1st. General transport, embracing railway, canal, and road transport, working along the line of communication from the base to the most advanced magazine.

2nd. Departmental transport, which shall convey the supplies from the advanced magazine to the divisional depôts.

3rd. Regimental transport, which shall bring the supplies from the divisional depôt to the battalions, batteries, or regiments.

Accuracy of detail and economy of power are only to be found in an intelligent division of labour. By such a division of the transport, the smallest portion is that which, having to be always close to the troops on all roads, and even in the fields, must be highly organised and well horsed. The Departmental transport, which need not move so rapidly, and generally moves at night, and always on roads, may carry heavier loads, or, what is the same thing, may use fewer horses, —while the transport working on the line of communication may, if it is not railway transport, be waggons hauled by relays of horses, pressed from the inhabitants and working a stage close to their own homes, thus avoiding the necessity of sending men and horses to the front, and further, relieving the magazines of the task of feeding horses and men so employed. The first description, General transport, must be under the commandant of the line of communications, and under him alone; the second description, or Departmental transport, must be under the heads of departments—artillery, engineer, and commissariat; and the third, or Regimental transport, must be under the officers commanding regiments. When I say the transport is to be under these different directions, I mean not that the horses detached for any one service are invariably to be so employed, but I mean that these are to be their normal or general duties; it being always distinctly understood that any horse or any man in an army is liable for any duty the General commanding may choose to order. It would appear almost needless to say this, but it used to be an axiom in the French army that the "intendant" was responsible for the supply of food, the commanding officer of artillery for that of ammunition, and the commanding engineer for intrenching tools, each having his own train, while the general was responsible for handling the troops in action. This led to its natural results, the heads of each branch of the service rarely helped one another, and the general, shorn of half his attributes, lost his power. In an army-corps, division, brigade, or regiment, the commanding officer is alone, and can alone be responsible, for not only handling, but also for supplying the wants of his men. He may, and doubtless must have persons under him responsible to him for carrying out certain duties, but their responsibility is to him, and to no one else.

Many of the arrangements adopted in foreign armies, and which are too often supposed to be modern discoveries, will be found to have existed under different names and altered circumstances, in the Peninsular War. Wellington began with no organisation, but originated as he went along, and his organization, adopted from experience, was in principle almost identical with what now holds in the German army. It is well worthy of study as given by Gurwood.

These were—1st. The regimental mule equipment (pack animals, to follow the troops through the difficult country they had to traverse in Spain). 2nd. The departmental transport, represented by the artillery train, the engineer train, and the commissariat train. The two first chiefly, though not altogether, composed of the corps of artillery drivers, and the latter composed chiefly of the Royal waggon train, while the general transport was represented by vast numbers of hired carriages and animals, comprising the ordnance and commissariat transport, and by boats on the Tagus and Douro, worked by seamen; the whole of the latter being under the general direction of the officer in charge of the communications. Allowing for the altered circumstances, and the absence of railways and telegraphs, the system used in the Peninsula by Wellington was very similar to that now adopted in Europe, with, however, one important difference, to which your attention will be shortly directed.

Viewing then the question generally, we arrive at this point, that if an army is to be kept up to its fighting-strength in front, the communications must be worked by an organisation separate and distinct from that in front. It is by no means meant that this organisation should be distinct from and independent of the general commanding

the army, far from it; the organization working on the line of communications should occupy the position, as regards the army, that an army-corps does, that is to say, the officer in command of the communication should hold to the general commanding, the position that an army-corps leader does. This is most distinctly laid down in foreign armies. If an army corps is working by itself it is really composed not of two, but of three divisions—one taking charge of the line of communication, and not being classed or counted as troops of the fighting line; similarly, if several army-corps forming an army are working together, there is another on the line of communication not counted or classed with the fighting troops.

Now this is the point where the modern foreign organization differs from that of Wellington, a difference undoubtedly caused by the small force at Wellington's disposal.

He was obliged to endeavour to look after his communications by means of detachments and convalescents—the results were constant abuses. We read continually in the pages of Napier of the cavalry regiments being dangerously weakened by detachments acting on the line of communication really as military police. We read of constant abuses arising from convalescents being detained in rear, and the fighting battalions in front being thereby weakened. Now in modern armies the force told off for the communications is complete—it has its own battalions, its own commissariat, artillery, and engineer staffs, which hold to the heads of those departments with the army the relations that similar officers do in divisions to the senior officers of those departments. Thus the troops in front are never weakened by detachments, and a division of 10,000 men on paper is really as nearly as possible of that strength on parade. The advantages of this as regards discipline are enormous—units such as regiments or battalions are not broken up to find garrison for this post or that important railway junction.

There is nothing more remarkable in examining from time to time the strength of the Prussian army in France than to see how closely the real strength of each corps corresponded with the regulation strength.

The advantages of doing away with detachments is too well known to require to be dwelt on here.

Indeed, if an army were to advance into a hostile country without such organisation, it would soon reach the end of its tether, the fighting men in front would be gradually disseminated along the whole line of communication, and nothing would be left in front to meet the enemy with.

In every army, there are and must be a very large number of semi-military bodies, that is to say, bodies possessing a certain amount of military organisation, and yet whose function is not to fight but to work for those who do. These bodies are invaluable; but in front their presence is absolutely hurtful; in rear their duties are all important, amongst these bodies, are the bakers, the butchers, the great mass of the telegraph corps, the railway corps, and a large proportion of the medical department. Further the protection and guard of the

various posts in rear may be given to troops, inferior in marching power to those in front, and consequently we are again brought by another set of reasons to the fact that a separate and special organisation is required for the line of communications.

Nothing more clearly demonstrates the value and importance of a careful preparation of these details than the Franco-German war. Prussia conquered France, not so much from valour on the field of battle, as by the most painstaking care in every detail.

As the Prussian army advanced it drew Prussian civil institutions after it, and the French statement, that France was invaded not by the Prussian Army but by the whole Prussian nation, was literally true. As a general statement, it may be said that the collection of supplies at the base of operations is really the work not of the military leaders so much as of the civil administration of the State.

Acting on this idea, Coblentz, Mayence and Manheim were the bases, or great depôts of the German Armies at first, stores were accumulated at these places chiefly by the civil government, organised bodies in charge of the communications worked from those points to the army, gradually as the army advanced these semi-military bodies followed; and were in their turn followed by a civil organisation. First, a Governor of Alsace was appointed, next a Governor of Lorraine, and each functionary exercising the civil government of the State, allowed the semi-military bodies in charge of the communications to be pushed to the front, and finally the grand depôts originally on the Rhine, were pushed to the Moselle.

The force in front thoroughly military, gradually shading off along its line of communication to the civil governors of the various provinces in the heart of Germany, where each corps had its home and peace station. The young unmarried men being in front, fighting and exposed, the older and married men in rear, each in proportion to his age and his power doing his country's work.

To place highly trained military bodies to guard communications, to see after the police duty, to prepare relays of horses, or convoys of stores, is manifestly a waste of power. Looking to the two recent campaigns of 1866 and of 1870, it appears that in this organisation, the Prussians showed there superiority more than in anything else, the whole power of the State being devoted to one object. The Military Estimates in peace maintained the fighting men, and but a very feeble nucleus of these semi-military bodies; their peculiar institution of universal service enabling them to put their hands on as many men as they required at a moment's notice.

Thus when war broke out, every man in the country found his place, in the vast machine by which the fighting men in front were kept supplied. The French Army had no such organization, and was so frittered away in detachments, and there was so much confusion, pillage, and waste in rear of their army, that, taught by experience, the new French military laws provide that men, who from their stature, or some slight physical infirmity, are not placed in the ranks, are enrolled for these auxiliary branches of the Army. In war the more complex the military machine becomes, the more important becomes the

moral power of armies, and I would venture to observe that armies only get more complex, because society itself gets more complex. Because discoveries and inventions introduced into civil life are adopted into armies. Because, in short, men are better educated, and the general standard of knowledge is everywhere higher, consequently moral force, as a lever that sways bodies of men of the size of modern armies is more important now than when Napoleon said it was three times as important as physical force. Nothing tends to preserve moral force in armies so much as well ordered communications. It is not merely that regular supplies of food are brought up, that the men are regularly fed, although that goes for something, but the sick and wounded are got out of sight rapidly. Men's minds are not allowed to dwell on horrors, and above all, the reinforcements coming up from the rear, seeing regularity, order, and strict discipline in the rear of the army, are impressed with the sense of power of the whole machine at work, and spread a healthy tone through the ranks they join.

It has often been said, and with great truth that German military institutions have not been tried by defeat, that a concatenation of peculiar events has helped Germany in her great successes. This most undoubtedly is true; but if we examine her military institutions, we shall find that her leaders take precisely this view, and they have striven to produce a system that shall be available in the day of defeat as well as in that of victory; and nowhere is this anxious care more evident than in the organization of communications.

The service working in rear must therefore have a special and separate organization. In Germany (France and Austria have followed German arrangements to a great extent) there is an officer who commands the whole line of communications; his place is with the General commanding, or one march in rear of him, and under his orders he has six distinct branches working.

1st. The route service.
2nd. The railway service.
3rd. The field intendance or commissariat.
4th. The field medical depôt.
5th. The route telegraph.
6th. The field post office.

Each of these departments has its own head, and each is of a civil, or quasi civil character. Each has its purely military branch in front.

The telegraph department is a good example of the way in which the civil shades off into the military.

It is divided into three distinct branches all under one head.

1st. The State or home telegraphs.

2nd. The route telegraphs along the line of communication, usually a light, overhead wire.

3rd. The field telegraph detachments which communicate with the division and army corps. The latter being under the Generals commanding, the Director of military telegraphs, deals with them through the generals.

As the army advances, the route telegraphs are rapidly laid, and

the first, or State telegraph department follows and completes the work, connecting it with the general telegraph network of the kingdom. The Director General of State Telegraphs having as his assistant, or deputy, the Director of Military Telegraphs.

Thus there is no attempt to spread the field-telegraph-detachments out along the line of communications; being well horsed, and an entirely military body, their functions are to make a line each day to unite the divisions, a line that must be rolled up and re-made the next day. The route telegraphs are more permanent but less military in their character, the great object being to push the State telegraph as rapidly as possible in rear. Thus by a proper division of labour the actual number of soldier telegraphists is but small, and the money spent by the State on soldiers is thus kept as much as possible to pay for actual fighting men, those who work in rear, being, on account of their prospective service in this way, relieved of a certain portion of the service they otherwise would have to do in the ranks. Men so employed do not require periodical training as soldiers, they do not require more than a distinctive dress and a habit of respect for superiors. I do not now propose to attempt to describe these six divisions or branches of the communications of an army, but I cannot dismiss the second, or that of field railways, without saying a few words on this very important special branch of the subject.

The use of railways has introduced great changes into war, and it is believed that these changes may be summarised somewhat as follows:—

Viewed strategically, they have given an enormous power in concentrating masses of men and horses from the distant portions of a country on certain points; such concentrations in short as those effected by the Germans in 1870, on Coblentz, Mayence, and Manheim. Viewed tactically, their use is restricted. Armies may be massed by these means at a secure distance from an enemy in a short time; but the moment that the distance between two contending armies becomes such that a powerful force must be ready to form in line of battle to meet an opposing army, the railway becomes for the purpose of moving troops of little value; but for the purpose of supplying troops, and removing sick and wounded, its value is at all times very great. Although universal compulsory service is more than sixty years old, I think we may fairly doubt the possibility of keeping the vast armies in the field that are thus placed in it, if railways did not exist. Suppose there had been no railways during the recent Franco-German war, I think it is exceedingly doubtful if Germany could have kept 400,000 or 500,000 men in the field. No amount of waggon transport would have fed them in France; and if such a force had attempted to advance, feeding on the country, it must have spread over so wide a front to seek subsistence and its power to concentrate would have been diminished to such an extent that its numerical value would have been greatly reduced.[1]

[1] The invasion of Russia by Napoleon is a case in point. Many writers have

Railways must, therefore, be viewed in two distinct lights:—

1st. As means for concentrating armies from distant points, and placing them on the theatre of war.

2nd. As means for supplying those armies while operating on the theatre of war.

This division is really that between railways actually in the zone of military operations and outside it.

In the former case the military element predominates; in the latter, the civil.

It is manifest that there must be a line of demarcation between these two. This the Germans term the transfer station. Take, for instance, the advance march of the Germans from the Rhine towards the Sarre. The Rhine was for some time the dividing line, Mayence, Manheim, and Coblentz being the transfer stations. East of these points the civil element prevailed; west, the military element was all powerful. The object being as the army advanced, to push these transfer stations after it as quickly as possible, they were moved first to the Moselle, and subsequently to the Meuse, in each case the civil railways of the State extending their field of operations further to the west, and allowing the military organisation to follow the army. The reason of this distinction is, that an army in the field depends for its supply on the productions of the country in rear of it, and it becomes essential not to dislocate the means of production, and to interfere with the trade and commerce of the country as little as possible. At the same time it is requisite that for a certain space in rear of the army it should have complete control over the railways; hence, a station must be selected where the separation takes place. The French made no such separation, and the consequence was that all kinds of stores, men and horses were sent from all France to the Army when actually in motion, there being no halting place out of the immediate zone of action, where the mass of supplies so sent could be arranged and forwarded as required, consequently the railways immediately in rear of the army were blocked and useless, the waggons containing the things that really were wanted, never could be got at. I know of no more extraordinary description than of the blocks of railway carriages in rear of the French Army at Le Mans, or in the town of Metz.

At the latter place nearly 7,000 carriages were blocked together in a solid mass; none of the people on the spot knew what the waggons contained—ammunition, food, clothes, arms, intrenching tools, pontoons, and hospital arrangements, being mixed up in a confused mass—the power of the railway as a carrying agent being destroyed by its carriages being used as moving magazines. Had a transfer station been used much of this confusion would have been prevented.

There is always a tendency to follow the lead of those who have been successful, and consequently since the successes of Prussia, there

carefully examined this great episode, and all agree that no organisation of carts or waggons could have fed so great a force so far from its base, but that a single line of railway would have done so with ease.

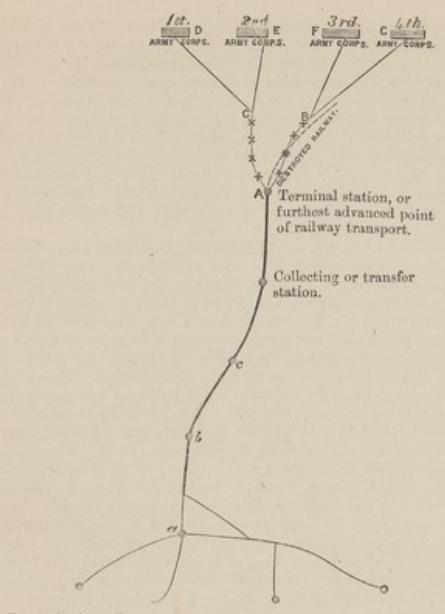
is a great tendency to Prussianize military matters. There is danger in this. There can be no doubt that, broadly speaking, the principles of war must be the same in every country, precisely as the principles which govern the administration of justice, the principles of music, painting, sculpture, &c., amongst civilised nations are identical. But each nation works out those principles in a different way. And any one who is a judge, will tell a French picture from a German, French music from German. So it must be with war—the principles which each nation has to deal with are identical. But in working those principles out, the peculiar idiosyncrasy of the nation must come into play. The outline of the picture in each case will be the same, but the colouring and detail will vary.

I am far from thinking or urging that we should adopt German customs in this country. But it is well to see what German customs are, and how the Germans have worked out the problem of utilizing their railways. When paying a visit to a German officer who filled an important position in a large fortress, I saw a table which looked like a kind of Bradshaw, and on asking what it was, I was told it was the annual mobilisation table. "See here," my friend said, "if we will "have war, and to-morrow is the first day, I know that at four o'clock "a train containing so and so will arrive, at half-past five another, and "so on, for the nine days during which the operation of mobilisation "takes place." And he told me that each year this table was altered, and every officer of certain grades had a copy of it. This table is really a very simple affair. An army is composed of men, horses, and stores; those men, horses, and stores, must in peace time be in certain known places. In war time they must be concentrated in other known places. Consequently it becomes a matter of simple calculation to determine where each of the scattered bodies or units can be best embarked in the railway waggons, and the time it will take to reach its point of destination. The table of mobilisation is merely the result of a careful study of the subject. In Germany, a section of the Head Quarter Staff, aided by the Government Inspectors of Railways, prepares these tables and prepares a Bradshaw, which in war takes the place, while the army is concentrating, of the ordinary Bradshaw; certain of the ordinary trains ceasing to be civil and becoming military, additional trains being added. On the completion of the mobilisation, the railway section simply directs what trains are to run as military trains, and all the rest work as usual.

Further, as every unit has its fixed head-quarters, so each army corps has its head quarters. And it is one of the functions of the railway section of the General Staff, aided by the Railway Inspectors, to select for each corps what is termed a "route depôt station"; to this station everything belonging to the corps is sent, whether going to it, or coming from it.

These route depôt stations have each a commandant, they are selected after careful consideration, and if plenty of store and platform-accommodation does not exist, during peace it is made; at this station the commandant is supreme.

Further, in peace time a committee for each line, consisting of the



a, *b*, *c*, important points which should be the head-quarters of the railway working commission.

A, B, C, road transport by waggon to the route termini B and C, C D, C E, B F, B G, the lines on which the departmental transport works feeding the Army Corps from the route termini B and C.

traffic manager and a military officer, is appointed. The duties of this committee are the following:—In case a country is plunged into war there can be only a limited number of possible contingencies. These contingencies are determined carefully. The route depôt station, and the places to which the troops and stores are to be moved are also determined. The line committee determines, where halts have to be made, where men and horses are to be fed and watered, and on single lines the passing places for trains. These points are all clearly laid down, and every one knows them.

The commandant at the depôt station simply loads the men, horses, and stores he receives from the district of the corps; the line committee take charge of them and deliver them at the transfer station. It is manifest that the whole of these arrangements require nothing more than a little care and forethought, and a mixture of railway knowledge and military knowledge on the part of those who make them. There is no science required at all. Let us suppose for one moment that Scotland was a foreign country, with whom we were as likely to fight as we once were. And suppose we had 30,000 men stationed in Hampshire and Dorsetshire, 30,000 in the Midland counties, and 30,000 in Kent. The first step towards a mobilisation of these forces for a Scottish war would be the selection of points of concentration for each body of troops, the determination of a route, depôt station, a detail of how the men, horses, and stores should get to that station, and the selection of a line of railway over which each corps was to move, the appointment of a line committee, consisting of military officers and the traffic managers of each line affected, and the determination of certain fixed trains to be used for through traffic, and also certain places where men and horses might be fed, either breakfast, dinner, or tea, say six hours after starting. These conditions are clear and definite, and require only a little time to arrange. But where are these trains carrying all these men and stores to go to—where will you disembark your loads? Here we come to one of the most difficult problems to determine, and one on the correct determination of which much depends. Are the Scotch likely to be more advanced in their preparation for war than we are? What is the political state of the country? What is the character of the leader, is the war popular, have they many railways to concentrate their troops with? All these questions enter into the determination of this point. It is manifest that if the point of disembarkation is chosen too far to the front the troops and stores coming up in a long column by rail are liable to be greatly inconvenienced, perhaps not by the actual attack so much as by the threatened attack of the enemy.

If the point is too much to the rear, the full value of the railways will not be obtained, consequently the determination of this point is one of the greatest importance. Let us suppose York is the station selected, then that station becomes the transfer station or collecting station.

Behind that, all transport is worked as described under the regulations prepared carefully beforehand, as much as possible peace-traffic is maintained, and after the first concentration of troops takes place, certain military trains only are run. The points of departure and the point of arrival once fixed, the concentration of troops becomes a simple matter.

Beyond York no civil traffic of any kind would be allowed, and a military railway director, with very extended powers, would be appointed to work all the railway traffic north of York, acting, however, always under the orders of the officer in chief command of the communications. But let us carry our arrangements a little further, the Collecting Station, York, becomes then at once a great store.

The troops as they arrive are pushed through it at once, some by rail, some by road, towards definite points, where each of the three corps coming from Kent, Hampshire, and the Midland counties would be formed. The station at York would be placed under a commandant, who would issue orders somewhat similar to the following:—

"No trains containing military stores are to pass York."

"Trains with troops and ammunition may, unless specially ordered, pass."

"No train will go to the front that is not full."

"All provision trains will be unloaded, except in special cases, when definite instructions will be given."

"All trains coming from the Army will run past York and not stop there."

Meantime, let us suppose that the commissary-general of the army in front finds, or thinks he will find, difficulties in feeding the troops, on account of some flank movement that is going to be made against the Scotch Army. He notifies the commandant of the line of communications of the quantity of provisions he is likely to require suddenly. These are loaded up, formed into trains, and pushed into sidings a few miles north of York, with a small guard which encamps beside them; a telegram from the front brings them on at once.

Similarly an action is expected, and hospital trains are formed, placed in sidings, with nurses, medical comforts, and a guard; a telegram brings them to the front at once, and the sick or wounded are carried far past York to the south.

North of York the traffic would be entirely military, and worked under a military railway director, who would have under him a proper staff for the purpose, and who would arrange for all the traffic being worked in a regular way. But how far can such traffic be worked? How close to the army can the railway transport be brought up to the front? The answer to these questions depends on many things:—

1st. The line, is it destroyed or likely to be destroyed?

2nd. The nature of the stations available as terminal stations.

3rd. The prospects of a collision with the enemy.

4th. The nature of the roads and the horse transport of the army corps.

5th. The situation of the army as regards the railway, and the front it was occupying.

But let us suppose a station selected, we will say Darlington, the enemy's army being somewhere in the neighbourhood of Newcastle. Beyond Darlington, railway transport would, except in special cases, cease, and each army corps would have to send its departmental transport to Darlington for supplies. Darlington, the route terminus, would be the point where the organisation of the line of communications would cease, it would be the great point where distribution would commence.

Let us suppose, however, a little further, that the railway has been destroyed north of Darlington, and that the enemy, the Scotch, retreat;

the army advances, and the distance from the route terminus to the corps becomes too great for the departmental transport to work. The officer in command of the communications foreseeing this, and knowing the direction the army is marching in, fixes a fresh route-terminus and establishes a line of horse transport from the railway-terminus, Darlington, to the points he has selected, to these points the departmental transport now send for supplies, the transport of those supplies to the route-terminus, resting with the officer in charge of the communications, while a strong body of workmen would be put on the railway to repair it, relay the rails when the railway terminus would be again advanced and so on. At the Collecting Station, York, supplies would be sought, not only in the south, but in the whole region round York, and each commissariat officer of the army-corps would seek by requisitions purchased, or other means, to relieve the strain on the communication as much as possible.

Such I believe to be the principles on which the Germans work railways, and undoubtedly so far as we can judge by the application of cause and effect, they are correct. I have tried not to burthen you with details, nor to enter into descriptions of how the complicated arrangements requisite for the organisation of lines, may be best divided between the departments of the army. If the principles are sound, the details will quickly settle themselves. But this we may feel sure of, that though good men may make bad systems work, yet all systems should provide for being worked by mediocre or indifferent men; many details of the German regulations, however, do not appear to me to be so framed,—I say it with the greatest diffidence and submission. But the general principles which prevail the whole, are logical, clear, and definite, and I cannot better conclude than by quoting the opening words of their new regulations on this subject.

"The regular working of railways is of the first importance, not "only for warlike operations, but also as most materially affecting "national interests. The greatest care should be taken that they are "regularly worked; on the lines in rear of transfer stations the "ordinary traffic will not be interfered with for military purposes, "except when absolutely requisite. As a rule the ordinary public "trains will run, extra ones being added for military purposes. The "carrying powers of a railway are best developed by constant steady "traffic at regular intervals."

"Any interference with the regularity of the railway is fatal."

The CHAIRMAN: I trust I may be allowed, in the name of this meeting, to assure Colonel Home that the subject which he has treated to-night has been neither tedious nor uninteresting, and I hope I may be allowed to thank him in the name of those who have listened to his lecture, for the instruction which he has managed to convey in so interesting a manner. Genius has been defined as a "vast capacity "for taking trouble;" and although I do not think that is by any means a correct definition, there can be no doubt that success in any enterprise, or any line of life, depends on a vast capacity for taking trouble; and I believe that the successes of the German armies in the two last wars were not so much owing to the manifestation of any great military genius on the part of the different generals, as to the vast capacity for taking trouble which was displayed in the bureaus of the military

offices of the empire in anticipation of war, no branch of which is, probably, more important than that which Colonel Home has brought before us so ably to-night.

Colonel CHESNEY, R.E.: I should like to give one single illustration of the value of the system which Colonel Home has so ably explained, of which I happen to have gathered the particulars on the spot, when visiting it on behalf of our Government at the close of the war. It occurred at a part of the siege of Metz that there were some comparatively slight but still smart actions, partly by reserve troops hurried up soon after a great part of the Army that had been round Metz, moved on towards Paris. Among these reserves were some from Wurtemburg. They came up not very long after the investment of Metz was complete, and almost immediately were brought into action; some of them had only just arrived. I learnt that they came into action, were wounded, and were conveyed by railway to the hospitals at Stuttgard, after a journey of less than twenty-four hours; so that it was affirmed that they were actually only thirty-six hours from the time they came before the French until the time they found themselves again in the heart of Germany, lying in their own town hospital. I suppose there can scarcely be a more striking instance of the value of perfect railway-management in maintaining unbroken the communications of an Army with its base.

The CHAIRMAN: I am sure you will allow me to return your thanks to Colonel Home for his very valuable lecture.

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