

**Handbook of the medical organisations (chiefly for war) of foreign armies /  
by Lieut.-Colonel Frank Howard.**

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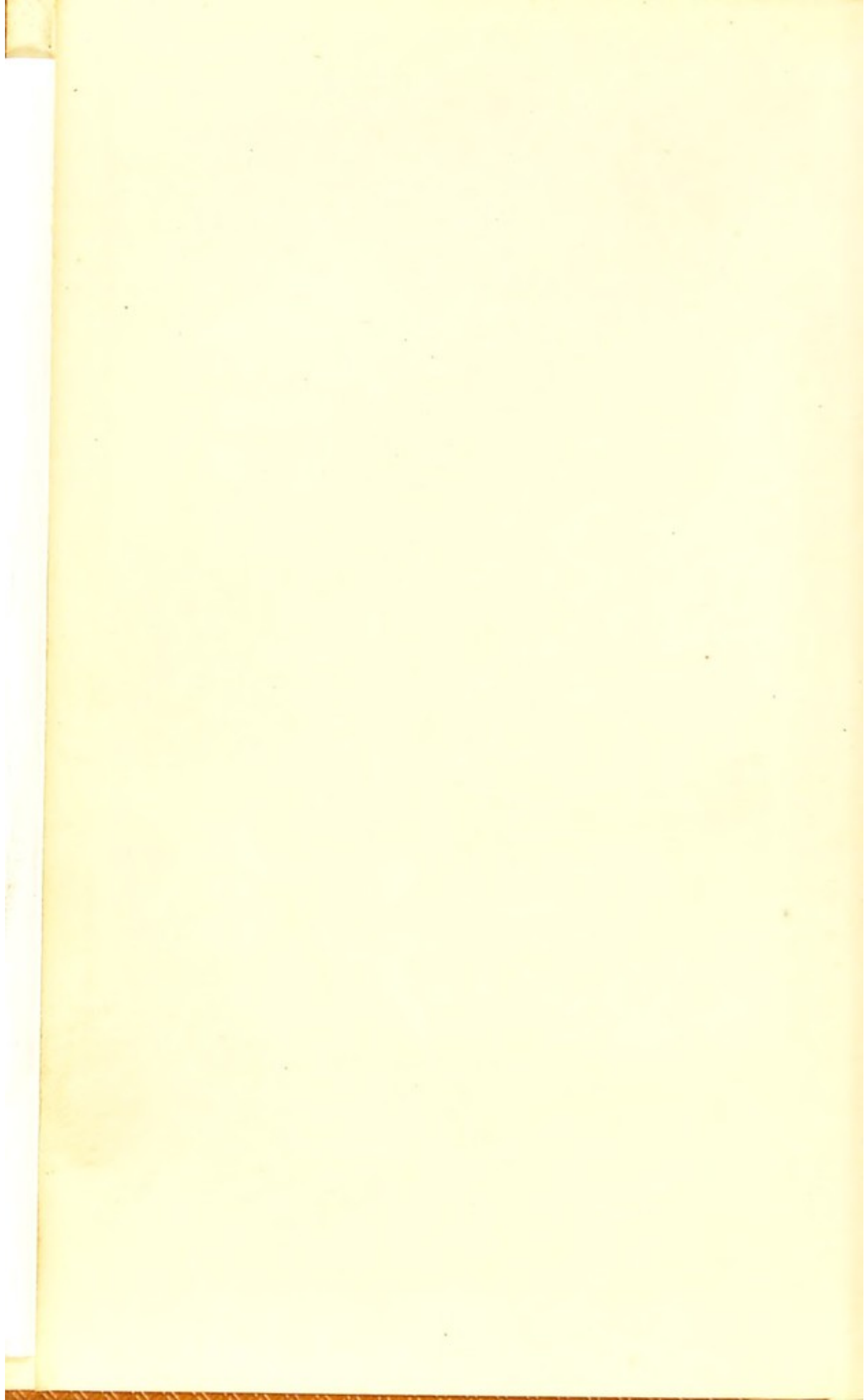
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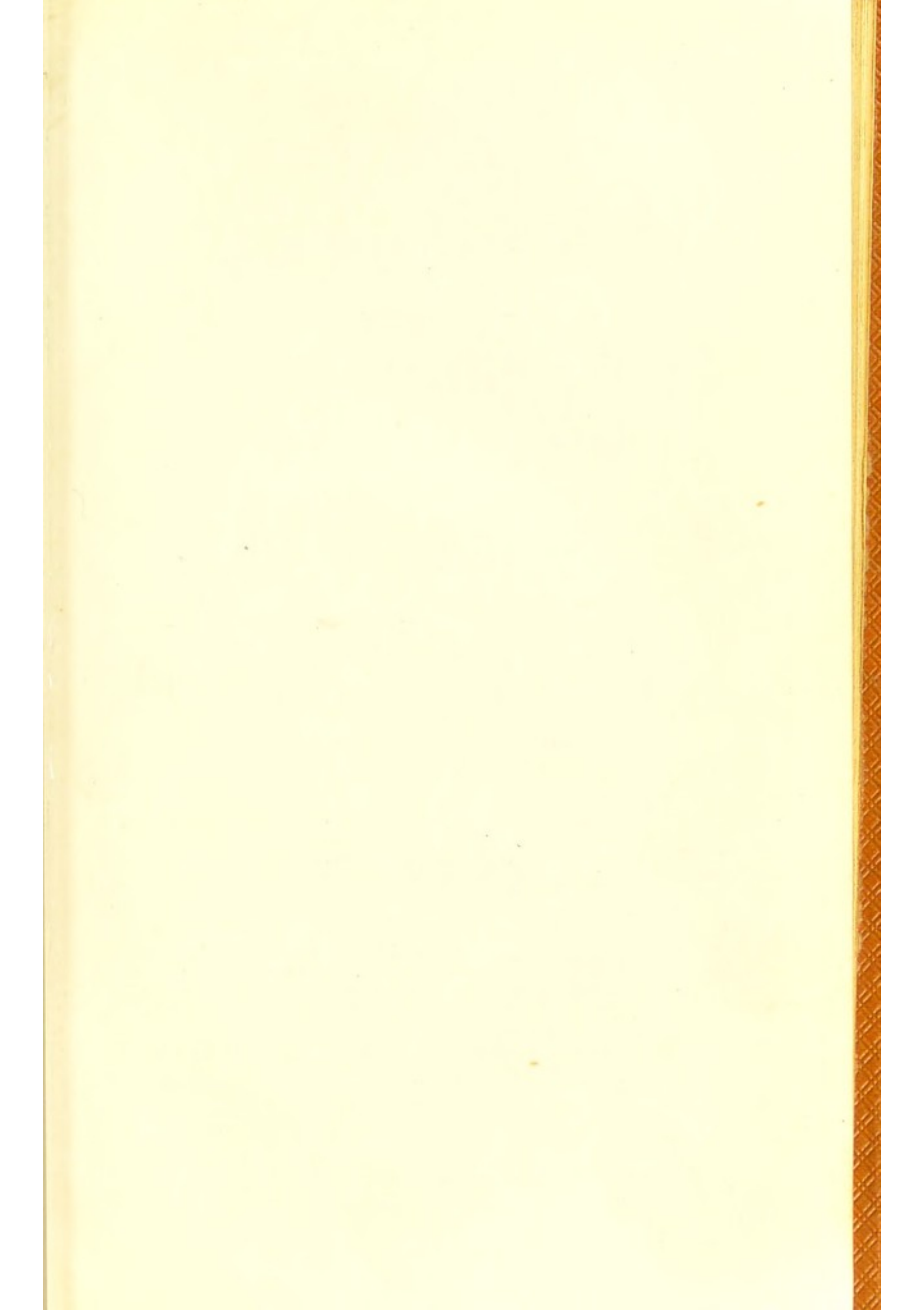
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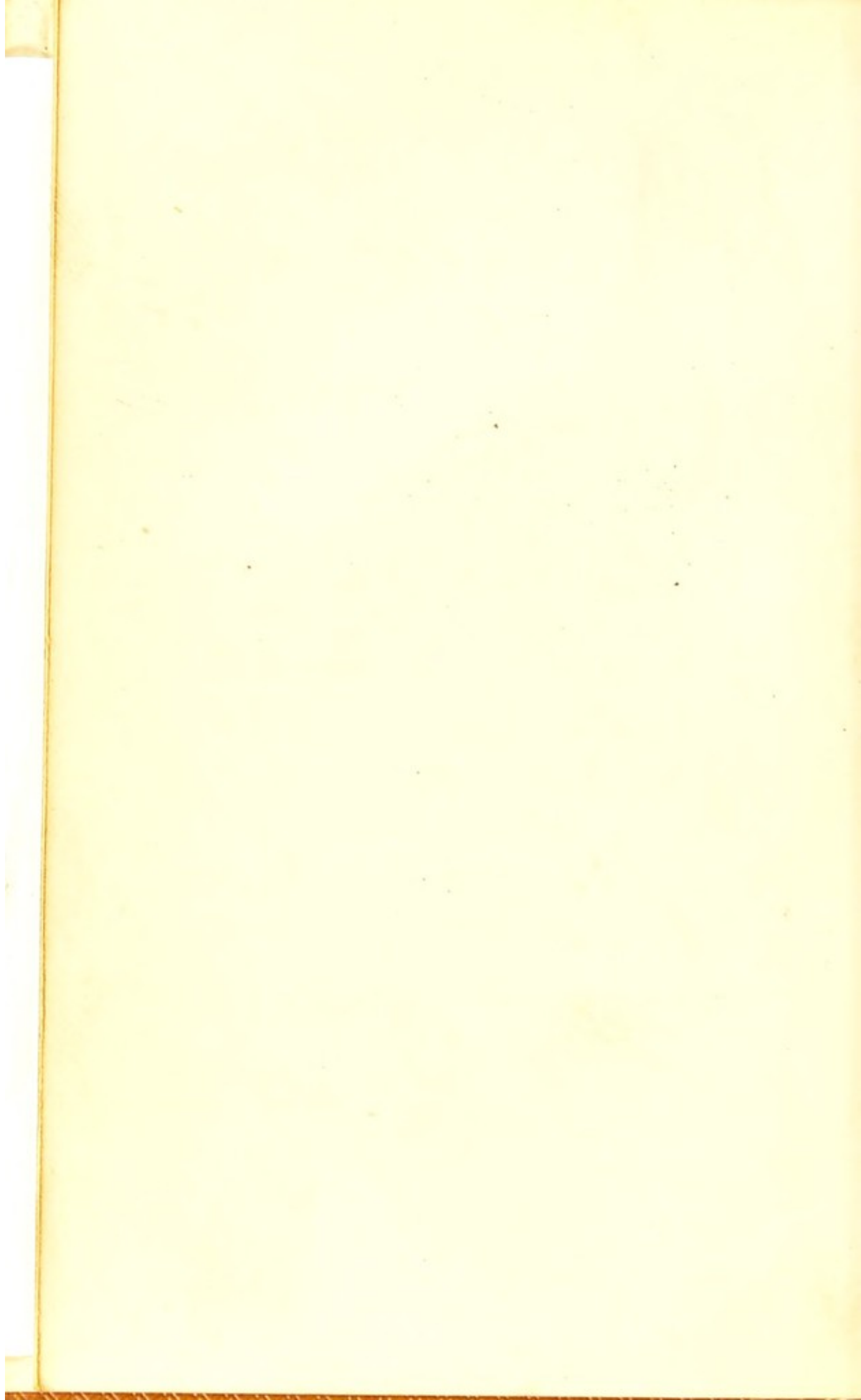
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H A N D B O O K  
OF THE  
MEDICAL ORGANISATIONS  
(CHIEFLY FOR WAR)  
OF  
FOREIGN ARMIES.

BY  
LIEUT.-COLONEL FRANK HOWARD,  
*Army Medical Staff (Retired Pay).*



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## P R E F A C E

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IN view of the fact that no "Handbook" of the Medical Organisations (chiefly for war) of foreign armies exists, and that knowledge on this subject will, in future, be required from our Army Surgeons in examinations for promotion, it occurred to me some time ago that the compilation of such a book would be useful to the officers of the Army Medical Service. To this end permission to carry out my proposal was sought officially through the Director-General, Army Medical Service, and was duly obtained from the Secretary of State for War. It has been my aim, while collecting information from various sources, to keep the "Handbook" within reasonable dimensions. I have, therefore, not dealt with descriptions of ambulances, or other carriage, for sick and wounded, regarding which information is obtainable in "The Manual of Ambulance Transport," by the late Surgeon-General Sir T. Longmore — edited by Surgeon-Captain (now Major) W. A. Morris. I have not considered it necessary to expand the "Handbook," by describing at length the duties falling to the various ranks of the Medical Service in the field; for, after all, the duties of the Principal Medical Officer of an Army Corps, or of a Division, do not materially differ, to whatever Army such Principal Medical Officers may belong, *e.g.*, in comparing these duties in the Russian and German Armies they appear almost identical. Indeed, the existing arrangements for medical aid in the field, and for the removal of



wounded therefrom, are, in a great measure, identical in most European armies. On the subject of Voluntary Aid in War, which has been only slightly alluded to in this "Handbook," I must refer Army Medical Officers to the information given in the pamphlet published by the Intelligence Branch, "Organisation of Voluntary Medical Aid in War" (1901).

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*Lieut.-Colonel,*  
*Army Medical Staff (Retired Pay).*

18, VICTORIA STREET, S.W.,  
December, 1901.

# MEDICAL ORGANISATIONS OF FOREIGN ARMIES.

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## AMERICA.

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THE medical corps of the army has, by recent Congressional Act, been increased from 192 to 321 medical officers, viz. :—

- 1 surgeon - general (with rank of brigadier-general).
- 8 assistant surgeons - general (with rank of colonel).
- 12 deputy surgeons-general (with rank of lieutenant-colonel).
- 60 surgeons (with rank of major).
- 240 assistant surgeons (with rank of 1st lieutenant, mounted, for the first five years, and the rank of captain, mounted, thereafter until promoted to major).

### PAY AND EMOLUMENTS.

An assistant surgeon, with the rank of 1st lieutenant, mounted, receives \$1,600 per annum, or \$133.33 monthly. At the end of five years he is promoted to captain and receives \$2,000 a year, which, with the increase of 10 per cent. for five years' service, is \$2,200, or \$183.33 per month. After 10 years' (8975)



service as captain the pay would be \$2,400 annually, or \$200 per month. The pay attached to the rank of major is \$2,500 a year, which, with 10 per cent. added for each five years' service, becomes \$3,000 after 10 years' service, \$3,250 after 15 years, and \$3,500 after 20 years. The monthly pay of lieutenant, colonel, colonel, and brigadier-general is \$333.33, \$375, and \$458.33 respectively. Allowances, according to rank, are given for quarters. Mileage while travelling on duty is passed, and the amount sufficient to cover expenses of journey. Transport for professional books is allowed, with a reasonable amount of baggage. Mounted officers, including all officers of the medical corps, are provided with stabling, forage, and transportation of horses owned and actually kept by them, not exceeding two for all ranks below a brigadier. Groceries and other articles may be purchased from the commissary, and fuel from the quartermasters' departments at about wholesale cost price.

There is an *Army Medical School* at Washington for the instruction of medical officers. The course of instruction is for five months (annually). Five professors are selected from among the senior medical officers of the army, also an instructor in first aid and ambulance drill. There is a president of the faculty of the Army Medical School and professors of military surgery, military hygiene, military medicine, and clinical and sanitary microscopy, including bacteriology and urinology.

*Leave of absence* at the rate of one month in the year on full pay is allowed, and if not taken may accumulate to a maximum of four months, which may be taken after four years. *Retirement* is permissible at any time for disability incurred on duty, or after 40 years' service. It is compulsory at the age of 64. Retired officers receive three-fourths of the amount of their pay proper at the time of retirement.



Medical officers of captains' rank approaching the period of examination for promotion to a majority are usually assigned to duty as attending surgeons in the principal medical centres of the United States, to enable them to become familiar with the practice of leading physicians and surgeons, and to attend lectures, meetings, &c.

Candidates for the medical corps have to undergo a physical examination, as well as a professional examination, before admission. Appointments are made by the president after recommendation of the candidate by the surgeon-general.

The nurse corps is settled by Congressional Act to consist of one superintendent (pay, \$1,800 per annum) and as many chief nurses, nurses, and reserve nurses as may be needed.

The nurses are appointed or removed by the surgeon-general, with the approval of the Secretary of State for War, and all of them must be graduates of hospital training schools, and required to pass a satisfactory professional, moral, mental, and physical examination.

The pay and allowances of nurses and of reserve nurses, when on active service, is placed at \$40 per month when on duty in the United States, and \$50 outside the limits of the United States. They are entitled to quarters, subsistence, and medical attendance during illness, and may be granted 30 days' leave of absence, with pay, in each year. When serving as chief nurses pay may be increased by the authority of the War Secretary, such increase not to exceed \$25 per month.

#### THE HOSPITAL CORPS

Consists of hospital stewards, acting hospital stewards, and privates. All enlistments are for privates, while provision is made for the promotion  
(8975)



of those who are earnest, capable, intelligent, and worthy. Original enlistments are confined to citizens of the United States ; the term of service is for three years. Applicants must be between the ages of 21 and 35, unmarried, of good character and habits, able bodied, not less than 5 feet 4 inches in height, and able to speak, read, and write the English language.

The rates of pay are as follows :—

	Pay per month.	Per year.	
Hospital steward	\$45.00	\$540.00	} First enlistment.
Acting hospital steward ....	25.00	300.00	
Private ....	18.00	216.00	

In addition, \$1 per month is added during the third year of enlistment.

Twenty per cent. is added to the monthly pay, as given in the above table, of enlisted men serving in Porto Rico, the Philippine Islands, Hawaii, and in the territory of Alaska. Members of the hospital corps re-enlisting within three months from date of discharge receive a further increase of pay for the fourth and fifth years of service, and a further increase for each five years of continuous service. They also receive from the Government rations, clothing, bedding, medicines, and medical attendance. Acting hospital stewards are detailed from privates of the hospital corps who have served three months as such, and are recommended by their medical officers as possessing the necessary qualifications and have passed the required examinations. Hospital stewards are appointed from acting hospital stewards, who are recommended by the medical officers and who have served not less than 12 months as acting hospital stewards, and are approved by a board of medical officers.



## HOSPITAL AND AMBULANCE SERVICE IN WAR.

The following significant note appears at the end of a paper contributed by Major John Van Rensselaer Hoff, surgeon, United States Army, on the sanitary organisation of the United States Army\* :—

“The paragraphs (1590 to 1602) of Army Regulations, 1889, under the Caption Hospital and Ambulance Service in War, give a general outline of sanitary organisation ; this outline embraces simply the principles of battlefield assistance, and fails to enter into the details of organisation so essential to successful work ; hence it may be justly said that in the medical department of the United States Army there exists to-day no detailed scheme of organisation for active service.”

In the latest (1901) edition of the “United States Army Regulations,” under the heading “Field Service” (paragraphs 1616 to 1620), it is stated that :—  
“In field service, troops will be accompanied by such number of men of the hospital corps as may be determined by the post-commander on the recommendation of the surgeon. On the march each medical officer will habitually be attended by a mounted private of the hospital corps. Hospital stewards, acting stewards, and at least one private of the corps in each separate command will be mounted when serving in the field, and all privates of the corps will be mounted when serving with mounted commands. Horses will be furnished by the quartermasters’ department for members of the corps on duty in the field when practicable. When no horses are available special application for authority to hire must be made.”

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\* Fourth annual proceedings of the Association of Military Surgeons of the United States, held at Washington, 1st, 2nd, and 3rd May, 1894.



“Ambulances will be used for the transportation of sick and injured, the instruction of the hospital corps and company bearers, and in urgent cases for the transportation of medical supplies, and all persons are prohibited from using them or requiring or permitting them to be used for any other purpose. No person except the proper medical officers, or the officers, N.C.O.'s, and privates of the ambulance service, or such persons as may be specially assigned by competent military authority to do duty therewith, will be permitted to take or accompany sick or injured men to the rear either on the march or elsewhere. When members of the hospital corps are detailed for service in the field during Indian wars, or when left with sick or wounded under circumstances which justify the expectation that their rights as non-combatants under the Geneva Convention will not be recognised, commanding officers will issue to members of the hospital corps revolvers or other available firearms.”

It is laid down in the “Manual for the Medical Department” (1900) that the ambulance and hospital service of each independent command, will be under the supervision of its chief surgeon. This officer should make all necessary arrangements for the care and transportation of the wounded, who, during an engagement will receive attention at the following principal points and in the following order :—

First.—With the line of battle under fire.

Second.—At the first dressing stations.

Third.—At the ambulance stations.

Fourth.—At the division, brigade, or field hospitals.

The chief surgeon establishes the ambulance stations in the rear, and gives directions concerning the first dressing stations; details the proper number of privates of the hospital corps, acting hospital stewards, hospital stewards and medical officers for



duty with the advanced line, and for the care and transportation of the wounded between that line, the first dressing stations, the ambulance stations and the hospitals.

First dressing stations will be established at the place nearest to the combatants, where the wounded and those caring for them will not be unnecessarily exposed to fire. Ambulance stations will be established at some place of security in the rear, or in some convenient building near the field of battle. The hospitals will be established by the chief surgeon after consultation with the commanding general. Dressing stations will be distinguished during the day by Red Cross flags, and at night by red lanterns.

The regimental hospital in field service furnishes protection and care to the sick while on a march or in the field, or to those temporarily sick while in camp of instruction. It is an emergency hospital in the one case, and a detention hospital in the other, and is not intended for the treatment of those very ill. Serious cases should be promptly transferred to brigade or division hospitals, except where regiments are isolated, in which case the bed capacity may be increased as necessary, all of the sick being cared for and transfers made to general hospitals under proper authority. The tentage will consist of 4 hospital tents (2 for wards, 1 for dispensary and storage, 1 for mess), 2 common tents for N.C.O.'s, 3 common tents for privates, 1 common tent for cooking.

The hospital corps detachment allowed a regiment serving in divisions and departments of the insular possessions of the United States is fixed at 1 hospital steward, 3 acting hospital stewards, and 12 privates of the hospital corps.

The duties of medical officers in the field are briefly as follows:—The chief surgeon of a corps is held responsible for the proper and effective management of the medical service of the command. He verifies



by personal inspection the condition of the hospitals and hospital corps companies and their trains, and makes arrangements for the probable exigencies of the campaign. He should see that the assignments by chief surgeons of divisions to positions on the operating staff of the field hospitals include the best surgical skill of each division. He accompanies on the march, the staff, and acquaints himself with the topography of the country, and indicates to the chief surgeons of divisions the localities best suited for field hospitals, which he inspects from time to time, as well as exercising supervision over first aid and ambulance stations. He also supervises the movement of sick and wounded to the base or general hospitals, detailing medical officers and attendants for their care.

The chief surgeon of a division supervises the medical and hospital corps service of the division. His usual position is with the staff. He frequently visits division hospitals and inspects ambulance company work. Prior to an engagement he sees that the field hospital is properly established and that operating surgeons and their assistants are at their proper stations. During and after an engagement he supervises the movement of wounded from ambulance stations to hospital.

The chief surgeon of a brigade is the adviser of the brigade commander in all medical and sanitary questions concerning the command.

During and after an engagement he should supervise the work at the first aid stations and the removal of the wounded to ambulance stations.

The regimental surgeon is in sanitary matters the adviser of the regimental commander. He forwards returns and reports of sick and wounded. He serves at the first aid stations during an engagement.

The surgeon in charge of a division hospital is responsible for the care of the sick and wounded on

the march and in camp. He furnishes daily reports of wounded and sick. He is assisted in his duties by medical officers doing duty under him.

The officer in command of the ambulance company is charged with the care of the pay, clothing, and subsistence of his men, and is responsible for the care of ambulances and other wagons, tents, horses, mules, forage, &c. He is assisted by his subalterns. During and after an engagement he is responsible for the safe and speedy transportation of the wounded on litters and in ambulance wagons from the field to the hospital by way of the first aid and ambulance stations, which latter he should organise.

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## AUSTRIA-HUNGARY.

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THE Medical Service in Austria is carried out by military surgeons who hold officers' rank, and form an officers' corps of military surgeons. They are assisted in their duties by the sanitary troops (*Sanitäts-Truppe*)\* and by the *personnel* of the Pharmacy or Medical Stores Department (*Militär Medicamenter Personal*).

### OFFICERS' CORPS OF SURGEONS.

This corps is divided into (1st) the corps of Military Surgeons for the Army; (2nd) the corps of Hungarian Landwehr Military Surgeons (for the Landwehr); (3rd) the Hungarian Landsturm† Surgeons. In peace time there are 1,236 Military Surgeons for the Army, 121 for the Austrian Landwehr, and 156 for the Hungarian Landwehr, all holding officers' rank.

In war the establishment is reckoned at from two to three surgeons per 1,000 men, and one surgeon to every 100 sick.

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\* The word "Sanitäts" in German includes all we mean by *Medical and Sanitary*.

† The words "Landwehr" and "Landsturm" may be explained as follows:—The Austro-Hungarian and German Armies consist of men serving with the colours, of the Reserve to the Active Army, of the Landwehr, and lastly of the Landsturm. The Landwehr consists of men who have completed their colour and reserve service with the Standing Army; while the Landsturm consists of men who have passed their 38th year, and are, therefore, free of service in the Standing Army or Landwehr; and, in addition, are the surplus male population of the country. There is a 1st and 2nd levy of the Landwehr.



The corps consists of :—

1. Duly qualified military surgeons of various ranks, from *Oberarzt*, with relative rank of 1st Lieutenant up to *General-Stabsarzt*, with relative rank of Major-General.
2. One-year volunteers who have taken the degree of Doctor of Medicine and are classed as assistant surgeons (*Assistenz-Arzt*) with relative rank of lieutenant. After their service they remain liable to be called out as assistant-surgeons during the whole of their period of liability to military service.
3. For duty with the Landsturm, military surgeons on the retired or unemployed list, and civil surgeons liable for service with the Landsturm, are called up for the duration of the war.

(*Note.*—Under 1. On mobilisation the services of civil practitioners who are no longer liable to service are accepted, provided they are fully qualified. They are given the rank of *Oberarzt* for the duration of the war. Well-known civil surgeons (celebrated operators, specialists, &c.) who volunteer for service with the army in the field are also employed as consultants for the duration of the war, and are given temporary rank from surgeon-major (*Stabsarzt*) upwards. To assure a sufficient number of surgeons for the army, medical students in their seventh term who have completed their one year's voluntary service, or have done six months' service as private soldiers, and undertake to serve six years as surgeons in the army after obtaining their degrees, are granted an annual stipend of £25 to £42 to continue their studies. After obtaining the doctor's degree, they have to serve six months on probation in a garrison hospital as assistant-surgeon's substitute, after which they may be promoted to *Oberarzt*.)

The establishment of medical officers in war for the undermentioned units is as follows :—

Infantry battalion....	....	....	....	3
„ regiment of three battalions	....			5
„ „ four „	....			7
Cavalry regiment ....	....	....	....	3
Corps or divisional artillery regiment	....			2
Horse battery division	....	....	....	1
Sanitary establishment of an infantry division	....	....	....	3
Field hospital	....	....	....	10
Sanitary railway train	....	....	....	2
Hospital ship	....	....	....	2

The uniform is as follows :—

Field cap same as infantry, light blue frock with black velvet facings, trousers blue grey with scarlet stripe, infantry cloak with black velvet facings, white arm band with red Geneva Cross. Every medical officer carries a black leather pouch containing surgical instruments and appliances.

## SANITARY TROOPS.

### *Organisation and Strength.*

In peace time the sanitary troops, corresponding to the Royal Army Medical Corps in the British service, comprise a sanitary troop staff and 26 sanitary detachments, each of which is attached to a garrison hospital. Total strength, 85 officers, and 3,060 N.C.O.'s and men.

On mobilisation these detachments furnish for service in the field, 44 field sanitary detachments for infantry divisions, 3 field sanitary detachments for



infantry divisions with mountain equipment, 8 field sanitary detachments for cavalry divisions, 41 field sanitary detachments for field hospitals, 26 field sanitary detachments for sanitary railway trains (*Sanitätszüge*); detachments for hospital ships, sanitary detachments for the hospitals of the German Order of Knighthood, and a large number of reserve sanitary detachments.

The reserve sanitary detachments, besides making good the waste in the above enumerated detachments, furnish the sanitary *personnel* for reserve hospitals, field convalescent homes, resting stations, sick trains (*Krankenzüge*), and fortress hospitals.

The strength of the various sanitary detachments is approximately as follows :—

—	Officers.	Men.
Field sanitary detachment for an infantry division.	2	108
Field sanitary detachment for an infantry division with mountain equipment.	4	117
Field sanitary detachment for a cavalry division.	—	26
Field sanitary detachment for a field hospital ...	4	197*
Field sanitary detachment for a field hospital with mountain equipment.	7	197*
Field sanitary detachment for a sanitary railway train.	—	28
Sanitary detachment for a hospital of the German Order of Knighthood.	1	30
Reserve sanitary detachment ... ..	1	50

\* Including wounded transport column.

The total war establishment of the sanitary troops of the permanent army is 404 officers and 21,204 N.C.O.'s and men.



*Stretcher and Medical Equipment Bearers.*

In every infantry battalion 1 N.C.O. and 16 men belonging to the battalion are told off as stretcher bearers.\*

In every field battery 4 gunners are told off as stretcher bearers, and every artillery regiment furnishes 1 N.C.O. In the fortress artillery 4 gunners are told off from every battery of the mobile siege groups as stretcher bearers. In the cavalry a division furnishes 6 stretcher bearers; a complete cavalry regiment with pioneer section, 14 stretcher bearers. For combatant troops of other arms, the stretcher bearer service is performed either by the bearers of the infantry or by sanitary troops. Medical supplies and instruments are carried in the field by men belonging to the various arms as follows:—

Infantry	....	2 men per battalion.
Cavalry	....	1 man per division of 3 squadrons.
Artillery	....	2 men per artillery regiment or ammunition park.

*Uniform and Armament.*

The uniform of the sanitary troops consists of a blue-grey field cap, dark green frock, cloak same as infantry, and blue-grey trousers. Facings, madder red; buttons, plain gilt.

All ranks of the sanitary troops, and the stretcher and medical equipment bearers of other branches wear a white band with a red Geneva cross on the left arm.

---

\* Infantry battalions belonging to mountain divisions have double this number of stretcher bearers.

The equipment of stretcher bearers and sanitary troops includes, in addition to the ordinary water-bottle, a second and larger water-bottle for administering to the wants of the sick and wounded.

N.C.O.'s and men of the sanitary troops are armed with pioneer swords; officers' and cadet officers' substitutes with infantry officers' swords.

#### MEDICAL ESTABLISHMENTS OF AN ARMY IN THE FIELD.

The medical establishments of an army in the field are classed as follows :—

##### Field sanitary establishments of 1st line—

Divisional sanitary establishments of infantry divisions, including field sanitary columns of the German Order of Knighthood.

Divisional sanitary establishments of infantry divisions with mountain equipment.

Divisional sanitary establishments of cavalry divisions.

##### Field sanitary establishments of 2nd line—

Field hospitals, including the Red Cross wounded transport columns.

Field convalescent homes (*Marodenhäuser*).

Mobile reserve hospitals (within the theatre of war).

Resting stations (*Kranken-Haltstationen*).

Sanitary railway trains, and trains of the Maltese Order of Knighthood.

Hospital ships.



Stationary reserve sanitary establishments—

Hospitals of fortresses in a state of defence.

Permanent military hospitals and reserve hospitals established outside the theatre of war.

Reserve hospitals and convalescent homes of medical aid societies, and civil hospitals.

In action the wounded are picked up by the stretcher bearers, who carry them to the divisional first assistance station (*Hilfsplätze*), and thus form a connecting link between the troops and the first line of field sanitary arrangements.

#### *Sanitary Establishment of an Infantry Division.*

On mobilisation a divisional sanitary establishment (*Anstalt*) is attached to every division of troops, and is called by the name of the division to which it is attached, thus:—

Infantry division sanitary establishment, No. 36.

The sanitary establishment of an infantry division is equipped for—

2 first assistance stations (*Hilfsplätze*).

1 dressing station (*Verbandplatz*).

1 ambulance station (*Ambulanz*).

1 reserve of sanitary materials.

To each infantry division there is also attached a field sanitary column of the German Order of Knighthood. During and after an engagement the medical officers of the divisional sanitary establishment are assisted by the medical officers posted to the regiments, battalions, &c., composing the division. Transport is provided by the train squadron attached to divisional headquarters.

The table (pp. 18, 19) shows the strength and distribution of the *personnel*.

The first assistance stations are usually placed from 1,000-1,200 paces in rear of the fighting line, and are distinguished by day by two flags—one a red cross on a white ground, and the other a black and yellow flag, and by night by a signal lantern with a red cross.

Dressing stations are usually established in buildings 3,000-5,000 paces in rear of the fighting line. They are distinguished by the same flags and lanterns as the 1st assistance stations.

The so-called ambulances are halting or resting places established between the dressing stations and field hospitals. They are sometimes established close to the dressing stations, at other times at suitable distance in rear of them—most frequently at railway stations.



*Strength of a Sanitary Establish*

	Medical Officers.	Officers, Sanitary Troops.	N.C.O., Sanitary Troops.	Privates, Sanitary Troops.	N.C.O.'s Train Troops.	Privates, Train Troops.	Civilian Drivers.
First assistance station, No. 1.	—	—	1	17	1	8	—
First assistance station, No. 2.	—	—	1	17	1	8	—
Dressing station ... ..	—	1	5	34	2	18	2
Ambulance station ... ..	3	1	4	15	1	6	3
Reserve of sanitary material	—	—	—	1	—	4	2
Sanitary column of the German Order of Knighthood.	—	—	1	12	1	12	1
	3	2	12	96	6	56	8
			108		62		

\* For the use of medical officers, officers

*ment of an Infantry Division.*

Riding Horses.	Government Horses.	Draught Horses.	Hired Horses.	Ambulance Wagons.	Equipment Wagons.	Ambulance Wagons.	Reserve Store Wagons.	Medical Red Cross Wagons.	Supply Wagons.	Supplementary Wagons.
				4-Horse.					2-Horse.	
				Ble- sierten- wagen.		Ambu- lanz- wagen.		Sani- tats- four- gon.		
11	16	—	—	4	—	—	—	—	—	—
1	16	—	—	4	—	—	—	—	—	—
3	26	4	4	3	2	—	—	—	3	2
5	12	6	6	—	—	3	—	—	—	3
—	8	4	4	—	—	—	2	—	—	2
1	22	2	2	4	—	—	—	1	—	1
11*	100	16	16	15	2	3	2	1	3	8
127			34							

sanitary troops, and N.C.O.'s of the train troops.



*Field Sanitary Establishment of a Cavalry Division.*

The field sanitary establishment of a cavalry division is equipped for one first assistance station and one dressing station. It has no medical officers of its own, except the surgeon as commandant, the sick and wounded being attended to by the medical officers of the cavalry regiments belonging to the division.

The following table shows the strength and distribution of the *personnel* :—

Regimental Surgeon.	N.C.O. Sanitary Troops.	Privates Sanitary Troops.	N.C.O. Train Troops.	Privates, Train Troops.	Civilian Drivers.	Riding Horses.	Government Draught Horses.	Hired Horses.	Ambulance Wagons.	Equipment Wagons.	Supply Wagons.	Supplementary Wagons.
1	4	22	1	13	1	2	22	2	4	1	1	1
	26		14			26			7			

*Field Sanitary Establishment of a Division with Mountain Equipment.*

The sanitary establishment of a division with mountain equipment provides only a dressing station, an ambulance station, and a reserve of sanitary material. A field sanitary column of the

German Order of Knighthood with mountain equipment is attached to it. The equipment for first assistance stations is carried by the troops, each battalion having a pack animal laden with medical stores for this purpose. The stores belonging to the dressing station and reserve are so packed that they can be divided into four sections, each complete in itself.

The *personnel* of a divisional establishment is shown on pp. 22 and 23.



*Field Sanitary Establishment of a*

	Medical Officers.	Apothecaries.	Officers, Sanitary Troops.	Privates, Sanitary Troops.	Officers, Train Troops.	Privates, Train Troops.	Privates, Landwehr.	Civillan, Personnel.
Dressing station (four sections).	4	—	2	87	—	40	—	—
Ambulance station (two sections).	2	—	2	12	1	$\frac{63}{71}$	—	—
Reserve of sanitary material (four sections).	—	1	—	5	—	$\frac{20}{24}$	—	—
Sanitary column of the German Order of Knighthood (may be divided).	—	—	—	13	—	16	—	—
	6	1	4	117	1	$\frac{139}{151}$	—	—
A mountain transport column may be added.	—	—	—	6	—	2	4	14

(a) The medical wagons (Sanitäts-Fourgon) are for use of Principal Medical Officer, and also carry medical stores.

*Division with Mountain Equipments.*

Horses.	Pack Animals.	Ambulance Wagon.	Ambulance Wagon.	Reserve Medical Store Wagon.	Medical Wagon.	Supply Wagon.	Light Country Wagon.
		4-Horse.				2-Horse.	
		Blessierten-Wagen.	Ambulanz-Wagen.		Sanitäts-Fourgon.		
10	52	—	—	—	—	—	—
$\frac{61}{77}$	44	11	$\frac{0}{3}$	—	—	$\frac{2}{3}$	—
$\frac{5}{13}$	20	—	—	$\frac{0}{2}$	—	—	—
28	—	4	—	—	2	—	—
$\frac{104}{128}$	116	15	$\frac{0}{3}$	$\frac{0}{2}$	2	$\frac{2}{3}$	—
—	—	—	—	—	—	—	2

(b) Wherever fractions are shown the numerator shows the numbers for normal equipment, the denominator for mixed equipment.



*Field Hospitals.*

Each field hospital provides accommodation for 600 patients, and can be divided into three sections for 200 patients each.

There would usually be a field hospital for each division of infantry or cavalry. The field hospitals are numbered consecutively. Detached sections bear the name of the hospital of which they form part, and their section number besides, thus :—

Field Hospital No. 4  

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Section No. 2

For the transport of sick and wounded there is attached to each field hospital a wounded transport column of the Red Cross Society.

The *personnel* of a field hospital is as follows :—

# *Establishment of a Field Hospital.*

25

	Medical Officers.	Chaplains.	Paymasters.	Apothecaries.	Officers; Sanitary Troops.	N.C.O.'s and Men, Sanitary Troops.	Armourers.	Smiths.	Civilian Conductors.	Civilian Drivers.	Riding Horses.	Draught Horses.	Store and Equipment Wagons.	4-Horse.	2-Horse.	Various other Wagons.
Regular army ...	10	1	3	4	3	171	1	2	1	81	2	162	24	24	30	
* Wounded transport column	—	—	—	—	1	26	—	—	—	18	1	36	—	—	16†	
Total ...	10	1	3	4	4	197	1	2	1	99	3	198	24	24	46	70
	22 officers and officials.					200 men.			100			201				

\* Supplied by the Austrian and Hungarian Red Cross Societies.

† Ambulance wagons for carriage of wounded.



### *Sanitary Railway Trains.*

On mobilisation 26 sanitary railway trains, each with accommodation for 104 sick and wounded, are equipped. More trains can be provided if required. Each train is fitted out for the transport of 104 patients.

The trains are numbered consecutively from 1 upwards :—

The medical *personnel* of each train consists of :—

2 medical officers.

1 apothecary.

28 N.C.O.'s and men of the sanitary troops.

While the train itself consists of :—

13 coaches for sick and wounded.

6 „ *personnel*, baggage, kitchen, &c.

—  
Total 19 coaches.

Railway transport of sick and wounded is further provided for by the trains of the Maltese Order of Knighthood, and, when necessary, by the formation of sick trains (*Krankenzüge*).

The latter consist of ordinary goods and passenger coaches, transformed for the time being by the addition of special fittings.

### *Field Convalescent Hospitals.*

The field convalescent hospitals (*Feld-Maroden-häuser*) are intended for slightly sick and wounded, who are likely to recover in a short time, and be fit to rejoin the colours. The number of these hospitals varies according to circumstances, but they are usually provided in the proportion of one convalescent

hospital per army corps, each with accommodation for 500 patients.

The hospitals are designated by consecutive numbers, thus :—

“Field Convalescent Hospital No. 2.”

### *Mobile Reserve Hospitals.*

Reserve hospitals (*Reservespitäler*) are provided within the theatre of war to enable field hospitals to be emptied and again made mobile. Like the field hospitals, each mobile reserve hospital provides accommodation for 600 patients, and can be divided into three “units” or sections of 200 beds each. There are no precise regulations for the number of these hospitals, but the usual calculation is one “unit” for every infantry division of the army or armies.

These hospitals are numbered consecutively, from 1 upwards. Detached units are designated by the number of the hospital to which they belong, as well as by their unit number, thus :—

Reserve Hospital No. 6.

Unit (*Einheit*) No. 2.

### *Resting Stations.*

Resting stations (*Kranken-Haltstationen*) are provided on the lines of communications, the usual calculation being two stations per army corps, each with accommodation for 200 patients.

These stations are called by the name of the *Etapen* station to which they belong.



## VOLUNTEER AMBULANCE AND MEDICAL AID SOCIETIES.

The most important voluntary societies which assist the medical department in the field are the following :—

The Society of the German Order of Knighthood.  
The Society of the Maltese Sovereign Order of Knighthood.

The Austrian and Hungarian Red Cross Societies.

### *Society of the German Order of Knighthood.*

The details of the *personnel* and wagons of field sanitary columns furnished by the German Order of Knighthood have already been given.

There are altogether 44 columns, 22 of which are provided with field equipment and two with mountain equipment. They are designated by the number of the divisional sanitary establishment to which they are attached.

These columns on mobilisation become an integral part of the medical establishments of the army. Their *personnel* is distinguished by wearing, below the arm-band with the Geneva Cross, another white arm-band with a distinctive cross.

The wagons of the columns also have both the Geneva and distinctive crosses painted on them.

In addition to the field sanitary columns, the society furnishes four hospitals for sick and wounded (*Verwundeten-Spitäler*), each with 200 beds, and it has also a reserve hospital with accommodation for 44 patients.

*Society of the Maltese Sovereign Order of Knighthood.*

The assistance in the field rendered by the Society of the Maltese Order of Knighthood consists in the provision of sanitary railway trains for the transport of sick and wounded. On mobilisation the society would usually equip six trains, but could equip six more. Each train consists of 20 coaches, and has accommodation for 100 sick and wounded. In addition to the Geneva badge, the *personnel* of the Maltese Order wear a red arm-band with white Maltese Cross.

*Red Cross Societies.*

The Austrian and Hungarian Red Cross Societies furnish 41 wounded transport columns (*Blessierten-Transport-Colonnen*), which are attached one to each field hospital. The establishment of the columns as regards *personnel* and wagons is given.

The sanitary *personnel* of the Austrian columns is recruited by volunteers from the Austrian "Veteran Societies," whilst those of the Hungarian columns are taken from the Hungarian Landwehr.

The uniform is the same as that of the sanitary troops of the army, except that the buttons are of white metal. Besides the Geneva badge worn on the left arm, the Red Cross Society badge is worn on the breast. It consists of the Society's arms in white metal for the *personnel* of the Austrian Society, and gilt metal for the Hungarian Society.

In addition to the wounded transport columns the Red Cross Societies equip three field hospitals, each of 200 beds (of which two are raised in Austria and one in Hungary). They also supply three mobile dépôts for medical stores, and, besides these, reserve and convalescent hospitals and resting stations.



*Hospital Ships*

are employed for the transport of sick and wounded men on the principal rivers (Danube, Theiss, Drau, and Save). They are fitted to accommodate 116 to 132 patients. Two to four of these ships form a wounded convoy and are towed by one tug.

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BELGIUM.

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THE general control of the hospitals is under the Intendant-General of the Army, and that of each hospital separately under a sub-intendant. All hospitals are under the military territorial authorities, and in case of any disagreements between the sub-intendants and the chief medical officers, the matter is referred to the general officer commanding the district, who either decides it or refers it to the War Office.

The *personnel* of each hospital is found by the hospital section of the battalion of administration.

The sub-intendants have the powers of commanding officers over them in all matters of discipline and police.

Nursing sisters (*sœurs hospitalières*) of various religious congregations are attached to hospitals and are bound by conventions passed between these bodies and the military authorities.

The conventions are stated in the regulations for the service of military hospitals.

Each hospital is administered by an officer of administration, who has the title of director of the hospital. He is responsible for all supply and material, and for the execution of the details of administration.

The normal distribution of *sous-officiers* and *infirmiers* in the various hospitals is given in the regulations for the service of military hospitals.

The *infirmiers* (orderlies) number 1 for 18 sick in hospital where there are sisters, and 1 to 12 in others.



All hospital buildings are under the barrack department controlled by the engineers. Separate rooms are reserved for officers and *sous-officiers*.

Medical officers attached to the hospitals live in the buildings, as also do the officers of administration when room is available ; if not, lodging allowance is granted at the rate of £28 to £12 a year according to grade. The description of the material in charge of hospitals and that for each man, as well as matters connected with the care of these, find a place in the regulations for military hospitals.

The clothing and equipment of men admitted to hospital are deposited in a special room. Valuables are left with the director. Lists are made.

The medical officers employed in hospitals consist of *médecins principaux* and *médecins adjoints*. Nearly the whole of the intermediate grades, viz., the *médecins de regiment* and *médecins de bataillon*, are employed with the units of the army.

The regulations show that the medical service is very closely confined to its main purpose, and how little it has to do with any secondary work. That is, technical duties only fall to the medical officers. They have, however, the power to punish *sous-officiers* and *infirmiers*, but only within the precincts of the hospital.

Whether with corps or in hospitals, one medical officer is on duty day and night, and though not absolutely confined to barracks, he must be found easily and must leave his address in case he is visiting a patient outside the locality occupied by troops. The medical officer on duty attends all parades and field exercises.

The police regulations in hospitals are strict. No smoking, card playing, or gambling in the wards is permitted. A captain of the troops in garrison inspects the hospital daily.

The medical department consists in peace time of

210 medical officers, capable of being raised on mobilisation to 362 in number.

The table below shows the number of officers attached to the various fighting units and also the establishment of ambulances and field hospitals :—

### MEDICAL UNITS.

Unit.	P'EA'CE.					WA'R.				
	Officers.	N.C.O.'s and Men.	Horses.		Vehicles.	Officers.	N.C.O.'s and Men.	Horses.		Vehicles.
			Riding.	Draught.				Riding.	Draught.	
Ambulance column—										
For army head-quarters.	—	—	—	—	—	2	74	5	14	4
For each army division.	—	—	—	—	—	5	224	13	50	17
For each cavalry division.	—	—	—	—	—	5	34	7	24	6
For Antwerp defences.	—	—	—	—	—	5	218	12	44	14
Field hospital ...	—	—	—	—	—	6	38	4	20	5

The *personnel* of the lower ranks for the different medical units is, on mobilisation, found by the battalion of administration. In war time the Red Cross Society of Belgium renders assistance to the medical services, but under the orders of the military medical officers.

The care of the wounded on the field of battle is organised as follows :—

- I.—“Service de ligne de combat,” comprising the collection of, and first aid to, the wounded, and their despatch to II.



II.—“Poste de secours,” the primary object of which is to place the wounded as rapidly as possible in a state to be transported to III.

III.—“Place de pansement, or headquarters of ambulance column. This is the centre of medical aid for a division.

IV.—Field Hospitals.—These are intended to reinforce, and act as temporary echelons in rear of the ambulance columns, and for the despatch of sick and wounded to the regular hospitals.

The arrangements for I and II are made by regimental surgeons and stretcher bearers. The arrangements for III by the ambulance column, assisted by regimental surgeons, &c., under the orders of the divisional medical officer.

All hospital establishments, whether fixed or movable, fly the national ensign and the flag of the Geneva Convention. By night their position is indicated by lanterns with the Red Geneva Cross. All employed, except regimental stretcher bearers, wear armlets with the Geneva Cross.

DETAIL OF FIELD HOSPITAL (*Hôpital Volant*) IN  
WAR.

Ranks.	Officers.	N.C.O.'s and Men.	Horses.		Vehicles.
			Riding.	Draught.	
Regimental surgeon ... ..	1	—	1	—	—
Battalion surgeon ... ..	1	—	1	—	—
Assistant surgeon ... ..	1	—	—	—	—
Dispenser... ..	2	—	—	—	—
Acting dispenser ... ..	—	2	—	—	—
<i>Train.</i>					
Sergeant ... ..	—	1	1	—	—
Corporal ... ..	—	1	1	—	—
Drivers, &c. ... ..	—	10	—	—	—
<i>Battalion of Administration.</i>					
Officer ... ..	1	—	—	—	—
Sergeant-major or sergeant ... ..	—	1	—	—	—
Sergeant-major or storekeeper ... ..	—	1	—	—	—
Cook ... ..	—	1	—	—	—
Compounder ... ..	—	1	—	—	—
Corporals and privates... ..	—	20	—	—	—
<i>Vehicles.</i>					
Ambulances (four-wheeled) ... ..	—	—	—	4	1
Dispensary wagons ... ..	—	—	—	8	2
Supply wagons ... ..	—	—	—	8	2
Total ... ..	6	38	4	20	5



## DETAIL OF AMBULANCE

Ranks.	For Army Headquarters.				
	Officers.	N.C.O.'s and Men.	Horses.		Vehicles.
			Riding.	Draught.	
<i>Medical and Veterinary.</i>					
Battalion surgeons ... ..	1	—	1	—	—
Assistant surgeons ... ..	—	—	—	—	—
Acting surgeons ... ..	—	4	—	—	—
Dispensers ... ..	1	—	—	—	—
Acting ditto ... ..	—	1	—	—	—
Acting veterinary officers ... ..	—	—	—	—	—
<i>Train.</i>					
Officers ... ..	—	—	—	—	—
Sergeants ... ..	—	2	2	—	—
Corporals ... ..	—	2	2	—	—
Drivers, &c. ... ..	—	8	—	—	—
<i>Battalion of Administration.</i>					
Officers ... ..	—	—	—	—	—
Clerks ... ..	—	1	—	—	—
Sergeants-major or sergeants ... ..	—	1	—	—	—
Corporals or privates ... ..	—	5	—	—	—
Sergeant bearers ... ..	—	2	—	—	—
Corporal bearers ... ..	—	4	—	—	—
Private bearers ... ..	—	44	—	—	—
<i>Vehicles.</i>					
Ambulances, 4-wheeled ... ..	—	—	—	4	1
"    2-wheeled ... ..	—	—	—	2	1
Pharmacy wagon ... ..	—	—	—	4	1
Supply wagons ... ..	—	—	—	4	1
Total ... ..	2	74	5	14	4

\* Five in all; on

## COLUMNS (WAR).

For each Army Division.*					For each Cavalry Division.					For Antwerp Defences.				
Officers.	N.C.O.'s and Men.	Horses.		Vehicles.	Officers.	N.C.O.'s and Men.	Horses.		Vehicles.	Officers.	N.C.O.'s and Men.	Horses.		Vehicles.
		Riding.	Draught.				Riding.	Draught.				Riding.	Draught.	
1	—	1	—	—	1	—	1	—	—	1	—	1	—	—
1	—	1	—	—	1	—	1	—	—	1	—	1	—	—
—	13	—	—	—	—	2	—	—	—	—	12	—	—	—
1	—	—	—	—	1	—	—	—	—	1	—	—	—	—
—	1	—	—	—	—	—	—	—	—	—	—	—	—	—
1	—	2	—	—	1	—	2	—	—	1	—	2	—	—
—	5	5	—	—	—	1	1	—	—	—	5	5	—	—
—	4	4	—	—	—	2	2	—	—	—	3	3	—	—
—	31	—	—	—	—	15	—	—	—	—	28	—	—	—
1	—	—	—	—	1	—	—	—	—	1	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	1	—	—	—	—	1	—	—	—	—	1	—	—	—
—	90	—	—	—	—	13	—	—	—	—	90	—	—	—
—	3	—	—	—	—	—	—	—	—	—	3	—	—	—
—	6	—	—	—	—	—	—	—	—	—	6	—	—	—
—	70	—	—	—	—	—	—	—	—	—	70	—	—	—
—	—	—	24	6	—	—	—	16	4	—	—	—	24	6
—	—	—	18	9	—	—	—	—	—	—	—	—	12	6
—	—	—	4	1	—	—	—	4	1	—	—	—	4	1
—	—	—	4	1	—	—	—	4	1	—	—	—	4	1
5	224	13	50	17	5	34	7	24	6	5	218	12	44	14

for 5th division.



## UNIFORM.

The *inspector-general*, who holds the rank of major-general, wears the uniform of a general officer, but without epaulettes in full dress, and with slight differences in shoulder cords and sash.

*Other officers.*—Similar to that of infantry of the line, but without epaulettes, and with the following differences: facings, &c., magenta for surgeons, light green for dispensers (*pharmaciens*). Dark blue trousers without stripe—except in full dress. Cocked hat. A cross belt, with departmental badge, is worn.

## ARMAMENT.

As for officers of infantry. Special sword knot.

## BULGARIA.

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THE army medical service of Bulgaria is composed of medical officers (*médecins*), veterinary medical officers (*médecins vétérinaires*), apothecaries (*pharmaciens*), N.C.O.'s (medical and veterinary), and men employed in hospitals and other sanitary establishments.

At the head of the *personnel* is placed the chief of the sanitary service (*chef de l'inspection sanitaire*). All the military medical officers are sanitary officers, and enjoy, save with some small exceptions, the same rights as officers in general.

The sanitary officers have the following titles :—

1st Grade	sanitaren	podporoutchik	(sub-lieutenant).
2nd	„	„	poroutchik (lieutenant).
3rd	„	„	capitan (captain).
4th	„	„	major (major).
5th	„	„	podpolkovnik (lieut.-colonel).
6th	„	„	polkovnik (colonel).

For veterinary officers, the word “veterinaire” is added after the title, and that of “pharmacien” for apothecaries.

Sanitary officers are placed as follows :—

- 1st. Surgeons major and surgeon lieutenants of regiments (*starchi et mladchi polkovylekar*), i.e., surgeons and junior surgeons).
- 2nd. Chief of a military hospital (*natchalnik na colnitza*).
- 3rd. Divisional medical officer (*divisionen likar*).
- 4th. The chief of the sanitary service (*natchalnik na voenno sanitarnata inspesetzia*).



To each regiment of infantry are attached in ordinary times :—

Two surgeons, of whom one is a surgeon-major of the grade of "sanitaren major" (major), and the other a surgeon from the grade of "sanitaren podporoutchik" (sub-lieutenant), to that of "sanitaren capitan" (captain).

Each cavalry and artillery regiment, and each battalion of engineers and garrison artillery, has a surgeon of the grade of "sanitaren capitan." Regiments of artillery and cavalry have equally veterinary surgeons, one for each regiment.

Apothecaries are allotted only to military hospitals and to supply depôts.

In the regiment there are, besides, five sanitary N.C.O.'s and four privates.

Military hospitals have also their sanitary and administrative *personnel*, composed of—

- 1st. The chief of the hospital, a sanitary officer of the grade of "sanitaren major," and under.
- 2nd. Surgeons and apothecaries of the grade of "sanitaren capitan," and under.

The administration and management of the hospital is allotted to an officer or military functionary, and the number of N.C.O.'s and men is in accordance with requirements.

All the surgeons, after having completed their studies, are liable to obligatory service during one year, just as soldiers, with this difference alone, that they are sent as assistants to the surgeons of corps. At the end of their service they have to submit to a special examination, after which those who wish to remain in the army are promoted to the 1st grade of sanitary officer.

All the surgeons (*médecins*) and veterinary surgeons (*médecins vétérinaires*) and apothecaries of the country



who have finished their obligatory service, as well as those who have been exempted, are entered in the Reserve to the age of 60, and in time of mobilisation are called to the colours, and are distributed according to their age and training to the different stations for army service. But to those who have not been sanitary officers are given the rights and privileges of sanitary officers of the grade corresponding to the place which they occupy, and they are obliged to wear the uniforms of sanitary officers during the period of mobilisation.

Sanitary companies do not exist in ordinary times ; they are only formed when mobilisation takes place. Each sanitary company is divisible into two sections : sanitary section and duty section. The number of men composing the company is about 400. These men are taken from the N.C.O.'s and men of the reserve of the sanitary service. They are exercised in peace time in military hospitals, where they pass through a special course on the care of the sick and wounded, and also in acquiring knowledge of sanitary formations and their administration. The course is carried out by sanitary officers, while administrative and disciplinary instruction falls to regimental officers.

The surgeon of each corps prepares in peace the necessary number of stretcher bearers ; those already in the reserve are called on to complete the sanitary *personnel* of various corps in the field.

In ordinary times sanitary establishments for the treatment of the sick are formed as follows :—

- 1st. Casualty or auxiliary hospitals (*Les infirmeries*)  
“Priemen pokoy.”
- 2nd. Regimental hospitals, or the 1st more developed  
(*Les hopitaux-infirmeries*), “Polkori lazareti.”
- 3rd. Station or general hospitals (*Les hopitaux militaires*), “Divisionni bolnitzi.”

The first two are opened near corps and are



inseparable from them ; as to the latter, they are independent establishments ; their administration is peculiar to these establishments, and as such they become a part of the composition of the division. A military hospital forms in the field two field hospitals of 200 beds each, and an ambulance and a divisional dressing station.

The regimental hospitals provide for the sick and maimed who do not require serious or special treatment.

Hospitals in the vicinity of troops undertake the treatment of more serious cases which are easily conveyed to them.

The regimental hospitals (*Hopitaux-infirmiers*) are for the treatment of all the sick of corps. These are in every garrison, and on account of the distance from the position of the station or general hospital, cannot transport the sick there, but are compelled to treat them on the spot.

The station or general hospitals are instituted for the treatment of all military sick sent to them from various corps.

Regimental hospitals, as well as the casualty and auxiliary hospitals, are entrusted to the medical officer of the corps of which they form a part in a medical and administrative point of view. The medical officer has under his orders all the sanitary *personnel* attached to the establishment.

The station and general hospitals are entrusted to a sanitary officer who has the title of chief of the hospital as well in medical as in administrative functions. All the *personnel* is placed under his orders.

As assistant chief of the hospital is nominated an administrative officer, who directs the administration and management of the establishment, and who is directly placed under his chief.

The care of the sick and internal duties of the

hospital are carried out by the subordinate sanitary *personnel* (the sanitary company), which is constituted of sanitary N.C.O.'s and men. These last are chosen for hospital work directly by recruiting boards, or they are volunteers who have elected to serve their time in the sanitary department. They pass, at first, a course of drill in the ranks, after which they are sent to hospital to go through special instruction under the direction of the chief of the hospital.

The sanitary N.C.O.'s for the medical service are recruited from the men of the sanitary company when they have completed their obligatory service (four years), and who have undergone the special course (eight months) for sanitary N.C.O.'s. As to the privates, they go through their instruction in the medical establishment of the corps of which they form a part.

*Uniform.*—Dark blue tunic and piping; Geneva Cross on white band on left arm; blue trousers with red stripes; cap-band and kalpak top, black for the medical service, white metal buttons. Surgeons wear one black line on silver shoulder straps, and a violet cap-band.

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## DENMARK.\*

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THE supreme administration of all army medical and sanitary matters is, like all other military matters, in the hands of the Minister for War. The military medical and sanitary duties are performed by a special force consisting of the medical officers, who form the army medical staff, and N.C.O.'s and privates constituting the medical staff corps. A great part of the economical affairs of the Army Medical Department (especially those concerning military hospitals) is, however, under the administration of the commissary department.

The medical staff consists of 39 regular medical officers, all nominated by the Crown, viz., 1 Director-General, who is the chief of the medical staff, having general's rank; 14 medical officers, 2nd class, of whom the five senior have the rank of lieutenant-colonel, the other nine that of captain; 24 medical officers of the 3rd class, of whom the eight senior have the rank of captain of the militia, the other 16 that of lieutenant. Besides these, there are medical officers of the 4th class, who have the rank of sub-lieutenant; these are not regulars, being only appointed for a limited period by the War Minister, after having been nominated by

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\* See Longmore's "Manual of Ambulance" (1893), edited by Major Morris, R.A.M.C., to which I am indebted for the details given. I have added some remarks regarding the classification of stretcher bearers.

the Director-General. Of these there may be up to 16 serving at the same time.

The Director-General's duties are, under the Minister of War, the supreme management and supervision of all army medical and sanitary matters, inspection of all medical and sanitary arrangements, the professional supervision of medical officers and military hospitals, the inspection of sanitary equipment. He is professionally the superior of the other medical officers, appoints medical officers of the 4th class (reserve), and nominates medical officers for appointment as regular medical officers of the 3rd class, and for promotion from 3rd to 2nd class. He is also chief of the medical staff corps, and has the supreme management of its administration, the details of which are in the hands of the medical staff corps commander, who is under the Director-General. He is also the adviser of the War Minister in all medical and sanitary matters, as also of all superior military authorities.

Of the 14 medical officers of the 2nd class two are principal medical officers for each of the two military districts into which the country is divided. The principal medical officer is under the general commanding the district, whose adviser he is in all sanitary matters, especially those concerning the district. Professionally he is under the Director-General, whom he assists in the supervision of sanitary arrangements and the professional work of the medical officers, especially in regard to the preparation of the medical statistics, and the administration of the sanitary equipment.

The other medical officers of the 2nd class and those of the 3rd class are employed either with the troops or in military hospitals, there being, as a rule, no difference between the employment of the medical officers of these two classes.

When with the troops the medical officer is, in the performance of his military duties, under the officer



commanding, being his adviser in all sanitary matters. Professionally he is under the principal medical officer and the Director-General.

He is charged with the care of the health of the troops, examines the sick, and has to attend to them when he does not send them to hospital. He furnishes statistical and other returns, and assists the commandant of the barracks in the sanitary inspection of these when detailed for this duty.

The medical officers of the 4th class (reserve) are only appointed on probation for a limited period; they assist the regular medical officers with the troops or in the military hospitals.

The medical officers are alternately detailed for duty at the annual sessions of the six conscript districts into which the country is divided.\* Here they have to examine the conscripts and give their opinion as to the military ability of these, whereon the session committee decides the enlistment. All matters concerning the conscription do not, however, come under the War Ministry or the Army Medical Department, but are under the Ministry of Justice. These conscripts, who are either qualified medical men or are medical students who have acted as clerks and dressers at one of the large metropolitan hospitals for at least two years, are, if they are physically fit, enlisted as assistant surgeons. Of these, four-fifths are sent off for duty in the army, and one-fifth in the navy. The former have to undergo the following training the next summer:—First.—Preparatory military training for a fortnight with the troops. Second.—A training in the military hospital of Copenhagen for four weeks (clinical demonstrations of sick, training in medical inspection of recruits and invalids,

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\* Military service is compulsory. All men attaining 22 years of age have to undergo medical examination at the sessions as to military ability. They may appear at 18 years of age, but not later than 25.



training in general military and in special medical inspection of recruits and invalids, training in general military and in special medical and sanitary matters, in military hygiene, use of medical and sanitary appliances, and in medical assistance in action). Third.—During four weeks' training in practical medical service with the troops during the manœuvres (September), having then the rank of corporal, while up to this time they were only privates. The assistant surgeons have then finished their duties, and have not to enter any more during peace, but may, if desirous, obtain an appointment as medical officers of the 4th class, being on probation for a year at a time.

In case of vacancy any assistant surgeon who is qualified at Copenhagen University, can be appointed regular medical officer, 3rd class, those who have acted on probation as medical officers of the 4th class having, however, the preference.

#### THE MEDICAL STAFF CORPS.

This consists of ward orderlies and stretcher bearers. The duty of the former is to personally attend the sick in the military hospitals according to the directions and under the supervision of the medical officer in charge. It is also their duty to act as "canteen soldiers," *i.e.*, to accompany the medical officers with the troops in the field, carrying the surgical haversack and assisting the medical officers when affording temporary assistance to sick and wounded by means of the medical and surgical appliances of the surgical haversack. Like the assistant surgeons, the ward orderlies are conscripts, especially fit for this kind of service, 120 being annually enlisted. They enter in four batches, 30 in each, their training lasting seven months. The ward orderlies of each batch go through a preliminary class of instruction lasting  $2\frac{1}{2}$  months, being trained



here in general military and professional duties, after which they undergo a final training for  $4\frac{1}{2}$  months at the military hospitals, being distributed in the different hospitals. They are then dismissed, but enter again one of the following years, serving at the hospitals and with the troops (as "canteen soldiers") during the manœuvres in September. Of the ward orderlies the one quarter most able are promoted from privates to sub-corporals, after having been trained for five months, and of these any number up to 15 may be promoted to corporals and appointed for one year at a time. Among the ward orderlies there is no higher rank than that of corporal. The school of the ward orderlies, as well as all matters pertaining to them outside the hospital, is managed by an officer, who is under the Director-General.

Stretcher bearers' duty at the ambulances or with the troops in search for the wounded during action, afford them, if necessary, the first temporary assistance (arresting bleeding, applying temporary dressings), and transport them on the stretcher or otherwise to the dressing station. The stretcher bearers are not enlisted at the session to perform this duty, but chosen amongst the soldiers with complete training, ninety-two (92) privates being chosen each year. They are trained during the manœuvres in September, and are called out one of the following years to go through what they have learned. Besides these stretcher bearer privates, 31 sub-corporals with special ability in this kind of work are chosen amongst the infantry troops to undergo a three months' training as bearer corporals. These are also called out at the manœuvres to go through what they have learned.

Stretcher bearers are divided into :—(1) Medical assistants (*sygehjælpre*) who, besides instruction in stretcher bearer work, also undergo a special course of "first aid" to the wounded. (2) Stretcher bearers proper. During war there are allotted for infantry

and ambulances 1 corporal, as chief stretcher bearer to each section of four bearers, 1 medical assistant, who has under him two others to help in finding the wounded and giving them first aid. For the other arms there are 1 medical assistant for each squadron and each battery, 2 for each company of artillery, and 1 for each company of engineers. As regards stretcher bearers proper, 3 are allotted for each stretcher.



## FRANCE.\*

THE organisation of the medical service of the French Army (*Corps de Santé de l'Armée de Terre*) consists of medical officers (*médicins militaires*), apothecaries (*pharmaciens militaires*), administrative officers (*officiers d'administration*), performing quartermasters', purveyors', and registrars' duties, and a corps of hospital orderlies (*sections d'infirmiers militaires*).

The medical officers command and the service has complete autonomy.

The fixed establishments forming the peace cadre are as follows (on mobilisation capable of expansion to any extent):—

## MEDICAL OFFICERS (CORPS DE MÉDECINS MILITAIRES).

Rank.†	Relative Rank.	Number.
Médecin inspecteur général ...	General of division ...	1
Médecins inspecteurs ...	General of brigade ...	11
Médecins principaux de 1re classe ...	Colonel ...	45
Médecins principaux de 2me classe ...	Lieutenant-colonel ...	60
Médecins majors de 1re classe ...	Major ( <i>chef de bataillon</i> ) ...	340
Médecins majors de 2me classe ...	Captain ...	500
Médecins aides-majors de 1re classe.	Lieutenant ...	400
Médecins aides-majors de 2me classe.	Sub-lieutenant ...	100
Total medical officers ...		1,457

\* For further and fuller information, see the "Army Medical Report" for 1899, to which Major W. G. Macpherson, Deputy Assistant Director, A.M.S., contributes a report on the medical service of the French Army, to which I am indebted for the details here given.

† The equivalents in English would be director-general, medical inspectors, P.M.O.'s 1st class, P.M.O.'s 2nd class, surgeon majors, surgeon captains, surgeon lieutenants, surgeon 2nd lieutenants.

# APOTHECARIES (CORPS DE PHARMACIENS MILITAIRES).

Rank.	Relative Rank.	Number.
Pharmaciens inspecteur ... ..	General of brigade ... ..	1
Pharmaciens principaux de 1re classe.	Colonel ... ..	4
Pharmaciens principaux de 2me classe.	Lieutenant-colonel ... ..	5
Pharmaciens majors de 1re classe	Major ... ..	30
Pharmaciens majors de 2me classe	Captain ... ..	45
Pharmaciens aides-majors de 1re classe.	Lieutenant ... ..	20
Pharmaciens aides-majors de 2me classe.	Sub-lieutenant ... ..	10
Total apothecaries ... ..		115

## OFFICIERS D'ADMINISTRATION.

Rank.	Number.
Officiers d'administration principaux ....	14
"                    "          1re classe....	56
"                    "          2me classe	56
"                    "          adjoints de 1re	
classe ....	112
"                    "          adjoints de 2me	
classe ....	112
Total officiers d'administration ...	350

These officers of administration are a branch of the Intendance, and, under the chief medical officer, administer the military hospital services.

## HOSPITAL ORDERLIES.

These are distributed in 25 *sections d'infirmiers*, one with each of the Army Corps 1 to 18, three with the (8975)



19th Army Corps (Algiers, Oran, Philippeville, and Tunis), one with the 20th Army Corps, two with the Government of Paris, and one with the Government of Lyons. The strength of these sections varies according to requirements. Some number 75 only, others 200, while the sections with the 19th Army Corps number from 500 to over 900 men each. The hospital orderlies in the different sections numbered in 1892 about 1,439 N.C.O.'s, corporals, and trumpeters, and 3,960 soldiers. Total, 5,399.

Chaplains (*aumoniers*) and transport officers and men—the *train* corps—are attached to the Army Medical Service, and placed under the medical officers in charge of ambulances, field hospitals, &c., in time of war.

The military hospitals are 35 in number, divided into (a) those of 600 or more beds, which are considered 1st class; (b) those of from 400 to 600 beds, 2nd class; (c) those of from 300 to 400 beds, 3rd class; (d) those of from 200 to 300 beds, 4th class; and (e) those with less than 200 beds, which are in the 5th class. Civil hospitals are required to receive and treat sick soldiers where military hospitals do not exist or where they are insufficient in a station. These civil hospitals are divided into mixed or militarised hospitals and civil hospitals proper. In the first are classed civil hospitals having wards specially allotted for military patients, who are under military hospital regulations. In the second are classed town hospitals where the garrison is below 300 men. In the civil hospitals, properly so called, military patients are treated by civilian surgeons. In a garrison of 1,000 men the treatment of sick is attended to by military medical officers; in a garrison of less number the civil surgeons perform duty in the military wards when the military *personnel* is insufficient. Each military hospital has a chief medical officer and junior medical officers as required.



## THE MEDICAL SERVICE IN THE FIELD.

The general scheme for the relief of the sick and wounded in the field is divided into :—

First.—The medical service at the front (*service de l'avant*).

Second.—The medical service on the lines of communication (*service de l'arrière*).

The service at the front is subdivided into :—

- (a) The regimental medical service.
- (b) The ambulances.
- (c) The field hospitals.

The medical service on the lines of communication is subdivided into :—

- (a) The stationary hospitals.
- (b) The evacuation of sick and wounded.
- (c) The replenishing of medical and surgical stores.

In addition there are dépôts for convalescents and for men temporarily disabled from trivial injuries (*dépôts d'éclopés*) which may be opened on the lines of communication or close to the troops at the front.

## THE REGIMENTAL MEDICAL SERVICE.

The *personnel* for this service consists of medical officers obtained from the *Corps de Santé* or reserve, and sick attendants and stretcher bearers from the regiment.

The infantry regiment forms a unit somewhat similar to a brigade of the British Army, and consists of three or four battalions, each battalion being composed of four companies of 250 rank and file. The proportion of medical officers is one per battalion in



peace, and two per battalion in the field, the additional medical officer being obtained from the reserve. The number of sick attendants (*infirmiers*) is one per battalion in peace, and one per company on mobilisation, the additional *infirmiers* being reservists who had acted as *infirmiers* during their service with the colours. The number of stretcher bearers is four per company, or 16 per battalion. The bandsmen of the regiment are also stretcher bearers, and, during an action, they are placed at the disposal of the medical officers.

In the cavalry there are two medical officers with each regiment of four squadrons, with one *infirmier* for each squadron, but no stretcher bearers.

Field artillery have one medical officer with each group of three batteries, and one *infirmier* and four stretcher bearers with each battery.

Horse artillery are organised, like cavalry, without stretcher bearers, but with one medical officer to two batteries, and one *infirmier* per battery.

A company of engineers has one *infirmier* and four stretcher bearers. There are no medical officers, the medical charge of the company as well as that of departmental corps being placed under an officer of the nearest ambulance or regimental unit.

The training of *infirmiers* and stretcher bearers is part of the duty of the battalion medical officers, the senior of whom acts as senior medical officer of the regiment, and is responsible for the work of the others. The *infirmiers* are fully trained as sick attendants at the regimental *infirmieries* (an inspection room or detention ward where slight cases are treated without being sent to hospital), as well as at the station hospital, where they undergo a course of practical instruction. In addition to the fully trained *infirmier* there is also an *infirmier* on probation with each battalion in time of peace.

All the regimental *infirmiers* wear the Red Cross



brassard. The regimental stretcher bearers do not, but wear instead a black or dark blue brassard with a white Maltese or St. Andrew's Cross.

The medical and surgical material at the disposal of the regimental medical service consists of the contents of the field companions and surgical haversacks carried by the *infirmiers* and stretcher bearers, and of the equipment carried on the *voiture médicale*. This is a two-wheeled wagon drawn by one horse, for infantry and field artillery, and a four-wheeled two-horse wagon for cavalry and horse artillery. Each battalion of infantry or group of three batteries has one *voiture médicale*, while the cavalry have one for each brigade of two regiments. A regiment of cavalry has, however, in addition two two-wheeled ambulance wagons, each of which carries a surgical pannier (*panier regimentaire pour troupes à cheval*).

With the exception of the two-wheeled ambulance wagons accompanying cavalry regiments, the regimental medical service does not possess ambulance wagons of its own; but during the march each infantry regiment has lent to it one of the ambulance wagons belonging to the ambulance of the division.

When an action is about to take place, these ambulance wagons rejoin their unit (the ambulance) and form a collecting station (*relai d'ambulance*), to which the wounded are brought by the regimental or ambulance stretcher bearers. Between this *relai d'ambulance* and the fighting line the regimental medical service forms as many first-aid stations (*postes de secours*) as may be considered necessary; and the rule is to employ the regimental stretcher bearers in carrying the wounded from the fighting line to the regimental *poste de secours*, and the bandsmen in carrying them from the *poste de secours* to the *relai d'ambulance*.

The wounded of cavalry are left to be collected by the stretcher bearers of the ambulance or nearest infantry or artillery unit.



## AMBULANCES.

With each army corps there are four ambulances, one for each division of infantry, one for the cavalry brigade, and one with the headquarter staff for disposal wherever the principal medical officer may consider best. With an army of more than one army corps there is also an ambulance with each cavalry division. Each ambulance is divisible into two sections, as below.

PERSONNEL AND TRANSPORT MATERIAL OF THE  
AMBULANCE OF AN INFANTRY DIVISION.

A.—*Personnel.*

## 1st Section.

(a) *Medical Personnel.*

- 1 médecin major (in command).
- 1 „ aide-major.
- 2 „ aides-majors of the reserve (dismounted).
- 1 *officier d'administration* for accounts, &c. (dismounted).
- 1 *officier d'administration* for supplies (mounted).
- 1 chaplain (mounted).
- 1 military medical student from the military medical school at Lyons (dismounted).
- 15 ward orderlies { 2 sergeants.  
3 corporals.  
10 privates.
- 49 stretcher bearers { 1 sergeant.  
2 corporals.  
46 privates.
- 1 cyclist.

## (b) Transport Corps.

- 1 lieutenant.
- 1 veterinary surgeon.
- 1 sergeant.
- 1 quartermaster-sergeant.
- 2 corporals.
- 1 farrier sergeant.
- 1 handyman.
- 1 bugler.
- 3 drivers, mounted (2 for the 4-horse wagons, 1 reserve).
- 34 drivers (dis-mounted) {
  - 15 on wagons.
  - 1 for mule with tools.
  - 1 for reserve mule.
  - 15 for mules with cacolets and litters.
  - 2 as orderlies for the lieutenant and veterinary surgeon.
- 4 orderlies (dismounted) {
  - médecin major.
  - médecin aide-major.
  - officier d'administration.
  - chaplain.
 for the mounted medical personnel.

## 2nd Section.

## (a) Medical Personnel.

- 1 médecin major.
- 2 „ aides-majors of the reserve (dismounted).
- 1 officier d'administration (dismounted).
- 15 ward orderlies {
  - 2 sergeants.
  - 3 corporals.
  - 10 privates.
- 49 stretcher bearers {
  - 1 sergeant.
  - 2 corporals.
  - 46 privates.



## (b) Transport Corps.

- 1 lieutenant.
- 1 sergeant.
- 2 corporals.
- 1 harness maker.
- 1 handyman.
- 1 bugler.
- 2 drivers mounted (2 for the 4-horse wagons).
- 30 drivers (dis-  
mounted) {
  - 13 on wagons.
  - 1 for reserve mule.
  - 15 for mules with cacolets and litters.
  - 1 as orderly for lieutenant.
- 1 orderly for médecin major.

B.—*Transport Material.*

## 1st Section.

## (a) Wheeled Transport.

- 2 two-wheeled ambulance wagons (1 horse).
  - 1 omnibus for dismounted officers
  - 3 *fourgons* for equipment ....
  - 1 *fourgon* for provisions ....
  - 1 surgical wagon ....
  - 1 administration wagon
- } 2 horses.
- } 4 horses.

## [(b) Officers' Chargers.

- 2 for senior medical officer.
- 1 for médecin aide-major.
- 1 for supply officer.
- 1 for chaplain.
- 1 for transport officer.
- 1 for veterinary surgeon.

## (c) Transport Animals.

6 riding horses	{	sergeant	....	....	....	....	1
		quartermaster-sergeant	....	....	....	....	1
		corporals	....	....	....	....	2
		farrier	....	....	....	....	1
		bugler	....	....	....	....	1
26 draught horses	{	two-wheeled ambulance wagons	....	....	....	....	2
		four-wheeled ambulance wagons	....	....	....	....	4
		omnibus for officers	....	....	....	....	2
		surgery wagon	....	....	....	....	4
		administration wagon	....	....	....	....	4
		<i>fourgons</i> for equipments	....	....	....	....	6
		<i>fourgon</i> for provisions	....	....	....	....	2
17 mules	{	reserve team	....	....	....	....	2
		cacolets	....	....	....	....	10
		litters	....	....	....	....	5
		tools	....	....	....	....	1
		reserve	....	....	....	....	1

## 2nd Section.

## (a) Wheeled Transport.

- 2 two-wheeled ambulance wagons.
- 3 *fourgons* for equipment.
- 1 surgical wagon.
- 1 administration wagon.

## (b) Officers' Chargers.

- 1 for médecin major.
- 1 for transport officer.

## (c) Transport Animals.

4 riding horses	{	sergeant	....	....	....	....	1
		corporals	....	....	....	....	2
		bugler	....	....	....	....	1



22 draught horses	{	two-wheeled ambulance wagon ....	2
		four-wheeled ambulance wagon ....	4
		surgey wagon ....	4
		administration wagon ....	4
		<i>fourgons</i> for equipment ....	6
16 mules	{	<i>fourgon</i> for provisions ....	2
		cacolets ....	10
		litters ....	5
		reserve ....	1

The cavalry and *quartier-général* (headquarter staff) ambulances differ in some respects from one another and from the infantry division ambulances in respect of *personnel* and *matériel* as follows :—

# Personnel.

Description of ambulance.	*Medical officers.	Administrative officers.	Chaplains, all mounted.	N.C.O.'s and men of the Medical Corps.	Officers of the Train.	N.C.O.'s and men of the Train (exclusive of Drivers).
Corps troops ...	8 (3 mounted)	3 (1 mounted)	3†	129	24	16
Infantry division...	8 (2 mounted)	3 (1 mounted)	1	129	24	11
Cavalry brigade ...	2 (1 mounted)	1 (mounted)	1	16	—	3
Cavalry division...	3 (2 mounted)	1 (mounted)	1	19	—	8

\* The medical officers not provided with chargers are those from the reserve (civil practitioners). One of the medical officers in the ambulance of the corps and infantry division is a *médicaux auxiliaire* or medical student.

† 1 Catholic, 1 Protestant, and 1 Jewish religion.

‡ 1 a veterinary surgeon.



*Transport Material.*

(Exclusive of cacolets and litters.)

Description of Ambulance.	Sick and Wounded.		2-horse Wagons.			4-horse Wagons.			
	*2-wheeled 1-horse.	†4-wheeled 2-horse.	Medical and surgical equipment ( <i>fourgon</i> ).	Provision wagons.	Omnibus for <i>personnel</i> not mounted.	Surgical wagons.	Administration wagons.	Field forge.	Forage wagons.
Corps troops ...	8	6	6	2	1	2	2	1	1
Infantry division	4	4	6	2	1	2	2	—	—
Cavalry brigade	3	3	2	—	—	—	—	—	—
Cavalry division	6	—	2	—	—	—	—	—	—

\* Carries two lying down.

† Carries four lying down, or two lying down and five sitting.

*Field Hospitals.*

These are organised for 100 beds. The *personnel* consists of 7 medical officers (2 of the regular service, mounted, and 5 reserve, not mounted), 1 chaplain, 3 officers of administration (1 mounted), 1 medical student, 1 detachment of *infirmiers* (6 sergeants, 10 sergeants, 10 corporals, 113 privates, of whom one is a bicyclist), and a detachment of the train, consisting of 1 N.C.O. and drivers.

The transport consists of four 2-horsed *fourgons* and one omnibus for the *personnel* not provided with chargers. The field hospitals belong to the army

corps, and are not attached to brigades or divisions. As a rule there are 12 to each army corps, but four of them are intended to be utilised as evacuation hospitals at the heads of the lines of communication. They are numbered and marked with the number of the army corps to which they belong. They are utilised wherever the principal medical officer considers it desirable.

It has to be borne in mind that, according to the French system, it is only after a battle that the functions of a field hospital commence, and it is, therefore, right that this power of massing or distributing should rest in the hands of the principal medical officer.

The ambulances retain the wounded and take care of them until all are collected. The principal medical officer then ascertains where there is the greatest accumulation of wounded and orders a sufficient number of field hospitals to that spot, and continues to distribute the whole of his field hospitals to the best advantage.

No tents, beds, or other hospital requisites are carried, but only medical and surgical material. All ordinary articles have to be obtained from the resources of the locality. For this purpose medical officers, not only of field hospitals, but also of the ambulances and regimental medical service, have power to requisition on mayors of towns or chief inhabitants of the locality for anything they may require. They are provided with two books containing foil and counterfoil. The one is the "*Carnet de Ordres de Réquisition*," the other the "*Carnet de Reçus pour Prestations fournies par Réquisitions*." By means of the former the medical officer can serve an order on the inhabitants which it becomes a penal offence to disobey; by means of the latter the inhabitants may eventually recover from Government the value of the articles supplied.



*Lines of Communication.*

The links between the medical service at the front and the medical service on the lines of communication are the "evacuation hospitals."

These hospitals are equipped as field hospitals, with the addition of the stores necessary for replenishing the medical services at the front, and also the equipment necessary for improvising hospital trains.

One evacuation hospital is established at the head of each line of communication ; and the duties are to receive the sick and wounded sent for evacuation, arrange them into convoys, and despatch them down the line, *i.e.*, by rail, road, or water, as the case may be. Arrangements are also made for the temporary care and treatment of patients waiting conveyance ; or for the transfer to convalescent depôts of those who are likely soon to be fit for duty, or to neighbouring hospitals of those whom it is advisable not to submit to a long journey. But the hospital itself is not intended for any more prolonged treatment than would be afforded, for example, at an ambulance.

## HOSPITAL TRAINS.

As regards methods for conveying sick and wounded along the lines of communication, the French Army Medical Service, like that of most other Continental armies, pays special attention to the organisation of transport of sick and wounded by railway.

Two hospital train organisations are recognised for conveyance of lying-down cases.

- (1) Permanent hospital trains.
- (2) Improvised hospital trains.

Patients able to sit up are conveyed in ordinary



passenger trains or trains organised out of ordinary passenger carriages.

*Permanent Hospital Trains.*

*(Trains Sanitaires Permanents.)*

These are of two types. The trains prepared by the Ouest and Orleans Railway Companies, and those prepared by the P.L.M. (Paris, Lyons, Mediterranean) Company, the only difference between the two being that the length of carriages in the latter is twice the length of the carriages in the former.

The organisation of these trains is as follows:—The railway companies mentioned maintain and use in time of peace, for ordinary goods traffic, certain carriages specially constructed for conversion into hospital carriages whenever the order for mobilisation is given. The companies keep ready all the necessary fittings, &c., for the conversion of the wagons; while the Army Medical Department keeps ready in its mobilisation stores, as distinct numbered units, all the additional material necessary for forming complete hospitals.

The material held in the medical mobilisation stores must be sent to the railway company within five days of the date on which the company has received the requisition for the train, and the railway authorities are responsible for completing the preparation of the train within 15 days of receipt of the requisition. This is done under the supervision of an officer of administration.

Each train consists of 16 carriages for sick or wounded, one carriage for officers (*personnel*), one carriage for ward orderlies, one for kitchen, one for scullery or pantry, one for surgery, dispensary and linen, one for provisions, and one for foul linen and fuel; total, 23 carriages. Four spare carriages are kept in reserve for each train in the



Paris railway depôts to replace carriages requiring repair.

All the carriages have through intercommunication. They are heated by portable stoves, and special arrangements exist for ventilation and light.

The carriages for patients contain eight cots (*lits-brancards*) each, placed in two tiers; four on each side of the carriage. In the hospital trains of the Paris-Lyons Mediterranean Railway Company the number of cots in each carriage is doubled.

The *personnel* of a permanent hospital train is normally 2 medical officers, 1 apothecary, 1 officer of administration, 1 military clerk, and 27 N.C.O.'s and men (*infirmiers*).

Special drilling renders the hospital staff competent to move cots and to load and unload trains.

#### *Improvised Hospital Trains.*

These are composed of goods wagons into which special apparatus kept ready for the purpose in the Army Medical Mobilisation Stores are placed. These apparatus are of two kinds—(1) the *Bry-Ameline*, an arrangement by which suspension hooks carrying traverses, on which the field stretchers are placed, are fixed into the sides of the carriage; and (2) the *Bréchet-Desprez-Ameline* apparatus, a framework arrangement, which can be placed bodily inside the carriage, the frame carrying the suspension traverses on which the field stretchers are placed. The former arrangement is intended to carry the stretchers in two tiers; the latter to carry them in three tiers. In both arrangements 12 patients can be placed in a wagon; but the frame apparatus is the most convenient, as each individual patient can be more easily attended to than in the arrangement by which the stretchers are placed on traverses across the whole width of the wagon. Only in exceptional and urgent



cases are stretchers to be placed direct on the floor of the wagon.

In addition to the special apparatus for slinging stretchers, ward utensils, such as commode, bed-pan, bed-urinal, spittoon, water-can, and camp-stool, are placed in each wagon, along with a cup and water bottle for each patient.

These improvised trains are made up of 40 wagons, numbered and arranged as follows :—

Number of the Wagon.	Description.	How loaded.
1	Brake van ... ..	Baggage and equipment.
2 to 11	Wagons for sick and wounded	120 patients lying down.
12 and 13	Brake vans ... ..	Baggage and equipment.
14 to 19	Wagons for sick and wounded	72 patients lying down.
20	1st class or mixed 1st and 2nd class carriage.	Hospital staff.
21 to 27	Wagons for sick and wounded	84 patients lying down.
28 and 29	Brake vans ... ..	Baggage and equipment.
30 to 39	Wagons for sick and wounded	120 patients lying down.
40	Brake van ... ..	Baggage and equipment.

Total ... .. 40 wagons, carrying 400 lying-down patients.

The preparation of one of these trains is carried out according to a carefully timed plan in seven hours. The wagons are all numbered and marked with the Geneva Cross. The *personnel* is variable according to the nature of the cases carried. The normal establishment, which may be increased or diminished as the senior medical officer of the evacuation hospital may consider necessary, is as follows :—

- 1 medical officer.
- 1 apothecary.
- 1 *officier d'administration*.
- 1 military clerk, and
- 44 N.C.O.'s and men (*infirmiers*).



### TRANSPORT OF SICK AND WOUNDED BY ROAD.

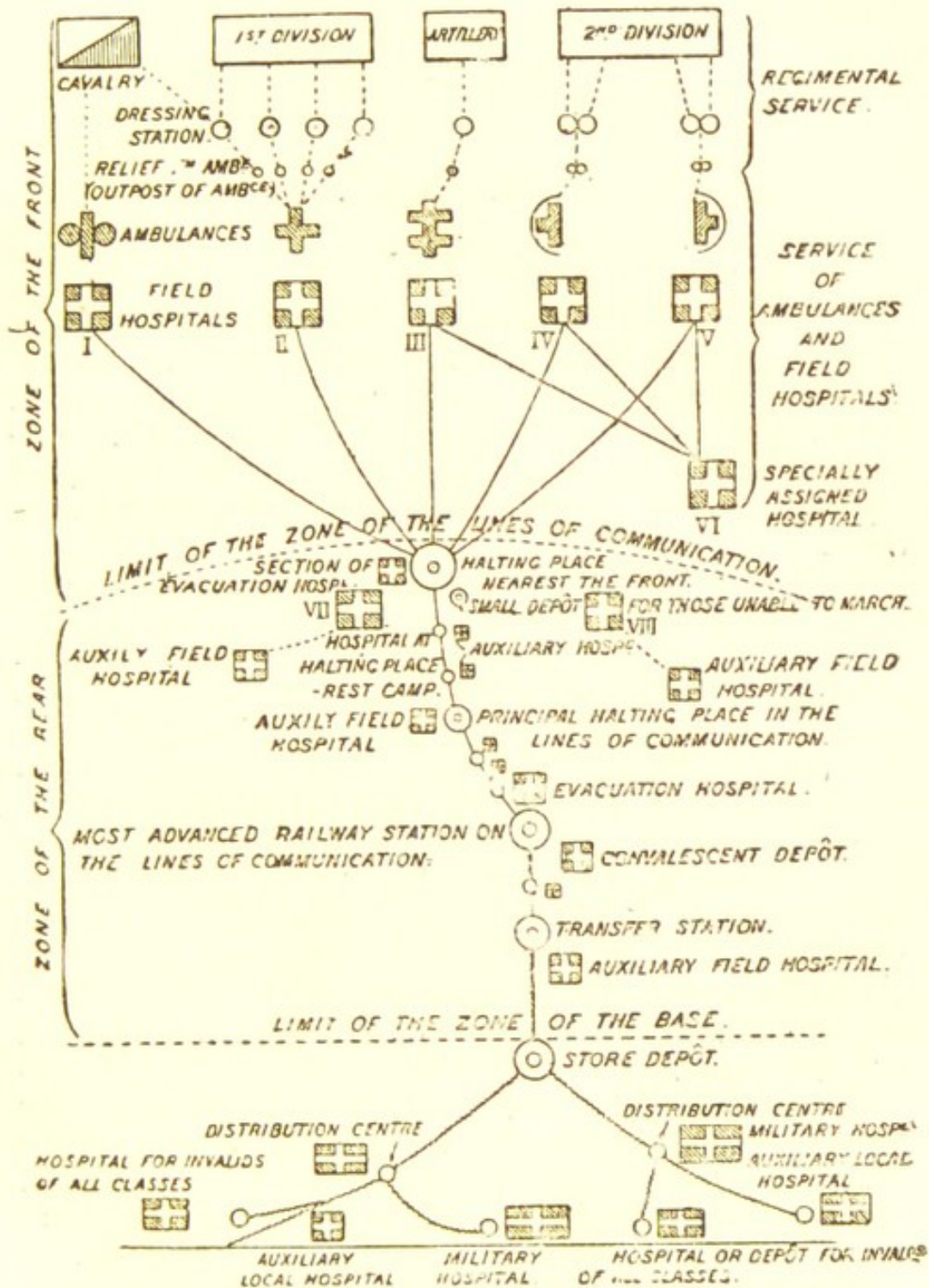
Two kinds of ambulance wagons are used, as already noted in the remarks upon ambulances, namely, the two-wheeled wagon for two lying down on stretchers, and the four-wheeled for four lying down, or 10 sitting up, or for two lying down or five sitting up. The stretchers are slung on leather loops, carried on rails. In the four-wheeled wagon they are slung in two tiers. Various improvised methods are also described in the regulations on the subject.

The *Bréchet-Desprez-Ameline* frame apparatus, for example, is used in the large forage wagons, and various methods are described for conveying patients on stretchers in country wagons, &c. Cacolets, litters, and wheeled stretchers are also utilised. The type of wheeled stretcher employed folds flat for packing, so that 16 can be taken to the front in one regulation transport wagon (*chariot de pare*).

### TRANSPORT OF SICK AND WOUNDED BY WATER.

All arrangements connected with hospital ships are in the hands of the Navy. Transport on rivers and canals is arranged for on two types of boats, the *flûte* and the *péniche*, the former being an undecked and the latter a partially decked form of barge.

The arrangement most recommended is to place on the floor of the barge the *Bréchet-Desprez-Ameline* frame for stretchers. It is calculated that a barge will carry 30 to 33 of these, or 100 patients. Failing these, it is recommended that improvised wooden cots should be fixed to the floor, but with this arrangement only about 30 can be carried in a barge, in addition to the orderlies and crew.





GERMANY.

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THE medical department of the German Army has a surgeon-general (*Generalstabsarzt*) as director-general at headquarters, who ranks with a major-general and draws the pay and allowances of that rank. The medical officers of the German Army have the rank of combatant officers and hold a position of equality with them.

Each army corps has a surgeon-general (*Generalarzt*) as medical director. The army corps are in number 20, including the two Bavarian corps. The surgeon-generals of these army corps are divided into two classes, 1st and 2nd, ranking respectively with colonels and lieut.-colonels. The senior surgeon-major (*Oberstabsarzt*) of each division is chief divisional surgeon. Garrison hospitals are directed by surgeon-majors, and they command the hospital *personnel* and possess disciplinary power. The grades below surgeon-general are surgeon-major (*Oberstabsarzte*), surgeons (*Stabsarzte*), and assistant-surgeons (*Assistenzarzte*). The surgeons-major and assistant-surgeons are classed into two (1st and 2nd class). There are also sub-surgeons and one-year volunteer surgeons. A surgeon-major is usually the senior medical officer of a regiment. Surgeons and assistant-surgeons are appointed to battalions and smaller units. The total number of medical officers in the German Army (including Bavarian) is 2,068.

To the headquarters of each army corps is attached a staff apothecary, who is, under the direction of the surgeon-general, responsible for the superintendence

of the dispensaries of the several hospitals. The apothecaries (higher officials) have the standing of officers, but without relative rank. Their appointments are made on the recommendation of the surgeon-generals of corps by the Minister for War.

#### THE WAR ORGANISATION OF THE MEDICAL SERVICE.

This consists of—

- 1 surgeon general-in-chief in Berlin.
- 1       "       attached to headquarters.
- 1       "       to each army corps.
- 1       "       to each independent army.
- 1 surgeon to each division.

Two medical officers are attached to each battalion of infantry of 4 companies about 1,000 strong. Two men from each company are trained as stretcher bearers. Each regiment (3 battalions) has a medical store wagon.

A cavalry regiment has 3 medical officers and 4 hospital assistants (1 per squadron) with a medical store wagon. The light artillery has 2 medical officers for each battalion of 3 or 4 batteries, and a hospital assistant for each battery. The heavy artillery also has 2 medical officers for each battalion (4 batteries), and hospital assistants for each battery.

The staff troops have a medical officer and hospital assistant with each unit.

#### BEARER COMPANIES (*Sanitats\* Kompagnien*).

These are parts of the train battalions of the army corps to which they belong, and are numbered consecutively, and the army corps to which attached

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\* The word "Sanitats" in German includes all we mean by *Medical and Sanitary*.



stated. One of them is attached permanently to each division, and one is kept at the disposal of the corps commander, and is attached to the corps artillery. Each is divided into two sections, each complete in itself.

The establishment of a bearer company is as follows :—

- 7 medical officers.
- 1 paymaster.
- 1 apothecary.

The officers of the train are—

- 1 captain.
- 2 lieutenants.
- 3 under officers.
- 3 lance-corporals.
- 14 privates.
- 12 soldier servants.
- 7 tradesmen.
- 1 sergeant-major bearer company.
- 15 under officers bearer company.
- 2 buglers.
- 176 lance-corporals and stretcher-bearers.
- 8 hospital assistants.
- 8 sick attendants.

—  
Total 261, with

- 13 officers' riding horses.
- 6 troop „
- 26 draught horses.
- 2 spare draught horses.
- 13 2-horsed vehicles.

The vehicles of a bearer company are—

- 8 ambulances.
- 2 medical store wagons.
- 1 provision wagon (all two-horsed).

The ambulances can carry 2 severely and 3 slightly wounded men. With each stretcher a knapsack containing dressings is supplied. The wagons are of different patterns; the older patterns are equipped with 7 stretchers, those of later date with 9 stretchers. Thus, a bearer company with old equipment has 56 stretchers, and those of later date with 72 stretchers. The wagons of the bearer company have each 2 shovels, 1 pickaxe, 1 axe, and 1 hatchet.

On active service the bearer companies form the second line of assistance and work between the collecting stations established by the regimental medical service and the dressing stations formed by themselves. The divisional surgeon or the divisional commander regulates the movement and employment of bearer companies.

#### FIELD HOSPITALS (*Feldlazarethe*).

These are the third line of assistance; 12 are mobilised for each army corps of 2 divisions, and for each army corps of 3 divisions, 18, each of which is capable of receiving 200 wounded and sick. The field hospitals are divisible into 2 sections. Each reserve division has usually 4 field hospitals, a P.M.O. in charge of each.

The establishment of a field hospital is as follows:—

- 2 surgeon-majors and 3 assistant surgeons.
- 1 apothecary.
- 1 hospital inspector.
- 1 accountant.
- 1 assistant apothecary.
- 1 sergeant ward master.
- 1 under officer clerk.
- 1 under officer storekeeper.
- 9 hospital assistants.



12 sick attendants.  
 1 cook.  
 2 transport under officers.  
 2 transport lance-corporals.  
 1 transport trumpeter.  
 9 transport drivers.  
 8 servants of officers.

Total 5 medical officers.  
 4 officials.  
 47 N.C.O.'s and men.

There are 5 riding horses for officers, 5 for troop riding, and 20 for draught. Total, 30 horses. The vehicles consist of :—

1 baggage wagon (2-horsed).  
 2 medical store wagons (2-horsed).  
 3 *matériel* and store wagons (4-horsed).  
 1 carriage (2 horses) for officials.

—  
 Total 7 vehicles.

Field hospitals may also be equipped with four 2-horsed *matériel* wagons and one 2-horsed ambulance wagon, in lieu of the 4-horsed *matériel* and store wagons ; in which case they have nine carriages and 28 horses.

The medical store and baggage wagons are the same as those of bearer companies. Everything has been done to reduce the stores of field hospitals so that their mobility may be increased. In the *matériel* and store wagons are carried the hospital stores required, and a pair of sheets and coverlets for each patient ; but no other bedding, and no tents. Bedding may be obtained locally by requisition.

The lines of communication and war hospitals are formed as required. The lines of communication

hospitals are, as a general rule, taken charge of by auxiliary societies for aid to the wounded.

For the war hospitals, formed to take over the wounded who cannot be moved when the field hospitals proceed on with the corps, each army corps mobilises :—

19 medical officers.  
 3 apothecaries.  
 6 other officials.  
 27 hospital assistants.  
 3 under officers.  
 36 sick attendants.  
 24 train soldiers.  
 3 cooks.

#### WAR PERSONNEL AND TRANSPORTS.

Units.	Medical Officers.	Train Officers.	Officials.	N.C.O.'s and Men.	Horses.	Carriages.
63 bearer companies ...	441	189	126	15,687	2,961	819
258 field hospitals ...	1,290	—	1,032	12,126	7,740	1,806
20 war hospitals ...	380	—	180	1,860	—	—
Total ...	2,111	189	1,338	29,673	10,701	2,625

The duties, then, of the medical service during and after an action may be stated as follows :—

As soon as it becomes apparent that the fight will assume considerable proportions, each body of troops,



by halting its medical wagon or chest, establishes its *dressing station* where the medical officers and hospital assistants, who have been previously told off to such stations, remain.

If time permits and circumstances are favourable, it may be advantageous to at once unite the dressing stations of several units. The senior medical officer will give the necessary orders as regards this. The stretcher bearers deposit arms and valises at the dressing station, tie a red band on the left arm, and follow the troops into action, carrying the stretchers and bandage valises.

The dressing station should be sheltered from rifle fire, and, if possible, also from artillery fire, and be easily accessible. It is very important that water should be close by. Straw, blankets, and such necessities, as well as wagons for the carriage of the wounded to the field hospital, are, if practicable, requisitioned. Empty supply wagons are also used for this purpose.

The order for the employment of the *bearer company*, or a section of it, are given by the officer commanding the body of troops to which it belongs.

The bearer company is intended to give, in an extended form, the first help to the wounded in action, and establishes a *chief dressing station*, the choice of its position being guided by the same consideration as in the case of the dressing stations of units. The dressing stations of units are to be united as soon as possible with the chief dressing station, so as to facilitate the *personnel* and material of the former being speedily sent back to their units.

The tents of the killed and wounded\* may at first be used, as a temporary measure, to shelter the wounded on the battlefield.

The chief dressing station is distinguished by the

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\* Each soldier carries a portion of a shelter tent.



German colours and the Geneva cross flag, at night also by red lanterns. The deployment of the stretcher bearers is directed by the commander of the bearer company. The requisitions, measures adopted for sending back the wounded, and all duties at the chief dressing station are directed by a medical officer detailed for the purpose, usually the divisional surgeon.

The *field hospitals* will take charge of wounded men coming either from the dressing station or straight from the battlefield.

In order to be able, in case of need, to remain in use for some time, they are, if possible, established in villages lying outside the area of the battle, or attached to such places, and extended by means of tents, huts, beds, &c. The position of the field hospital will be made known by the same distinctive marks as the chief dressing station.

Orders regarding the employment of a field hospital are given by the officer commanding the troops to whom it is allotted.

After the first assistance (bandaging, &c.) which the medical *personnel* administer to the wounded on the battlefield, the next thing is to get the wounded quickly into hospital. When field hospitals exist, endeavours should be made to get the wounded to them at once.

The rule must be strictly insisted on that slightly wounded men, after giving up their ammunition, with the exception of a few rounds, but retaining their arms, go to the rear alone, and that men, who are not stretcher bearers, only carry back wounded men when ordered to do so by an officer. After depositing the wounded, these men must immediately return to the fight and report themselves. After the fight it is the duty of every body of troops, without special orders, to have the battlefield in its vicinity searched for wounded men, and to protect them from plunderers.



The authorities on the line of communication arrange for the conversion of the field hospital into a standing hospital by relieving the *personnel* and *matériel*; they also arrange for the shelter for the sick and wounded, and for sending them back to their homes.

The duties of the medical service on the lines of communication comprise :—

- (a) Care of the sick on the lines of communication hospitals (*Etappen lazarethe*).
- (b) Care of the sick in the stationary hospital (*Stehende Kriegs lazarethe*).
- (c) Distribution of the sick.
- (d) Forwarding of medical stores.

Hospitals on the lines of communication receive the sick of troops passing through, and drafts of sick, as well as men belonging to regiments on the lines of communication if they require immediate hospital treatment. Stationary hospitals are intended to relieve and supplement field hospitals whose work they continue, as the latter advance with their corps.

The sick and wounded can be moved by rail, road, or water. There are hospital trains on the railways. These consist of :—

First.—Hospital trains\* fitted up for the exclusive use of such sick and wounded as can only be moved in a lying-down position. They have closed carriages.

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\* On the outbreak of war, the hospital trains laid down in the plan of mobilisation are at once formed. Each train consists of 41 carriages, of which 30 are wagons for 10 sick each. They are arranged as follows :—1 baggage van with brake, 1 store van with brake, 1 carriage for medical officers, 1 carriage for hospital assistants with brake, 8 carriages for sick, 1 store wagon for provisions with brake, 1 wagon fitted as kitchen, 7 carriages for sick, 1 wagon for office and apothecary's store, 7 carriages for sick, 1 wagon fitted for kitchen, 1 store wagon for provisions, 8 carriages for sick, 1 carriage for hospital assistants, 1 wagon as fuel store.



These trains, which are fitted up for hospital requirements, have a permanent staff and stores, and consist of carriages specially prepared for the purpose in peace time. Each train has a principal medical officer in charge.

Second.—Subsidiary hospital trains, consisting of goods, wagons, and fourth class passenger carriages. These trains, put together out of goods wagons, which have not been previously prepared for the purpose, are fitted up by the transport committee,\* with special arrangements for lying down, and are supplied with a medical and nursing staff. The senior medical officer has charge of the train. The sick and wounded who can travel in a sitting position are placed in sick trains, put together in the theatre of war, out of every kind of covered wagon that may be handy. These trains are provided with the necessary equipment for a large number of sick and slightly wounded. There is usually no special medical staff on these trains: medical assistance being given when required at the stations along the line of communications. Stations for refreshment, medical treatment, dressing of wounds, and halting places for the night, are provided for the wounded, so that their needs may be attended to; and where, in cases of long journeys, they may have a night's rest and opportunities for washing. Small rest camps are organised by officers employed on the lines of communication for the accommodation of men slightly wounded, sick, and recovering who require treatment, though not necessarily in hospital, and are likely to become fit for duty soon. Convalescents who no longer require medical treatment, are not admitted to these camps, but are sent by their regiments to join convalescent detachments.

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\* In order to carry out the distribution of the sick, there are organisations called "Committees for the Transport of Sick," of which there is one at the headquarters of each officer commanding a line of communication.



## THE HOME GARRISON.

The duties of the medical service with the Home Army consists chiefly in work in the reserve and fortress hospitals, besides the ordinary medical charge of the troops in the home territory. All military hospitals which belong to the command of a deputy corps commander (with the exception of fortress hospitals), are called reserve hospitals; they either existed previously in peace times, or have been organised for the war. Their use is to receive the sick and wounded from the home garrison. Hospitals are called fortress hospitals, which either exist in fortresses, or are instituted by the military authorities when mobilisation takes place. The medical charge of the troops and military institutes is conducted by surgeons and hospital orderlies, the number of whom is laid down in the establishment according to peace or special regulations.

For every fortress or larger garrison there are a number of garrison surgeons in accordance with the peace establishment. Sick and wounded men may, according to the discretion of the principal medical officer or the hospital committee, be transferred from the reserve hospitals to public hospitals or private homes.

## UNIFORM.

*Medical Services.*

For hospital assistants and officers.—Tunic, dark blue with scarlet piping, yellow buttons, and with dark blue collars, cuffs, and shoulder straps, with number of corps (in the case of officers the staff of Æsculapius). The officer's frock coat is black with blue collar and scarlet piping.

Trousers dark grey (Bavarian dark blue), with scarlet piping.

Head-dress.—Infantry helmet; forage cap dark blue with dark blue band and scarlet piping.

For sick attendants.—The same as for hospital assistants, but with blue piping on tunic and blue patch on cuff.

For bearer companies.—Blue tunics with crimson collars, cuffs, shoulder straps, and piping. No helmet, peak blue forage cap with crimson band. Geneva band on right arm.



## HOLLAND.

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THE military system of the Dutch Army aims at obtaining as many men as possible by voluntary enlistment, and supplying the balance by conscription. The Home Army consists of :—1st line, the active army ; 2nd line, the Schutterij, active and reserve ; 3rd line, the Landstorm.

The medical department consists of the medical staff and three bearer companies, which latter are allotted one to each of the three divisions, with a detachment to the headquarter staff. The establishment consists, in time of peace, of 336 medical officers, veterinary surgeons, and apothecaries (140 of the medical officers being borne as reserve).

The establishment of a bearer company in time of peace is 1 officer and 231 men, or 3 officers and 693 men for the three companies. There are, actually, 819 hospital soldiers available to fill up the companies to the strength mentioned below, and to provide the one or two hospital soldiers borne on the strength of each unit, when at war strength.

The bearer companies are attached :—

The 1st to the 7th Regiment of infantry.

„	2nd	„	5th	„	„
„	3rd	„	6th	„	„

They are filled up by transfers from other corps within the respective divisions.

*Clothing and arms.*—Hospital soldiers as for infantry, but with “H.S.” on helmet plate and fatigue cap.

### TRAIN FOR RESERVE DRESSING STATION WITH HEAD- QUARTERS OF FIELD ARMY.

	Troops.		Horses.		Vehicles.	In Peace, vehicles kept.
	Officers.	Men.	Officers'.	Troop.		
Medical Staff ...	6	69	5	5	—	At Woerden.
Train detachment ...	—	18	—	32	—	Two pharmacy wagons at Amsterdam.
	6	87	5	37	—	

### TRAIN FOR MEDICAL SERVICE OF A DIVISION.

	Troops.		Horses.		Vehicles.	In time of Peace, the vehicles are
	Officers.	Men.	Officers'.	Troop.		
Staff ...	1	6	2	8	—	1st and 2nd Division, at Woerden. 3rd Division, at Dor- drecht. Except pharmacy wa- gons, which are kept at the medical stores at Amsterdam and Utrecht.
Dressing station de- tachment—						
Medical staff ...	18	207	15	15	—	
Detachment of train ...	—	48	—	90	24	
Field hospital—						
Medical staff ...	7	28	5	5	—	
Detachment of train ...	—	8	—	13	3	
	26	297	22	131	27	

To the medical service of the Colonial Army (the army in the Dutch East Indies) are attached 233 officers and 1,399 other ranks.

(8975)



## ITALY.

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THE Italian military medical service has a distinct corps organisation, and its officers have military titles, as lieutenants, captains, majors, colonels, and generals, with the addition of the word "medico," meaning doctor.

The estimates for 1894-95 provided for a medical organisation, as follows :—

13 surgeon colonels, 26 surgeon lieutenant-colonels, 55 surgeon majors, 283 surgeon captains, 288 surgeon lieutenants and 2nd lieutenants. Total, 665.

12 accountant majors, 25 accountant captains, 57 accountant lieutenants and 2nd lieutenants. Total, 94. And also for 115 sergeant-majors and sergeants, 42 lance-sergeants, 12 lance-sergeants or corporals for accountant duty, 290 corporals, as attendants and bearers, and 1,840 privates, attendants, and bearers. Total, 2,299.

The military medical corps consists of—

1 military sanitary Inspector-General's Department.  
12 military sanitary territorial "directions" or administrations.

An indefinite number of principal military hospital "directions" or administrations.

Medical officers.

12 sanitary sections or companies.

The military sanitary Inspector-General's Department consists of—

- 1 inspector-in-chief (surgeon major-general).
- 2 sanitary inspectors (surgeon major-generals or surgeon colonels).
- 1 apothecary-in-chief.
- 1 secretary.

Each territorial "direction" or administration consists of—

- 1 surgeon colonel (principal medical officer).
- 1 surgeon lieutenant.
- 1 clerk.
- 1 orderly.
- 3 attendants.

The principal military hospital "directions" or administrations are established by royal decree.

The combatant units have a medical staff as follows :—

Regiment of Alpini : 1 surgeon lieutenant per battalion.

Regiment of infantry or rifles : 1 surgeon captain, 2 surgeon lieutenants. In war, 1 surgeon captain (regimental staff), 2 surgeon subalterns each battalion (battalion staff), 1 corporal (sanitary assistant) each battalion, 4 bearers each battalion. Total, 7 officers, 3 corporals, 12 bearers.

Regiment of cavalry (2 battalions per regiment) : 1 surgeon captain, 1 surgeon subaltern, with regimental staff. In war, 1 surgeon captain (regimental staff, 1 surgeon subaltern per battalion (battalion staff), 1 corporal sanitary assistant. Total, 3 officers, 1 corporal.

Regiment of field artillery corps or divisional (2 brigades) : 1 surgeon captain, 1 surgeon subaltern, with regimental staff.



- Horse artillery regiment (3 brigades and 1 train brigade): 1 surgeon captain, 1 surgeon subaltern, with regimental staff.
- Mountain artillery regiment (3 brigades): 1 surgeon captain, 2 surgeon lieutenants, with regimental staff.
- Regiment of fortress artillery (3 brigades): 1 surgeon captain, 1 surgeon subaltern, with regimental staff.
- Regiment of fortress artillery (4 brigades): 1 surgeon captain, 1 surgeon subaltern, with regimental staff.
- Regiment of engineers (7 brigades): 1 surgeon captain, 1 surgeon subaltern, with regimental staff.

Every regiment, and in case of the Alpini every battalion, has a corporal or lance-sergeant as sanitary assistant, except the regiment of mountain artillery, which has 3.

The *personnel* of each foot medical section consists of :—

—	Officers.	Enlisted.	Civilians.	Horses.
Surgeon captains ... ..	2	—	—	2
Surgeon subalterns ... ..	4	—	—	—
Accountant subaltern ... ..	1	—	—	—
Chaplain ... ..	—	—	1	—
First sergeant or sergeant ...	—	1	—	—
Sergeants or lance sergeants ...	—	2	—	—
Lance sergeants or corporals, sanitary assistants (three of them apothecaries).	—	6	—	—
Lance sergeants, bearers ...	—	3	—	—
Corporal sick attendants ...	—	3	—	—
Corporal bearers ... ..	—	8	—	—
Privates, sick attendants ...	—	14	—	—
Privates, bearers ... ..	—	132	—	—
Attendants (officers') ... ..	—	8	—	—
Total sanitary <i>personnel</i> ...	7	177	1	2
Section of train ... ..	1	25	—	28
4 two wheeled and 8 four- wheeled vehicles.				

The strength of each mounted sanitary section is:—

—	Officers.	Enlisted.	Civilians.	Horses.
Surgeon captain ... ..	1	—	—	1
Surgeon subaltern ... ..	1	—	—	—
Accountant subaltern ... ..	1	—	—	—
Chaplain ... ..	—	—	1	—
First sergeant or sergeant ...	—	1	—	—
Lance sergeant ... ..	—	1	—	—
Lance sergeants or corporals, sanitary assistants (one of them apothecary).	—	2	—	—
Corporal sick attendant ...	—	1	—	—
Corporal bearer ... ..	—	1	—	—
Privates, sick attendants ...	—	4	—	—
Privates, bearers ... ..	—	20	—	—
Attendants (officers') ... ..	—	4	—	—
Total sanitary <i>personnel</i> ...	3	34	1	1
Detachment of artillery train	—	13	—	14
2 two-wheeled and 4 four- wheeled vehicles.				



### WAR ESTABLISHMENT.

With the intendants at army headquarters there are—

- 1 director surgeon colonel (allowed 2 horses).
- 1 surgeon lieutenant-colonel (allowed 2 horses).
- 4 surgeon captains (allowed 1 horse each).
- 4 surgeon subalterns.
- 1 chief apothecary.
- 3 apothecaries.
- 2 clerks.
- 2 officers' orderlies, 15 attendants (officers' servants).
- Detachment of train : 1 sergeant, 1 lance-sergeant,  
5 corporals, 12 lance-corporals and privates, with  
5 vehicles of all kinds, including ambulance and  
forage wagons.

There are 15 field hospitals attached to headquarters, each organised as follows :—

Field Hospital. 200 beds—

- 1 surgeon major or captain (director) allowed  
2 horses.
- 2 surgeon captains (mounted).
- 4 surgeon subalterns.
- 1 accountant subaltern.
- 1 apothecary } civilians.
- 1 chaplain }
- 3 sergeants and lance-sergeants.
- 5 sanitary assistants (2 of them apothecaries).
- 2 corporal sick attendants.
- 2 corporal bearers.
- 18 sick attendants (lance corporals and privates).
- 12 bearers (lance corporals and privates).
- 10 officers' attendants.

- Total 8 officers.  
 52 N.C.O.'s and privates.  
 11 civilians (civilian train).  
 1 four-wheeled vehicle (an omnibus for carrying  
     the subalterns, the apothecary, the chaplain,  
     and, if necessary, the sick).  
 8 two-wheeled vehicles, with 20 horses.

There are also field hospitals with 100 beds, and mountain hospitals of 50 beds, with a proportionately similar *personnel*. The *personnel* and *matériel* of the latter generally consist of 2 surgeons, 1 apothecary, 2 orderlies, 2 N.C.O.'s, 7 hospital orderlies, and 3 bearers. 25 mules carry the equipment in sacks and panniers.

#### HOSPITAL RAILWAY TRAIN.

- 1 train director (surgeon captain).  
 3 surgeon subalterns.  
 2 N.C.O.'s.  
 5 lance-sergeants or corporals.  
 4 officers' attendants.  
 35 privates.  
 1 combination car.  
 35 cars for transport of wounded.\*  
 1 baggage car.  
 1 car for hospital stores, clothing, &c.

- Total 4 officers.  
 46 N.C.O.'s and privates, and  
 38 cars.

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\* Provided with necessary equipment and each supplied with 8 litters. The Italian army uses three kinds of stretchers, a simple, non-collapsible stretcher, made by Guida, who also made the second, or collapsible one. The third kind of stretcher, which is the one that has been longest in use, is one which can be taken to pieces, made by Areno. Guida has built, for mountain transport, a carrying chair, which can also be turned into a stretcher, and which is carried on pack-animals.



280 wounded may be carried in the hospital train. Its enlisted *personnel* is ordinarily drawn from the territorial militia.

Each army in the field has at its disposal 4 transport (railroad) trains for sick and wounded.

With the headquarters of each army corps (2 divisions) there are—

1 principal medical officer (surgeon colonel or lieutenant-colonel, who is allowed 2 horses).

1 surgeon lieutenant.

1 clerk.

1 officers' orderly.

3 officers' attendants.

With each corps, headquarters, and division of infantry, there is a foot medical section, and with each cavalry division a mounted medical section, the constitution of which has been given.

Uniform of Army Hospital Corps similar to infantry, excepting that the badge on the shako is a star with the Geneva cross and a white pompom with the number of the company in red, and the Geneva badge on arm. The men only carry side-arms.

## JAPAN.\*

RESERVE hospitals (base hospitals at home) are established in or out of military garrisons, and are for the reception of patients sent back from the field, as well as for those from regiments of the reserve, and from the garrison. These reserve hospitals are called after the locality in which they are situated, with the addition of the adjective "military reserve," *e.g.*, Hiro Shuna Military Reserve Hospital, or Shimoniseki Military Reserve Hospital.

The organisation of reserve hospitals is as follows :—

- 1 chief (surgeon colonel, surgeon lieutenant-colonel, or surgeon major).
- 2 to 3 medical officers.
- 1 to 4 pharmacutists (officers).
- 1 commissariat officer.
- 3 to 5 chief attendants.
- 1 to 6 pharmacutists (under officers).
- 2 to 8 commissariat (under officers or men).
- 30 to 40 attendants.
- 1 or 2 mechanics.

Total 42 to 70 officers and men (5 to 9 officers, 37 to 61 under officers and men).

Temporary civil medical practitioners and pharmacutists can be made to replace the regular medical

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\* See for fuller information the "Report on the Medico-Military Arrangements of the Japanese Army in the Field, 1894-95," by Surgeon General W. Taylor, from which the details above are compiled.



and pharmaceutical officers where the latter may not be available.

Reserve attendants can be made to replace deficiencies in attendants and pharmacutists (under officers). For every increase of 40 patients over 120, 1 medical officer, 1 chief attendant, and 10 to 13 attendants may be added. The duties of all, except those of hospital chief (who is subject to the commander of the territorial division and responsible for all under him), and the commissariat officer and under officer may be taken by benevolent societies.

The field hospitals on the lines of communication, the Etape medical staff for the governing of the medical service consists of—

- 1 surgeon lieutenant-colonel, or surgeon major as chief.
- 1 surgeon captain or surgeon lieutenant.
- 1 pharmacist (only when there is no reserve medical store).
- 1 under officer.

The chief of the Etape medical staff is under the orders of the Etape commander, and receives orders from the field medical commander respecting medical services. He also acts as medical adviser to the Etape commander. The Etape hospitals are for the reception of patients coming from regiments passing through the station, or from regiments in the Etape station, or from the fighting line, who cannot bear further transport.

#### THE RESERVE MEDICAL PERSONNEL.

To each division is attached medical *personnel* organised at the time of mobilisation under the same regulations as the transport staff. The duty of this reserve medical *personnel* is to serve in the stationary field hospitals.

The establishment consists of—

- 1 chief, a surgeon major, mounted.
- 2 surgeon captains.
- 4 surgeon lieutenants (first or second).
- 1 pharmacist officer.
- 1 commissariat officer.
- 14 chief attendants (under officers).
- 40 attendants (under officers).
- 3 pharmacutists (under officers).
- 8 servants.
- 1 horse boy.

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Total 75 (9 officers, 57 under officers, 9 men, 1 horse.)

The medical officers are taken normally from the active list ; but those from first or second class reserve may be employed. The *personnel* is divisible into two or more parts. If divided the next senior to the surgeon-major becomes chief of the second division, and so on.

#### STATIONARY FIELD HOSPITALS

are as their names denote, and receive patients from the field hospitals. The *personnel* is decided by the Etape commander based on a plan submitted by the chief of the Etape medical staff. The same regulations as for field hospitals apply regarding *personnel*, discipline, and administration. The disposition of stationary field hospitals is carried on according to circumstances.

#### RESERVE MEDICAL STORES.

One reserve medical store is allotted to each division. It is called after the division to which it belongs. The following is the establishment :—



- 1 chief store master (lieutenant of transport), mounted.
- 2 transport under officers (first or second class), mounted.
- 6 transport soldiers (2 shoeing smiths), mounted.
- 1 pharmacist officer (second or third class).
- 2 pharmacutists.
- 2 mechanics.
- 1 clerk.
- 1 servant.
- 1 horse boy.

---

Total 17 (2 officers, 5 under officers, 10 men, 9 horses).

The equipment supplies of reserve medical stores consists of :—

- 8 field panniers (medical and surgical equipment).
- 20 reserve field panniers (medical and surgical equipment).
- Patients' clothing.
- Camp utensils.
- Officers' baggage.

#### TRANSPORT STAFF FOR PATIENTS.

There are two transport staffs attached to the Etape of an army, on mobilisation one staff is to be organised for each division. In organising the staff the chief of the division medical staff is to receive assistance from the chief of the division intendance staff, and also of the transport battalions commander.

The transport staff is named after the division to which it belongs, and is organised as follows :—

- 1 chief (major or captain).
- 2 medical officers (surgeon captain or lieutenants).
- 1 chief attendant (under officer).
- 2 attendants.
- 1 clerk.
- 3 orderlies.
- 3 servants.

---

Total 13

The chief of the staff is under the orders of the Etape commander; but in matters of transport he follows the directions of the chief of the Etape medical staff.

The transport staff location varies according to circumstances, but is chiefly at the most advanced Etape station. Its advance is with the fighting line. The medical officers of the transport staff are not, as a rule, to be made to serve in railways or transport ships. When not occupied they may be required by order of the chief of the Etape medical staff to assist in Etape hospitals. Usually no medical equipment is required in the transport staff, but should it be necessary, articles which cannot be procured locally should be drawn from the reserve medical stores, or store at the base, if it be near. Materials required in patients' railway trains and in ships should be drawn from the reserve medical store or store at the base.

#### FIELD HOSPITALS.

There are six field hospitals to each division. These receive the wounded from the dressing stations or directly from the fighting line, and transport them to the rear, gradually relieving the dressing stations so as to enable the bearer company commanders to advance



or retire without hindrance. Field hospitals are understood to continue or complete the aid given at dressing stations, and are called by the names of their divisions. The *personnel* and equipment of each are divisible into two equal parts. Their positions are fixed by the division commanders. Ordinarily the 1st, 2nd, and 3rd proceed with the first line of the transport, and the 4th, 5th, and 6th with the second line.

The *personnel* of the field hospital is as follows :—

Nos.	Designation.	Officers.	Under Officers.	Men.	Horses.
1	Chief surgeon-major ... ..	1	—	—	1
1	Surgeon captain ... ..	1	—	—	1
4	Surgeon lieutenants ... ..	4	—	—	—
1	Pharmacist ... ..	1	—	—	—
1	Commissariat officer of the intendant.	1	—	—	—
6	Chief attendants ... ..	—	6	—	—
3	Pharmacutists ... ..	—	3	—	—
6	Attendants ... ..	—	6	—	—
34	Orderlies ... ..	—	—	34	—
1	Mechanic ... ..	—	—	1	—
2	Clerks ... ..	—	2	—	—
6	Soldiers as clerks and cooks ... ..	—	—	6	—
1	Transport under officer ... ..	—	1	—	1
3	Transport soldiers (one at least a shoeing smith).	—	—	3	3
38	Carriers ... ..	—	—	38	38
6	Servants ... ..	—	—	6	—
2	Horse boys ... ..	—	—	2	—
116	Total ... ..	8	18	90	44

The surgeon major, surgeon captain, one of the surgeon lieutenants, the pharmacist officer, one of the pharmacutists, the commissariat officer, one of the clerks, and four of the chief attendants must be taken from the active list. The rest may, in cases

of deficiency, be taken from the 1st or 2nd class reserve, the six soldiers being taken from the 2nd class. Ten of the 34 orderlies are to be taken from the hospital orderlies, and the remainder from candidates for orderlies, by the chief of the divisional medical staff, and trained till the day of departure in the garrison hospital. The mechanic is to be taken from the mechanics of the medical staff and hospitals; but in cases of deficiency from the candidates.

The field hospital equipment consists of medical and surgical stores, clothing, reserve clothing, diet materials, cooking utensils, camp utensils, treasure chest, and officers' baggage. There are 38 horses, 2 for field panniers, 4 for reserve panniers, 4 for tents, 13 for clothing, 5 for diet materials, 4 for cooking utensils, 3 for camp utensils, treasure chest, officers' baggage and reserve clothing, and 3 spare horses. The medical and surgical equipment consists of:—4 field panniers, 8 reserve panniers, and 4 tents. Each medical officer carries a case of surgical instruments. Surgeon captains and all ranks above it provide their own. Mounted officers carry the case in their saddle bags, and dismounted in their officers' bag. Two days' portable ration is to be carried by every one of the *personnel*, and one day's ration for each of the *personnel* (uncooked rice) on the reserve horses. For saddle horses, one day's portable ration, and for each of the pack-horses two days' portable ration is to be carried. One day's ordinary food is carried by each horse. Besides one day's portable ration, one day's ordinary food for saddle-horses is to be carried by the reserve horses.

The Medical Staff Corps consists of two parts:—

- 1st. Centre.
- 2nd. Two bearer companies.



The *personnel* of the centre is as follows :—

- 1 captain, called captain of the Medical Staff Corps, who is mounted.
- 2 under officers (1 clerk, 1 superintendent cook).
- 1 surgeon major as chief medical officer (mounted).
- 1 surgeon captain (mounted).
- 6 surgeon lieutenants, mounted (in Guards, 4).
- 1 pharmaceutical officer.
- 3 pharmacutists (in Guards, 2).
- 10 chief attendants (in Guards, 8).
- 26 attendants, under officers (in Guards, 20).
- 1 commissariat officer.
- 1 clerk, under officer.
- 1 transport under officer (mounted).
- 3 transport soldiers (1 at least a shoeing smith) mounted.
- 36 carriers.
- 36 pack-horses (in Guards, 33).
- 2 servants.
- 9 grooms (in Guards, 7).

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Total 104 (*i.e.*, 11 officers, 43 under officers, 50 men, and 49 horses).

The *personnel* of a bearer company consists of :—

- 1 captain of company, who is mounted.
- 1 under officer.
- 2 sub-division commanders (1st class under officers).
- 6 section commanders (2nd class under officers).
- 145 bearers (1 trumpeter, 1 shoemaker), in Guards, 109.
- 1 horse-boy (soldier).

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Total 156, *i.e.*, 1 officer, 9 under officers, 146 men, 1 horse (in Guards, 120).

Each bearer company consists of two sub-divisions, and each sub-division of three sections.

In forming the Medical Staff Corps (the bearer column), the company captain, chief medical officer, 3 medical officers, 1 pharmaceutical officer, 1 commissariat officer, 2 under officers, 4 chief attendants, 1 pharmacist, and 1 clerk should be taken from the active list. The remainder, if not available from the active list, should be taken from the 1st or 2nd class reserve.

Under officers and men of bearer companies are to be taken from the infantry of the 1st or 2nd reserves, who have been trained as bearers, one-third from the 1st class and two-thirds from the 2nd class; and, if possible, one of the under officers of each sub-division should be taken from the active list of those trained in bearer company duties. Division commanders are to arrange for the instruction of two or three men in such duties.

The corps follows the movements of the regiments, &c., in action, and its duties begin as soon as there are wounded, subject to the orders of the divisional commander.

The bearer company acts in two ways, one called the front, and the other the rear service. The former consists in searching for wounded in the field, applying first dressings under the direction of the regimental medical *personnel*, and removing them to the dressing stations; the latter, in the transporting of the wounded from the dressing stations to the field hospitals.

There are three bearers, with one bandage bag to each stretcher. In the event of severe fighting and many wounded, two bearers should carry the stretcher, leaving the third to assist slightly wounded to walk. The contents of the bandage bag are:—1 bottle of Hoffman's liquid, 1 bottle of iodoform, 1 tourniquet, 3 first field dressings, 3 triangular bandages, 3 gauze pads, 1 sponge, 1 case of isinglass plaster, 1 medicine



cup, 1 pair of scissors, 8 roller bandages, 1 paper safety pins, and 1 tray. Bearers must not treat a wounded man as dead without the certificate of a medical officer, and they carry the dead from the fighting line to a fixed place only on special command. As a general rule they are not detailed for that duty until all the wounded have been removed.

### DRESSING STATIONS.

The work of these stations is divided into three parts or sections distinguished by different colours:—

- (a) Receiving and forwarding section, blue ;
- (b) Operating section, white ;
- (c) Dressing section, red.

In (a) the wounded are relieved of their arms and accoutrements, knapsacks, &c., and valuables, of which a list is made and handed over to the under officer acting as clerk.

In (b) all operations which are urgently necessary are performed, and the necessary dressings completed, and precautions taken for safe transport by bearers.

In (c) wounds are dressed, and after this patients are sent to the collecting station. In the dressing station the medical officer is responsible for the wound report, or tally of each wounded man. Slightly wounded men requiring no immediate aid in hospital, and able to walk, should be sent to the transport station (distinct from dressing or collecting station). They are to be collected in one place near, and when more than three assembled, sent under the guidance of the senior of the party to the field hospital.

During the cessation of fighting the *personnel* of the bearer company, not specially employed, should assist in the treatment of the wounded in the field hospitals,

or in sending them to the rear. In this case bearers may be employed, not only for transport, but to assist the attendants.

The Medical Staff Corps (bearer company) equipment consists of medical and surgical materials, reserve clothing, treasure chest, officers' baggage, &c.

	Horses.			
Medical and surgical equipment (field panniers, 2 ; reserve panniers, 4 ; stretchers, 8 ; tents, 2)	...	...	...	16
Reserve clothing	...	...	...	1
Provisions	...	...	...	7
Cooking utensils	...	...	...	6
Remaining equipment	...	...	...	4
Spare ....	...	...	...	2
				—
Total ...	...	...	...	36

The medical and surgical equipment consists of 4 field panniers, 8 reserve panniers, 96 stretchers, 2 tents.

No blankets or patients' clothing is provided in the bearer company, for the nature of the aid is temporary, and patients are at once sent to the field hospitals.

#### MEDICAL ORGANISATION OF CORPS.

The regimental medical service is divided into two—

- 1st. Medical aid in the fighting line, and—
- 2nd. Service in the temporary dressing station.

1st. The *personnel* of the regimental medical services are present in the fighting line and give first aid, passing the wounded to the rear.

2nd. The regimental dressing station (temporary) is to give aid to the wounded from the fighting line



before the "bearer company" begins its work, and, in cases where the latter or field hospital is not available to perform such operations as may be urgently necessary. The equipment for these temporary (regimental) dressing stations is procured from the infantry.

The following is the medical organisation of the different corps and arms of the service :—

Infantry regiments—

- 2 surgeon captains (one may be surgeon lieut.-colonel or major).
- 4 surgeon lieutenants.
- 3 chief attendants.
- 12 ordinary attendants.
- 48 reserve bearers (trained soldiers belonging to the regiment).

Cavalry battalions—

- 1 surgeon captain or major.
- 1 surgeon lieutenant.
- 1 chief attendant.
- 1 ordinary attendant.

Battalion of Artillery—

- 1 surgeon captain or major.
- 2 surgeon lieutenants.
- 1 chief attendant.
- 6 ordinary attendants.

Battalion of Engineers—

- 1 surgeon captain or major.
- 1 surgeon lieutenant.
- 1 chief attendant.
- 2 ordinary attendants.

Battalion of Transport—

- 1 surgeon captain or major.
- 2 surgeon lieutenants.
- 3 chief attendants.

In case of need the numbers can be added to from the station medical establishment, which is not limited in numbers.

Each infantry company has four men instructed in stretcher drill and first aid. They wear, on going into action and at all drills, a red band round the left arm; they are not Red Cross men.

Each battalion has two panniers and four stretchers. Each pannier contains medicines in its upper, and surgical instruments and materials in its lower, part. The two panniers are carried on a pack-horse. Each battalion of artillery has two panniers carried on a wagon in the field, and on a pack-horse in mountain artillery; it has no stretchers.

Each battalion of cavalry, and of engineers, is without panniers and stretchers. If the equipment carried by the chief and ordinary attendants is not sufficient, what is wanted is drawn from the nearest corps having panniers. Regimental medical officers carry a pocket-case of surgical instruments much the same as with us.

Each chief attendant carries a medical and surgical case containing scissors, probe, forceps, a few important drugs, chiefly anodynes, and field dressings; while each attendant carries a bandage bag, containing tourniquet, field dressings, iodoform, Hoffman's liquid, isinglass plaster, &c.

Each officer, under officer, N.C.O., and soldier carries, in a pocket in the left-hand corner of the skirt of his tunic, one first field dressing, which consists of anti-septic gauze, oiled paper, triangular bandage, and one safety pin.

Each regiment should have, besides the equipment already mentioned, bundles of blankets for patients and of camp utensils, *e.g.*, kitchen things, &c.; deficiencies are supplied by application to supply officer by medical officer; indents are to be signed by commanding officer of the regiment or by the captain of the company.



The chief of the medical department at the War Office is, in time of war, the field medical commander, and has as his *personnel* :—

- 1 surgeon colonel or surgeon major.
- 1 pharmacist officer and two clerks.

He administers the whole field medical service and directs and controls the medical service of regiments in the field.

In the army is instituted the Army Medical Staff for administering its medical affairs. It consists of—

- 1 surgeon general.
- 1 medical officer.
- 2 chief attendants (under officers).

The chief of the A.M.S. is subject to the army commander, and controls the medical affairs of the army. Although subject to the army commander, yet, with regard to *personnel* and rules of service he is to receive orders from the field medical commander.

In each division there is a division medical staff—

- 1 chief (surgeon colonel or lieut.-colonel).
- 1 medical officer.
- 1 pharmacist officer.
- 2 chief attendants (under officers).

The chief is subject to the division commander, and controls the medical service of the division.

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## MEXICO.

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THERE is no fixed number for the Medical Corps, but recent regulations show that in peace it shall consist of—(a) medical officers, (b) pharmacutists, (c) veterinary officers, and (d) ambulance service.

For the Military Hospital of Instruction and Practical Military School of Medicine in Mexico the following staff is laid down :—

- 1 director surgeon (colonel).
- 7 medical officers (lieut.-colonels), professors  
of the school, besides their duties as  
surgeons.
- 2 medical officers (majors).
- 1 chief pharmacist (lieut.-colonel).
- 10 candidates of medicine (lieutenants).
- 2 candidates of pharmacy (lieutenants).
- 1 lieut.-colonel administrator.
- 1 1st captain commissary.
- 1 1st sergeant adjutant of commissary.
- 1 dentist (sub-lieutenant).

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Total 27

For the hospital service, sanitary sections, battalions, regiments, and ships of war there are—



1 colonel sub-inspector.  
 10 medical officers (lieut.-colonels).  
 64     "     "     (majors).  
 12     "     "     (1st captains).  
 4 pharmacutists (majors).  
 6     "     "     (1st captains).  
 4 majors administrators.  
 5 1st captains administrators.  
 4 2nd     "     commissaries.  
 5 lieutenants     "

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Total 115

#### THE VETERINARY SERVICE.

5 veterinary medical officers (majors).  
 5     "     "     "     (1st captains).  
 5     "     "     "     (2nd     "     ).  
 4 candidates (lieutenants).

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Total 19

#### COMPANY OF HOSPITAL ORDERLIES.

1 1st captain of infantry.  
 3 lieutenants     "  
 3 sub-lieutenants     "  
 15 1st sergeants.  
 20 2nd sergeants.  
 40 1st class orderlies (corporals).  
 140 2nd     "     "     (privates).

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Total 222

## AMBULANCE TRAIN.

1	lieutenant of cavalry.
1	sub-lieutenant of cavalry.
1	1st sergeant of train company.
1	saddler.
6	2nd sergeants of train company.
1	2nd sergeant farrier.
12	corporals, train company.
12	privates, 1st class, train company.
30	"          2nd   "       "       "

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Total 65

There are with the ambulance train 60 mules and 8 horses.

The titles and ranks of the medical officers, pharmacutists, and veterinary officers in the Mexican army are as follows :—

Coronel sub-inspector ranking as colonel.

Teniente coronel 'médico cirujano ranking as lieut.-colonel.

Mayor médico cirujano ranking as major.

Capitán 1º médico cirujano ranking as 1st captain.

Aspirante á medico cirujano ranking as 1st lieutenant.

(*Aspirante* is a medical cadet or candidate.)

## PHARMACEUTISTS.

Teniente coronel farmacéutico ranking as lieut.-colonel.

Mayor farmacéutico ranking as major.

Capitán 1º farmacéutico ranking as 1st captain.

Aspirante á farmacéutico ranking as lieutenant.



## VETERINARY OFFICERS.

Teniente coronel veterinario ranking as lieutenant-colonel.

Mayor veterinario ranking as major.

Cápitan 1° veterinario ranking as 1st captain.

„ 2° „ ranking as 2nd captain.

Aspirante á veterinario ranking as lieutenant.

Special rewards and pay exist, by Act of Congress, for medical officers who distinguish themselves by gallant deeds in battle, or by scientific work of a meritorious character. Medical officers enjoy the same decorations, retired pay, and other advantages which fall to officers of other branches of the service by army regulations. The Cross of Honour is bestowed for gallantry in the field and for meritorious scientific work.

Surgeons are appointed from the Medical Cadets (*aspirantes*) who have graduated from the National Medical College, and have completed their course of instruction in the Military Hospital of Instruction which is in Mexico City. It has a ward capacity of 300 beds, and suitable lecture and clinical rooms in a separate building. There are also pathological specimens, post-mortem room, &c.

In addition to the instruction given at the National Medical School, which the students and *aspirantes* are required to attend in order to obtain degrees, they are compelled to attend medical and surgical clinics, instruction in transport methods, hygiene, and other subjects pertaining to military medical requirements.

In addition to the Military Instruction Hospital in the city of Mexico, which treats sick and wounded from the various garrisons, there are nine permanent

hospitals at Vera Cruz, Tampico, Mazatlan, Puebla, St. Louis Potosi, Monterey, Matamoras, Guadalajara, and Tepic. There are also temporary hospitals in less important towns. The *personnel* of the hospitals varies according to the size and importance of the commands, but normally each one has one director (lieut.-colonel), one sub-director (major), one pharmacist (major or captain), one executive officer (major or captain), one commissary (captain or lieutenant). The enlisted men belong to the *infirmos* company.

Officers for the ambulance corps are selected from the army on the grounds of special fitness for these duties. Enlistments are voluntary. Sergeants must be able to read and write.

Promotions are by seniority, except in the case of the Surgeon General, which is a promotion by selection. The positions of directors and professors are supposed to be by competitive examinations.

#### MEDICAL STAFF ON A WAR FOOTING.

Heads and officials of the medical staff are to be withdrawn from any posts in other departments they may be occupying, in order to fulfil their duties in the ambulance section and field hospitals that may be formed, &c.

The remaining staff of the ambulance and administration is likewise to be withdrawn from the hospitals, and to be drafted to form the ambulances and medical detachments required by the different divisions that may be constituted. Their places in the hospitals are to be filled by a civil element, engaged for the purpose.



CONSTITUTION OF DIVISIONAL AMBULANCE (*Ambulancia  
Divisionaria*).

*Lieutenant Colonel Surgeon in command.*

Two Sections.

- 1st Section*—4 surgeon majors.  
 4 medical cadets (*aspirantes*).  
 1 2nd officer of ambulance.  
 1 head hospital orderly.  
 6 hospital orderlies of 1st class.  
 12       "       "       2nd class.  
 7 assistant orderlies.  
 2nd sergeant of ambulance train.  
 2 corporals       "       "  
 6 1st class privates of ambulance train.  
 6 2nd       "       "       "       "
- 2nd Section*—4 surgeon majors.  
 4 medical cadets (*aspirantes*).  
 1 3rd officer of ambulance.  
 1 head hospital orderly.  
 6 1st class hospital orderlies.  
 12 2nd       "       "       "  
 7 assistant       "       "  
 1 2nd sergeant of ambulance train.  
 2 corporals       "       "  
 6 1st class privates of ambulance train.  
 6 2nd       "       "       "       "

MATERIAL.

- 2 medical chests.  
 2 surgical chests.  
 2 operating tents.  
 2 hospital tents.  
 2 tents for officers.  
 40 hand stretchers.  
 6 carts for wounded.  
 2 carts for transport.

FIELD HOSPITAL (*Hospital de Campaña*).

- 6 surgeon majors.
- 1 veterinary surgeon major.
- 1 pharmacist captain, 1st class.
- 1       "                       "       2nd class.
- 1 administrative captain, 1st class.
- 1       "                       "       2nd class.
- 1 captain of commissariat, 2nd class.
- 1 lieutenant of commissariat.
- 8 hospital overseers.
- 11 head hospital orderlies.
- 24 1st class hospital orderlies.
- 24 2nd   "               "               "
- 80 stretcher bearers.
- 10 assistants.

AMBULANCE (*Ambulancia*).

- 1 lieutenant of ambulance.
- 1 sub-lieutenant of ambulance.
- 1 2nd sergeant farrier.
- 1 mechanic.
- 1 sergeant, 2nd class, of ambulance train.
- 1 corporal of ambulance train.
- 16 1st class privates of ambulance train.
- 16 2nd   "               "               "               "

## MATERIAL.

- 20 hand stretchers.
- 1 operating tent.
- 1 isolation tent.
- 2 tents for officers.
- 20 hospital tents.
- 2 tents for administration.
- 12 carts for the 26 tents.
- 2 carts for rations and park.
- 1 cooking cart.
- 1 cart with medical and surgical necessities.



The uniform for officers of the medical corps is much the same as that of infantry, with the following modifications :—The collar and cuffs of sleeves and band of cap are of carmine silk velvet, and a gold lace wave around the collar. The collars of the ambulance and executive officers have no border. For enlisted men cloth in lieu of velvet. The *esculapius* is worn braided in gold on the left sleeve of the blouse and dress coat. The officers of the ambulance corps, executive department, and pharmacists wear the *esculapius* on the cuff instead of sleeve and braided in carmine silk. The trousers of officers are ornamented with gold stripes or welts in place of the red cloth welts of infantry. Officers of the ambulance corps and executive departments, red silk welts in place of gold. The sword knob is of carmine silk. The edges of the saddle-cloth, knapsack, and bolsters are trimmed in red cloth. An *esculapius* in gold is worn on the saddle-cloth. Officers of the ambulance corps, the same as medical officers, with the following exceptions :—The buttons, borders, &c., of silver and welts for trousers of carmine cord ; the collar of the dress coat has no border ; the bridles of black leather ; the *esculapius* for medical officers is of silver and gold, the staff of silver ; that for pharmacists consists of a mortar, around which is coiled the viper. The Veterinarians wear the same uniform as the surgeons, except the buttons, trimmings, mountings, borders, stripes, &c., which are of silver. The trousers have two cords on side of red, like the cavalry use. All officers wear blouse, trousers, and cap of grey for fatigue. The dress coat and trousers are made of dark blue, colour of all branches.

## NORWAY.

THE organisation of the Norwegian Army has for its base obligatory military service, which applies equally to everyone.

The medical department of the army is organised on an altogether military scale, whether for peace or for war, and in exact agreement with the other branches of the army. The Director-General of the medical service, who is a general officer (Major-General), is placed under the same conditions in the army as the heads of the other special arms of the service. The army doctors are officers. There are two classes, those on a fixed salary and those who are called out for obligatory military service—that is to say, *vaernepligtige*.

All medical students are called to serve in the medical department, where they put in their military service ; so the entire number of army doctors (officers) required for the army can be placed on a war footing.

*N.C.O.'s, Corporals, and Men.*

There are two similar classes. All the young men allotted to the medical department are there exclusively instructed and drilled ; but the N.C.O.'s on a fixed salary (rate of pay), taken from the N.C.O.'s of the army, are given special instructions in a special course.

For stretcher bearers men are selected who are capable in every essential point. Their classes of drills, &c., are of the same duration as those of young soldiers in the infantry.



The hospital orderlies are taken from men classed in the "auxiliary" service of the ambulance train.

N.B.—*Service auxiliaire* means men who are not up to the physical standard for the combatant ranks.

In the combatant ranks of the army instruction is given by the medical units attached to those corps, to the regimental stretcher bearers, who remain with their companies and are not detached to join the medical department except immediately before a battle.

The *personnel* of the medical department is distributed over the combatant branches and the special companies (units) of the medical department. These latter units comprise :—

#### COMPANIES OF THE MEDICAL DEPARTMENT.

##### *Ambulance.*

Each bearer company comprises —

1 captain, C.O., mounted.

4 lieutenants, 2 mounted.

1 2nd lieutenant of transport detached from the transport corps.

1 sergeant-major.

1 quartermaster-sergeant.

6 sergeants of stretcher bearers.

2 sergeants of hospital orderlies.

10 corporals of stretcher bearers.

2 corporals of hospital orderlies.

1 sergeant (mounted) } detached from transport

1 corporal (mounted) } corps.

2 trumpeters.

96 stretcher bearers.

6 hospital orderlies.

1 saddler

1 tailor

1 shoemaker

4 regimental orderlies

11 drivers

} detached from transport  
corps.

*Field Hospitals.*

The *personnel* is as follows :—

- 1 captain, C.O., mounted.
- 2 lieutenants.
- 1 apothecary.
- 1 army clerk.
- 3 sergeants of hospital orderlies.
- 3 corporals of hospital orderlies.
- 1 transport sergeant (detached from transport corps).
- 6 hospital orderlies.
- 2 cooks.
- 1 regimental orderly } detached from transport
- 9 drivers } corps.

*Lines of Communication.*

- 1 major, C.O.
- 1 lieutenant, A.D.C.
- 6 captains
- 10 lieutenants
- 1 second lieutenant from the transport corps.
- 1 staff clerk.
- 2 clerks.
- 2 apothecaries (assistant surgeons, 1st class).
- 3 " ( " " 2nd " ).
- 1 instrument maker.
- 20 sergeants.
- 24 corporals.
- 60 hospital orderlies.
- 8 cooks (distributed at the different posts and railway convoys at each halting place).

The organisation is the same for the three lines, regulars, militia, and reserve.



*Transport.*

Like the *personnel*, the transport and equipment (*matériel*) are distributed amongst the units of the medical department and the fighting units :—

1 bearer company comprises—

2 surgery carts	} all drawn by 2 horses.
2 baggage carts	
6 ambulance wagons	

The ambulance wagon contains 1 tent, strong linen canvas (hemp) and 2 movable mattresses for the men who are seated and 8 stretchers. The traversers, the canvas, and the slings of the stretchers are carried in the wagon, while the poles are attached to the outside of the wagon by a special mechanism.

The wagon with above and accessories (without the stretchers) weighs about 500 kilos. ;\* it can carry 2 lying down and 1 seated, or 5 seated, or in case of urgency 7.

*Field Hospital.*

The equipment, comprising 50 beds, besides all that is necessary for the establishing and working of the hospital, is carried in—

9 wagons, each 2 horses.

2 surgery wagons, carrying dressings, surgical instruments, apparatus, and prepared dressings.

1 cart for baggage of the hospital staff.

6 wagons for the remaining equipment.

Total weight of each loaded vehicle about 1,020 kilos.

Total weight of entire equipment, including the vehicles, about 10,000 kilos.

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\* 1 kilogramme is equal to  $2\frac{1}{2}$  lbs. avoirdupois.

Except the service equipment allotted to the head-quarter staffs and to the dépôts, the combatant units are furnished with equipment, as follows :—

*Engineers.*

For each company—

- 1 field companion with haversack.
- 2 stretchers.

*Artillery.*

Field artillery for a battalion (6 batteries)—

- 1 ambulance wagon, 4-wheeled.
- 8 stretchers.

For a single battery—

- 1 field companion, with haversack.
- 2 stretchers.

*Mountain Artillery.*

Per battery—

- 1 field companion, with haversack.
- 2 stretchers.

*Garrison Artillery* (= *Artillerie de place*) (*for Coast Defence*).

For each company—

- 1 field companion, with haversack.
- 2 stretchers.

With the equipment allotted to the units of the medical department of the strongholds.



*Cavalry.*

Per regiment—

1 ambulance wagon, 4-wheeled.  
8 stretchers.

For each squadron—

1 pair of cavalry bags, with haversack.

*Infantry.*

For each battalion (of about 800 men)—

1 surgical cart.  
1 ambulance cart.

Each cart has two wheels, and is drawn by one horse ; it admits of a second horse being harnessed in front, if necessary.

There is in each surgical cart five cases containing all the equipment required for the treatment of the sick of the battalion, and for the establishment of a dressing station.

The supply of medicines, surgical instruments, of apparatus and dressings, &c., is sufficient for the wants of the battalion, even if it is detached for a fairly long interval. Total weight of the vehicle loaded is about 500 kilos.

The body of the ambulance cart is arranged in exactly the same way as the ambulance wagon with four wheels ; there is sufficient room for as many wounded as in the wagon, and the same number of stretchers are carried in the same manner as has already been mentioned when describing the ambulance wagon.

Total weight of the ambulance cart loaded (space for tent, mattresses, and other accessories included, but without stretchers), about 320 kilos.

*Transport Corps.*

For company—

1 field companion, with haversack.

2 stretchers.

## DESCRIPTION OF STRETCHER.

The stretcher can be taken to pieces ; it comprises the canvas, the two traverses, and the two poles. The poles are straight, made of pinewood, and sheathed with brass. The traverses are made of plane wood, they have two feet, the intermediate space between which is quite plain (on the *under* surface).

In the traverses there are holes lined with brass to receive the poles, and in the upper border of the traverses, brass studs are placed to hook on the attachments of the canvas.

The canvas is brown sackcloth, very strong. Besides the attachments mentioned above, for the hooking on of the canvas to the traverses, there is also attached to the canvas a pillow-case, which can be stuffed with hay, straw, &c.

Each part of the stretcher is so constructed that it fits any other stretchers, the component parts make up any stretcher with accuracy.

This stretcher is universal, it goes everywhere, whether in the ambulance wagons, or in the railway wagons. By this it avoids the shaking of the wounded by transferring him from one stretcher to another.

The weight of the stretcher is 7.5 kilos. ; it is very strong, and can be handled and set up and taken down with ease.

The railway train service improvised is provided with apparatus for suspending the stretcher after the



French system. It takes up more space, the stretcher being a little larger than the French pattern.

*Establishment of the Lines of Communication of the Medical Department.*

The equipment of these establishments is based on the principle of temporary hospitals, and on the degree (rapidity) of evacuation from the theatre of war. This equipment is kept in store.

*Personal Equipment.*

- Officers.—1 shoulder badge.  
1 dressing case.
- N.C.O.'s.—1 shoulder badge.  
1 portable lantern.  
1 knife.
- Corporals.—1 surgical haversack.  
1 water bottle.  
1 portable lantern.  
1 knife.
- Privates.—1 knife.

The stretcher bearers are still armed with a bayonet; however, this will be replaced by a short billhook, the back of which will be a saw.

Officers and N.C.O.'s carry the sabre.

In addition, all the *personnel* of the medical department are armed with a revolver. In the combatant ranks each individual does not carry a first dressing. Plenty of these dressings are provided in the dressing equipment first dressing station, and a supply is also carried by the *personnel* of the medical department.

PORTUGAL.

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THE staff of military medical officers consists of—

- 1 colonel.
- 6 lieutenant-colonels.
- 9 majors.
- 60 captains.
- 54 lieutenants.

By a recent law (1901) the rank for the admission of medical officers is that of an ensign, who is promoted to lieutenant after one year's service. Vacancies are filled by civil physicians qualified either by the University of Coimbra, or by the medico-surgical schools of Lisbon and Oporto, preference being given after theoretical, practical, and documentary competition before a board of three military medical officers.

The candidate nominated has to practice during six months in one of the permanent hospitals before being admitted to the military medical corps.

Before the organisation of 1899 military medical officers were designated as follows:—Surgeon-in-chief of the army, surgeons of division, surgeons of brigade, surgeons-major, and adjutant surgeons.

The present medical colonel corresponds to the former surgeon-in-chief, and is the head of the medical department in the War Office, which manages all matters connected with the medical, pharmaceutical, and veterinary services of the army, including the administration of military hospitals.



Of the 6 lieutenant-colonels, who were surgeons of division, 4 are chiefs of the service and medical inspectors to the four military divisions, subordinate to the generals of division and to the medical colonel, while 2 are directors of the permanent military hospitals at Lisbon and Oporto.

Of the 9 medical majors (formerly surgeons of brigade, 4 are sub-inspectors to the four divisions, 2 are sub-inspectors of the permanent hospitals, and 3 are directors of the three united hospitals of Belem, Elvas, and Chaves.

The sub-chief of the War Office Medical Department may be a major or captain, and if the former, the sub-director of the permanent hospitals shall be a captain.

The medical captains, lieutenants, and ensigns are appointed to the different corps engineers, artillery, cavalry, infantry, &c., and to the several garrisons and military establishments.

Promotion to the higher ranks is only governed by time of service.

### MILITARY HOSPITALS.

These are either permanent, united, or regimental. The permanent (Lisbon, Oporto) are managed by a director and sub-director, and the medical service is rendered by the medical officers of local regiments. Both have an autonomous existence, and are governed by an administration committee which attends to financial matters, defraying expenses, and rendering accounts.

Regimental hospitals are established in places where barracks, a regiment, or a battalion exists. They are conducted by the medical captains, who are responsible to the administration committee of the regiment.

Medical officers in the hospitals have full power,

and are allowed to prescribe in special cases outside the dietary form.

There are two medical stores in Lisbon, one for clothing, furniture, and surgical appliances under the management of a medical captain; the second for medicines under the management of a major pharmacist. These supply military hospitals under the orders of the chief of the medical department, War Office.

Military medical officers have a perfectly free hand in judging the fitness or unfitness for duty of officers, N.C.O.'s, and privates.

The medical boards at Lisbon and Oporto, composed of three medical officers of high rank, grant sick leave, or recommend officers for superannuation; and also grant leave, retirement, or furlough to privates. In other parts of the country the medical inspector or sub-inspector of the division visits every four months the different regiments, and, with the medical officers of corps forms a medical board for furloughs, but such boards cannot recommend the retirement of officers except by special War Office authority.

The inspection of barracks, hospitals, and general sanitary arrangements rests with the medical inspectors.

The "Companhia de Saude" supplies nurses, clerks, and attendants for the military hospitals. It is not considered sufficient to perform all the duties, and it is therefore necessary in regimental hospitals to employ sergeants, corporals, and privates of regiments. This "Companhia de Saude" undertakes all the work of medical sections in war, except at the relief posts, which is undertaken by the duly instructed bearer companies attached to regiments.



## REGULATIONS FOR THE MEDICAL STAFF ON ACTIVE SERVICE.

*(Servigo de Saude em Campanha.)*

These may be briefly summed up as follows :—The tables give the composition of field hospitals, ambulances, bearer companies, &c.

The staff on the field of battle includes :—

- (1) The staff in the fighting line.
- (2) The dressing stations.
- (3) The ambulance section.
- (4) The field hospitals.

As a rule each division has two dressing stations, one for each brigade, one ambulance post, and one field hospital.

At the beginning of an engagement the stretcher bearers muster at the dressing station in groups of three, with hospital orderly and stretcher to each group.

*Dressing Stations.*—To be 1,000\* to 1,500 metres from the fighting line. Wounded divided into three classes :—(1) Those who can walk ; (2) who can be carried ; (3) whom it would be dangerous to carry. Arms are discharged and sent to rear with wounded in ambulance wagons.

*Ambulance posts.*—To be 2,000 to 3,000 metres from the dressing station and in easy communication with it. Wounded divided into three classes :—(1) slight ; (2) severe ; and (3) those necessitating operation that can only be carried out in the field hospital.

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\* 1,000 metres equal to 1,093½ yards.

*Field Hospitals.*—To be not more than 10 to 12 kilometres\* from ambulance posts.

TABLE I.

	Men.		Horses, &c.		Vehicles.	
	Officers and Staff attached.	N.C.O.'s and Men.	Saddle.	Draught or Pack.	2-wheel.	4-wheel.
<b>HEADQUARTERS OF COMMANDER-IN-CHIEF.</b>						
Head office of medical staff (see Table II).	11	58	14	12	3	1
<b>BAGGAGE TRAIN OF ACTIVE ARMY.</b>						
Four field hospitals (see Table VII)...	28	172	24	112	16	20
<b>DIVISION OF ACTIVE ARMY.</b>						
<i>Headquarters of Division</i> (see Table III).						
Medical staff ... ..	6	57	9	10	2	1
<b>FLYING BRIGADE OF CAVALRY.</b>						
Brigade ambulance (see Table VI) ...	6	29	8	12	5	—
<b>ARMY CORPS (EVENTUAL RESERVE).</b>						
Medical staff (see Table IV) ... ..	7	41	10	12	3	1
Divisional ambulance (see Table V)	16	211	24	68	10	10

\* 8 kilometres equal 5 miles.



TABLE II.

	Men.		Horses, &c.		Vehicles.	
	Officers and Staff attached.	N.C.O.'s and Men.	Saddle.	Draught or Pack.	2-wheel.	4-wheel.
<b>HEAD OFFICE AND MEDICAL STAFF OF COMMANDER-IN-CHIEF</b> ( <i>Direcção Superior E Serviço de Saúde de Commando-em-Chefe</i> ).						
(1) <i>Officers of Medical Staff.</i>						
Director-in-chief (lieut.-colonel surgeon).	1	1	2	—	—	—
Head of secretary's department (captain surgeon).	1	1	1	—	—	—
Assistants (lieut. surgeons) ...	2	2	2	—	—	—
Lieut. surgeons (of reserve) ...	2	—	—	—	—	—
Pharmaceutist ...	1	—	—	—	—	—
Veterinary surgeon (1 major and 1 captain).	2	2	2	—	—	—
Chaplain ...	1	1	1	—	—	—
Total ...	10	7	8	—	—	—
(2) <i>Bearer Company.</i>						
Clerks (1 sergeant, 2 corporals) ...	—	3	—	—	—	—
Hospital orderlies (corporals) ...	—	4	—	—	—	—
Stretcher bearers (corporals and privates).	—	20	—	—	—	—
Servants (privates) ...	—	12	—	—	—	—
Total ...	—	39	—	—	—	—

TABLE II—continued.

	Men.		Horses, &c.		Vehicles.	
	Officers and Staff attached.	N.C.O.'s and Men.	Saddle.	Draught or Pack.	2-wheel.	4-wheel.
(3) <i>Baggage Train and Drivers.</i>						
Staff of drivers (subaltern in command).	1	1	1	—	—	—
Staff of drivers (second sergeant) ...	—	1	1	—	—	—
„ „ (corporals) ...	—	4	4	—	—	—
Cart for dressings ...	—	1	—	2	1	—
„ reserve of fodder ...	—	1	—	2	1	—
Special cart for medicines ...	—	2	—	4	—	1
Cart for baggage, papers, and rations.	—	1	—	2	1	—
Reserve of staff and horses, &c. ...	—	1	—	2	—	—
Total ...	1	12	6	12	3	1
Grand total ...	11	58	14	12	3	1
	69		26		4	

TABLE III.

MEDICAL STAFF FOR HEADQUARTERS OF A DIVISION ( <i>Servico de Saude do quartel General de uma divisão</i> ).						
(1) <i>Officers.</i>						
Head of medical staff (lieut.-colonel surgeon).	1	1	2	—	—	—
Departmental adjutant (captain surgeon).	1	1	1	—	—	—
Lieutenant surgeons (of reserve) ...	2	—	—	—	—	—
Pharmacist ...	1	—	—	—	—	—
Veterinary surgeon ...	1	1	1	—	—	—
Total ...	6	3	4	—	—	—



TABLE III—*continued.*

	Men.		Horses, &c.		Vehicles.	
	Officers and Staff attached.	N.C.O.'s and Men.	Saddle.	Draught or Pack.	2-wheel.	4-wheel.
(2) <i>Bearer Company.</i>						
Hospital orderlies (sergeants) ...	—	2	—	—	—	—
" " (corporals) ...	—	4	—	—	—	—
Stretcher bearers ...	—	32	—	—	—	—
Servants ...	—	6	—	—	—	—
Total ...	—	44	—	—	—	—
(3) <i>Baggage Train and Drivers.</i>						
Staff of drivers (second sergeant) ...	—	1	1	—	—	—
" " (corporals) ...	—	4	4	—	—	—
Cart for dressings ...	—	1	—	2	1	—
" reserve fodder ...	—	1	—	2	1	—
Special cart for medicines ...	—	2	—	4	—	1
Reserve of men and horses, &c. ...	—	1	—	2	—	—
Total ...	6	57	9	10	2	1
Grand total ...	63		19		3	

TABLE IV.

MEDICAL STAFF FOR AN ARMY CORPS (EVENTUAL "RESERVE").						
(1) <i>Officers.</i>						
Head of medical staff (lieut.-colonel surgeon).	1	1	2	—	—	—
Adjutant (captain surgeon) ...	1	1	1	—	—	—
Lieutenant surgeons (1 of reserve) ...	2	—	—	—	—	—
Pharmaceutist ...	1	—	—	—	—	—
Veterinary surgeon ...	1	1	1	—	—	—
Chaplain ...	1	1	1	—	—	—
Total ...	7	4	5	—	—	—

TABLE IV—*continued.*

	Men.		Horses, &c.		Vehicles.	
	Officers and Staff attached.	N.C.O.'s and Men.	Saddle.	Draught or Pack.	2-wheel.	4-wheel.
<i>(2) Bearer Company.</i>						
Clerks (1 sergeant and 1 corporal) ...	—	2	—	—	—	—
Hospital orderlies (corporals) ...	—	2	—	—	—	—
Stretcher bearers (corporals and privates).	—	14	—	—	—	—
Servants ... ..	—	8	—	—	—	—
Total ... ..	—	26	—	—	—	—
<i>(3) Baggage Train and Drivers.</i>						
Staff of drivers (2nd sergeant) ...	—	1	1	—	—	—
„ „ (corporals) ... ..	—	4	4	—	—	—
Cart for surgical dressings ... ..	—	1	—	2	1	—
„ reserve of fodder ... ..	—	1	—	2	1	—
Special cart for medicines ... ..	—	2	—	4	—	1
Cart for baggage papers and rations	—	1	—	2	1	—
Reserve of men and horses, &c. ...	—	1	—	2	—	—
Total ... ..	—	11	5	12	3	1
Grand Total ... ..	7	41	10	12	3	1
	48		22		4	



TABLE V.

	Men.		Horses, &c.		Vehicles.	
	Officers and Staff attached.	N.C.O.'s and Men.	Saddle.	Draught or Pack.	2-wheel.	4-wheel.
<b>DIVISIONAL AMBULANCE.*</b>						
<i>(Ambulancia Divisionaria.)</i>						
(1) <i>Officers.</i>						
Head of ambulance (surgeon major)	1	1	1	—	—	—
Heads of sections (captain surgeons)	1	1	2	—	—	—
Assistants (lieutenant surgeons of reserve).	2	2	2	—	—	—
Pharmaceutists ... ..	8	—	—	—	—	—
Administrative military officer ...	1	—	—	—	—	—
Veterinary surgeon ... ..	1	1	1	—	—	—
Chaplain ... ..	1	1	1	—	—	—
Total ... ..	15	6	7	—	—	—
(2) <i>Bearer Company.</i>						
Hospital orderlies (sergeants) ...	—	8	—	—	—	—
„ „ (1st corporals) ...	—	16	—	—	—	—
„ „ (2nd corporals) ...	—	8	—	—	—	—
Stretcher bearers (sergeants) ...	—	2	—	—	—	—
„ „ (1st corporals) ...	—	4	—	—	—	—
„ „ (2nd corporals and privates).	—	92	—	—	—	—
Servants ... ..	—	24	—	—	—	—
Total ... ..	—	154	—	—	—	—

\* Divisible into two sections.

TABLE V—*continued.*

	Men.		Horses, &c.		Vehicles.	
	Officers and Staff attached.	N.C.O.'s and Men.	Saddle.	Draught or Pack.	2 wheel.	4-wheel.
<i>(3) Baggage Train and Drivers.</i>						
Staff of drivers (subaltern in command).	1	1	1	—	—	—
“ “ (2nd sergeants) ...	—	2	2	—	—	—
“ “ (corporals, 6 acting as orderlies).	—	12	12	—	—	—
“ “ (trumpeter) ...	—	1	1	—	—	—
“ “ (farrier) ...	—	1	1	—	—	—
Large carts for transport of wounded	—	8	—	16	—	4
Light “ “ “ “	—	6	—	12	6	—
Cart for dressings and medicines ...	—	4	—	8	—	2
Carts for carrying tents, &c. ...	—	4	—	8	—	2
“ reserve of medicines ...	—	4	—	8	—	2
“ baggage papers and rations	—	4	—	8	4	—
Reserve of men and horses, &c. ...	—	4	—	8	—	—
Total ... ..	1	51	17	68	10	10
Grand Total ... ..	16	211	24	68	10	10
	227		92		20	



TABLE VI.

	Men.		Horses, &c.		Vehicles.	
	Officers and Staff attached.	N.C.O.'s and Men.	Saddle.	Draught or Pack.	2-wheel.	4-wheel.
AMBULANCE FOR FLYING BRIGADE OF CAVALRY.						
(1) <i>Officers.</i>						
Chief of ambulance (surgeon major or captain).	1	1	2	—	—	—
Assistants (lieutenant surgeon) ...	2	—	—	—	—	—
Pharmacutists... ..	1	1	1	—	—	—
Administrative military officer ...	1	1	1	—	—	—
Chaplain ... ..	1	1	1	—	—	—
Total ... ..	6	4	5	—	—	—
(2) <i>Bearer Company.</i>						
Hospital orderlies (sergeants and corporals).	—	7	—	—	—	—
Servants (corporals and privates) ...	—	9	—	—	—	—
Total ... ..	—	16	—	—	—	—
(3) <i>Baggage Train and Drivers.</i>						
Staff of drivers (2nd sergeant) ...	—	1	1	—	—	—
(corporal) ...	—	2	2	—	—	—
Light carts for carrying wounded ...	—	4	—	8	4	—
Cart for material, baggage, and rations.	—	1	—	2	1	—
Reserve of men and horses ... ..	—	1	—	2	—	—
Total ... ..	—	9	3	12	5	—
Grand Total ... ..	6	29	8	12	5	—
	35		20		5	

TABLE VII.

	Men.		Horses, &c.		Vehicles.	
	Officers and Staff attached.	N.C.O.'s and Men.	Saddle.	Draught or Pack.	2-wheel.	4-wheel.
<b>FIELD HOSPITAL (<i>Hospital moved</i>).</b>						
(1) <i>Officers.</i>						
Manager of hospital (captain or lieutenant surgeon).	1	1	1	—	—	—
Lieutenant surgeons (of reserve) ...	3	—	—	—	—	—
Dispensers ... ..	1	—	—	—	—	—
Chaplain ... ..	1	—	—	—	—	—
Administrative military officer ...	1	1	1	—	—	—
Total ... ..	7	2	2	—	—	—
(2) <i>Bearer Company.</i>						
Hospital orderlies (sergeants) ...	—	3	—	—	—	—
" " (corporals) ...	—	8	—	—	—	—
Servants (privates) ... ..	—	12	—	—	—	—
Total ... ..	—	23	—	—	—	—
(3) <i>Baggage Train and Drivers.</i>						
Staff of drivers (2nd sergeant) ...	—	1	1	—	—	—
" " (corporals) ... ..	—	3	3	—	—	—
Carts for hospital tents ... ..	—	2	—	4	—	1
" huts ... ..	—	4	—	8	—	2
" camp bedsteads ... ..	—	1	—	2	1	—
" bedding ... ..	—	4	—	8	—	2
Cart for dressings and medicines ...	—	1	—	2	1	—
" baggage, papers, and rations ...	—	1	—	2	1	—
" transport of staff ... ..	—	1	—	2	1	—
Total ... ..	—	18	4	28	4	5
Grand total ... ..	7	43	6	28	4	5
	50		34		9	



## ROUMANIA.

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THERE is a special health department under the Ministry of War which deals with the organisation and mobilisation of the sanitary and veterinary services ; the supply of material for ambulances, medicines, and surgical instruments, and management of the health establishments, their *personnel*, and the medical school. At the headquarters of each of the four *corps d'armée* (Craiova, Bucarest, Galatz, and Jassy) is a military hospital for the reception and treatment of officers and soldiers belonging to the various corps suffering from serious illness which cannot be treated in the regimental hospitals. Each hospital is under the superintendence of the chief medical officer of the *corps d'armée*, except the central military hospital at Bucarest, which has a special director of equivalent rank. It is also the centre for medical instruction.

In addition to corps hospitals, there exist in the principal military centres divisional hospitals composed of sections detached from the corps hospital. There exist eight of these, besides three special infirmaries at Zeis, Galatz, and Roman for the treatment of eye diseases. There is also a special establishment for invalid officers at the hydropathic establishment of Govora. The hospital and infirmary service is performed by military medical officers and apothecaries, varying in number according to the importance of the establishment. These are assisted by an administrative staff composed of civilians and military of lower



grades. The *personnel* of these hospitals comprise 70 medical officers and apothecaries, 24 administrative officers, 64 superior employées besides the subordinate establishment and detachments of the "compania sanitara," or bearer companies, of which four exist, one for each *corps d'armée*, as well as a bearer section for the independent division of the Dobrudja. The aggregate strength of these bearer companies in time of war is 2,000 men, with 800 bearers. At each corps hospital is a central dépôt for drugs and surgical instruments, and a chemical and bacteriological laboratory.

There is a medical school attached to the central hospital at Bucarest, where students are lodged and maintained at the expense of the State. The medical school is under the immediate direction of the War Minister. The students are divided into two *classes* and distributed in five *divisions* corresponding to the years of study of the faculties of medicine. Special instruction in military matters, sanitation, hygiene, fencing, riding, &c., is also given to the pupils. The two *classes* of students are: first, students of the faculty of medicine, who have to pass a competitive examination, and second, young men from the preparatory schools at Jassy and Craiova, specially founded for the education of sons of officers who can claim by right admission to the medical school. As to the *divisions*: the students in the first, second, and third year are called military students in medicine, and are considered as under the colours and subject to military laws and regulations. Those of the fourth and fifth year are named battalion doctors of the second class, but remain as students until they obtain the M.D. degree of the university, after which they serve for six years as military medical officers.

Besides the Central Medical School (Bucarest) there are five schools for the training of subordinate members of the sanitary department, one at each of the army:



corps' headquarters, and one at Constantza, in the Dobrudja.

#### BEARER COMPANIES.

The men of the "compagnia sanitaria" are trained in the schools named, as well as one man selected from each company, squadron, or battery in the army. The men selected are taken from the reservists who can read and write, and have to serve six months with the colours before joining the school, where they remain for one year. After a year the mass of the bearer companies are attached to the corps hospitals; the others return to their regiments and are employed in the regimental infirmaries. Promotion to "corporal infirmier" is subject to the successful passing of an examination held by a commission presided over by the chief medical officer of the corps. Six months before expiry of the term of service they undergo another examination, and, if successful, obtain the rank of sergeant and a brevet as "agent sanitaire," which qualifies them for employment as assistant surgeon or hospital assistant in the civil hospitals, as departmental or communal vaccinator, or rural sanitary officer. Apothecaries are selected from those who have taken degrees as such. They are obliged to serve for one year as battalion apothecary, after which, subject to passing a successful examination, they are passed into the reserve; if they fail they are kept with the colours for another three months on half pay.

#### RANKS.

The highest rank obtainable in the medical service is that of medical inspector-general of brigade, who ranks with a brigadier-general. The medical officer of a *corps d'armée* ranks with a colonel. The principal medical officer of a division, apothecary-in-chief, and

principal veterinary surgeon rank with lieutenant-colonels. Regimental medical officers of the 1st class, apothecaries and veterinary surgeons of *corps d'armée* rank with majors. Regimental medical officers of the 2nd class, divisional apothecaries, and veterinary surgeons rank with captains. Battalion surgeons, regimental apothecaries, and veterinary surgeons rank with lieutenants. Battalion surgeons, second class, battalion apothecaries, and squadron veterinary surgeons rank with sub-lieutenants.

### THE MEDICAL AND VETERINARY SERVICES.

These are composed of :—

On the Peace Establishment.	In the Reserve, called out in War.	
3 medical inspectors-general of brigade	....	2
8 medical officers of army corps	....	3
9 medical officers of divisions	....	10
27 medical officers, 1st class, regimental	....	44
24 medical officers, 2nd class, regimental	....	166
10 medical officers, 1st class, battalion	....	113
10 medical officers, 2nd class, battalion	....	6
1 apothecary-in-chief ....	....	—
8 apothecaries, army corps	....	—
20 apothecaries, divisional	....	2
25 apothecaries, regimental	....	75
6 apothecaries, battalion	....	81
1 veterinary surgeon-in-chief	....	—
5 veterinary surgeons, army corps	....	—
22 veterinary surgeons, divisional	....	3
13 veterinary surgeons, regimental	....	64
— veterinary surgeons, squadron	....	15

The *matériel* for complete and well-found ambulances and field hospitals are attached to the four army corps. There are also nine divisional ambulances, as well as



regimental ambulances, and those of the Roumanian Red Cross Society. In war these are organised and officered from the *personnel* of army corps with divisional hospitals, assisted by reserve medical officers called in.

#### WAR ORGANISATION.

In war time the field sanitary department is divided into :—

- (a) The advanced service (*servicial d'inainte*).
- (b) The rear service (*servicial din urona*).

The former comprises all sanitary corps accompanying the army corps in the field. The latter comprises the remaining portions of the army sanitary establishments which do not accompany the army corps. These are not under the command of the generals commanding army corps, but are placed under the director of the communication lines, who is subordinate to the director-generals of railways and of the communications (*étape*), and to the chief or the general staff.

The *advanced service* is divided into four sections : (a) regimental service, (b) divisional ambulance, (c) army corps ambulance, (d) field hospital. These are conducted almost identically with the methods prevailing in other armies on service.

The *rear service* into two groups :—

##### I. Local hospitals—

- Temporary field hospitals.
- Permanent hospitals.
- Auxiliary hospitals (Red Cross)

##### II. Evacuation hospitals—

- Evacuation hospitals.
- Infirmaries at various stations.
- Service of transport.
- Stationary dépôts for stores.
- Convalescent dépôts.

## REGIMENTAL SERVICE.

The medical staff of a regiment of infantry (12 companies) consists of 5 officers, 52 non-commissioned officers and men of the bearer corps, 7 hospital orderlies, 5 horses, 1 wagon provided with canteens, stretchers, and all that is necessary for giving first aid.

A battalion of chasseurs or of engineers (4 companies) has 3 medical officers, 17 bearers, 4 orderlies, and one ambulance wagon (4-horsed).

A regiment of cavalry (4 squadrons) has 3 medical officers, 2 veterinary officers, 8 men of the bearer corps, 29 horses, and 1 ambulance wagon with medical and surgical appliances.

The medical staff of a regiment of divisional artillery is almost the same as for a cavalry regiment.

The headquarters staff of army corps, divisions, divisions of independent artillery, and ammunition columns are all provided with a medical staff proportioned to their numbers.

## DIVISIONAL AMBULANCE.

This is composed of two sections, comprising in all three senior and 24 junior medical and veterinary officers, 190 N.C.O.'s and men of the bearer corps, and hospital orderlies, 111 horses, and 20 wagons, and fourgons, including one of veterinary stores. These ambulances take up a position in rear of the divisional reserve at about 2,000 yards in rear of the firing line, and as near as possible to a road. The medical staff and bearers go to the front, and aid the regimental surgeons in their work, carrying the wounded to the divisional ambulances.



The army corps ambulance has four senior and 24 junior officers, 197 N.C.O.'s and men, 118 horses, 14 ambulance wagons, and fourgons, besides four transport wagons for tents and other *matériel*, and three for medical and veterinary stores. It is placed out of range of the enemy's fire, and on or near the main road. It assists the divisional ambulance. The wounded are divided into two classes, (*a*) those for the field hospital, and (*b*) those who are to be sent to the hospitals of the rear service.

#### FIELD HOSPITALS (*Spitalal mobil*).

These hospitals of army corps are located in a position as near as possible to the army corps ambulance. All buildings when available are utilised. The medical staff consists of four senior officers, 48 juniors, 119 N.C.O.'s and 166 men of the bearer corps, and 166 soldier assistants and hospital orderlies. The carriage consists of 39 ambulance wagons, fourgons, carts, &c., with 218 horses. All available carriage is employed in the transport of wounded, both from the corps ambulance to the field hospital of the corps and also from the latter to the field hospitals of the rear service.

The army corps field hospitals move forward with the army corps.

The horses for the ambulance and field hospitals are provided by the military train.

In time of peace the *matériel* for the formation of ambulances, &c., is kept in dépôt at the headquarters of the four army corps, and of the separate Dobrudja division. Both the ambulances and field hospitals are organised at these centres on mobilisation.

*Uniform.*—Medical officers have a dark blue tunic with black velvet collar and facings, and brass

buttons ; dark blue trousers with two red stripes ; red cap with black velvet band. N.C.O.'s and men of the bearer companies have a dark blue tunic with red facings, white metal buttons, and the Geneva cross on the shoulder straps ; dark grey trousers with narrow red stripe ; dark blue cap with red band.

Badges of rank as for infantry in the case of officers, white for other ranks.

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## RUSSIA.

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The Russian Medical Service\* is organised on the system of dual control, there being a military governor in every large hospital, who is the responsible head.

In peace there is no medical corps in the Russian army existing as an unit by itself. Each combatant unit has a small medical *personnel* belonging to it.

The medical establishment for an infantry regiment of 4 battalions is—

- 1 senior surgeon (surgeon major).
- 4 junior surgeons (assistant surgeons).
- 1 senior dresser.
- 12 junior dressers.
- 1 apothecary.
- 14 dresser pupils.
- 1 hospital sergeant.
- 3 hospital orderlies.

All non-combatants.

Each unit has its own hospital, that of an infantry regiment numbering 16 beds. In addition, there are garrison hospitals for more severe cases in certain of the larger garrisons, with beds for from 150 to 800 men, and to these a medical *personnel*, varying from 4 to 18 medical officers, with the necessary subordinate *personnel*, is attached.

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\* The total of the medical department of the Russian army is given as about 2,808 surgeons, 232 pharmacists, 3,804 dressers, and 3,455 company squadron, or battery dressers, which represents the peace organisation.

From the above, as cadres, are formed all the medical units required on mobilisation, the extra medical *personnel* being taken from the reserve, and the drivers supplied from the reserve of cavalry.

#### REGIMENTAL MEDICAL ESTABLISHMENTS.

Each unit in the field has a medical *personnel*, with the requisite stores and transport attached to it. Taking, for example, an infantry regiment, the medical *personnel* is the same as in peace, except that there are 20 junior and company dressers, and no dresser pupils. The *matériel* comprises stores for a hospital of 16 beds, and, in addition, each dresser carries a dresser's knapsack for first aid, and 32 stretchers are provided. The medical transport consists of—

- 4 1-horsed carts for medical stores.
- 1 2-horsed wagon with stretchers.
- 4 4-horsed ambulance wagons.

Six men per company are trained as stretcher bearers, and when so employed wear the Red Cross badge on their left arm, but otherwise take their places in the ranks.

The medical arrangements in other units are of a similar nature.

In action the regimental medical *personnel* form advanced dressing stations to which the wounded of the regiments are brought in, and in which their wounds are attended to and first aid applied.

When troops are halted, a regimental hospital is organised.

#### SANITARY DIVISIONS.

To each active or reserve infantry division in the field is attached a "sanitary division," which forms



part of the divisional supply and transport column, and consists of—

- 1 divisional hospital.
- 2 mobile field hospitals.

The “divisional hospital” corresponds to the British “bearer company”; the “mobile hospital” to the “field hospital.”

To each of the rifle brigades of the line is attached a brigade hospital, corresponding to the “divisional hospital” of an infantry division.

#### DIVISIONAL HOSPITALS.

The work of the divisional hospital in action is to form a main dressing station, to search for and bring in the wounded from the field, or the advanced dressing stations, to it, and to co-operate with the troops in despatching the wounded to the field hospitals told off to them. The main dressing station is marked by day by two flags (one national and one bearing the Red Cross), and at night by lanterns.

The composition of the divisional hospital is as follows :—

- 1 divisional surgeon.
- 4 other surgeons.

—  
Total 5 medical officers.

- 1 officer in charge of—  
bearer company and hospital.
- 1 hospital overseer (official).
- 3 dressers.
- 1 apothecary dresser.
- 1 veterinary dresser.
- 2 clerks.
- 22 hospital assistants.
- 2 transport under officers.
- 37 transport drivers.

Bearer company—

- 1 sergeant-major.
- 4 senior under officers.
- 12 junior under officers.
- 200 privates.

---

Total 285 N.C.O.'s and men.

Vehicles—

- 8 4-horsed ambulance wagons.
- 1 4-horsed wagon for tents.
- 15 2-horsed wagons for stores.
- 3 1-horsed medical store carts.

---

Total 27 vehicles.

Horses—

- 2 riding, for officials.
- 2 riding, for N.C.O.'s.
- 69 draught.
- 5 spare.

---

Total 78 horses.

Each hospital is supplied with 1 special and 50 ordinary stretchers, 10 boxes each with 200 sets of bandages, 50 lanterns, and 50 bandaging knapsacks (1 of each per stretcher), 4 dressing tents, 2 operating tables, medical stores, food, &c.

### RIFLE BRIGADE HOSPITALS.

The work of a rifle brigade hospital is as has been described for a divisional hospital.

Its composition is—

- 1 brigade surgeon commanding.
- 3 other surgeons.

(8975)



## Officials—

- 1 hospital overseer (commanding bearer company).
- 1 assistant.
- 21 non-combatant medical subordinates.
- 1 bearer company of 141 N.C.O.'s and men.
- 32 transport N.C.O.'s and men.

## The vehicles consist of—

- 8 2-horsed ambulance wagons.
- 15 2-horsed store wagons.
- 2 1-horsed medical store carts.

—  
Total 25 vehicles and 56 horses.

The material carried is similar and proportionate in quantity to that carried in a divisional hospital.

## MOBILE FIELD HOSPITALS.

The mobile hospital forms the third line of medical assistance, and each affords accommodation for 10 officers and 200 men. In action their position is selected by the divisional surgeon, and to them are brought the wounded from the main dressing stations. After an action they are emptied, and follow their division as soon as possible. In action they are marked by flags as for a main dressing station.

The establishment of a mobile field hospital is as follows :—

- 1 senior surgeon.
- 3 surgeons.
- 1 surgeon in charge of pharmacy.
- 1 hospital overseer.
- 1 assistant overseer.
- 1 accountant.
- 1 chaplain.

—  
Total 9 officials.

- 7 dressers.
- 2 apothecary dressers.
- 1 veterinary dresser.
- 1 sacristan.
- 3 clerks.
- 1 sergeant-major.
- 1 quartermaster-sergeant.
- 4 privates (non-combatants).
- 59 hospital attendants.
- 2 transport under officers.
- 26 transport drivers.

---

Total 107 N.C.O.'s and men.

- 4 Sisters of Mercy, for whom a carriage, 4-horsed, is provided.

Vehicles—

- 2 4-horsed wagons.
- 19 2-horsed wagons for stores, &c.
- 4 1-horsed carts for medical stores.

Total 25 vehicles.

Horses—

- 4 riding, for officials and under officers.
- 50 draught.
- 3 spare.

---

Total 57 horses.

The stores of a mobile hospital comprise bedding and hospital clothing for 10 officers and 200 men, 210 bedsteads, 105 small tables, 40 stretchers, 3 large tents for 20 men, and the necessary medical and food stores.

The total strength of a divisional sanitary division is therefore—



—	Officers.	Officials.	N.C.O.'s and Men.	Horses.	Carriages.
1 divisional hos- pital.	1	6	285	78	27
2 mobile field hos- pitals.	—	18	214	114	50
Total ... ..	1	24	499	192	77

## OTHER MEDICAL FORMATIONS.

*Mobile Field Hospitals.*

In addition to the two mobile field hospitals included in the sanitary division of each infantry division, there are mobilised by each active infantry division two mobile field hospitals, giving 96 in all, for general duty. Their composition is precisely similar to that of the others, and they are disposed of as required by the staff of the army to which they are attached.

*Reserve Field Hospitals.*

These are established at points on the lines of communication, as may be required, 240 of them in all being maintained. They have no transport, their *personnel* and stores being forwarded by rail, boat, or by requisitioned carriage. Their composition is the same as that of a mobile hospital less the transport *personnel*, and each has—

- 5 surgeons.
- 5 officials.
- 4 Sisters of Mercy.
- 80 N.C.O.'s and men.
- 5 wagons.

*Military Sanitary Convoys.*

These are mobilised for the transport of the wounded and sick from the battlefield to the rear, and are in number 20. They are disposed of as required by the staff of the army. The establishment of each is as follows :—

- 1 field officer (combatant) in command.
- 2 surgeons.
- 3 dressers.
- 1 apothecary dresser.
- 1 veterinary dresser.
- 1 commissary.
- 2 clerks.
- 19 hospital attendants.
- 3 transport under officers.
- 68 transport drivers.

---

Total 98 N.C.O.'s and men.

2 Sisters of Mercy.

Vehicles—

- 27 4-horsed ambulances.
- 1 4-horsed kitchen wagon.
- 7 2-horsed store wagons.
- 1 1-horsed medical store cart.

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Total 36 vehicles.

Horses—

- 4 riding.
- 127 draught.
- 6 spare.

---

Total 137 horses.



*Field Dispensaries.*

The field dispensaries supply the divisional and field hospitals with all the medical and surgical stores they require. Seven in all are mobilised, and they are distributed as required. Each is provided with a supply equal to four months' requirements, and has a *personnel* of—

1 officer in charge.  
2 other officials.

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Total 3 officials.

3 apothecary dressers.  
1 clerk.  
17 non-combatant privates.

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Total 21 N.C.O.'s and men.

When required to move, transport is furnished under the orders of the army hospital inspector.

*The Medical Service in the Field.*

It will thus be seen that, as in the British army, the medical service of Russia with the army of operations is divided into the medical *personnel* attached to the various units, the "divisional hospitals," which correspond to our bearer companies, and the field hospitals. On the lines of communication are the immobile (stationary) field hospitals, the detachments of weakly men, the sanitary convoys, and the field medical store depôts. In the home territory are the permanent, fortress, and local hospitals. The military medical service is aided and supplemented by the Red Cross hospital establishment.

## UNIFORMS.

The regimental medical establishments. The surgeons wear dark green tunics and trousers, with cuffs and collars of the same colour, with scarlet piping. The forage cap is dark green, with a dark green band and scarlet piping. Their shoulder pieces are narrower than those of combatant officers, and are lined with green with silver lace. The subordinate *personnel* wears the uniform of the regiment.

*For Divisional Hospitals.*

*Uniform and Arms.*—The uniform worn by the men is the same as that of the remainder of the divisional supply and transport column, which is the same as that of the first regiment of the division, with the divisional number on the shoulder strap. The transport drivers have hatchets; the remaining *personnel* is unarmed. Except the transport drivers all wear the Red Cross badge on the left arm.

*For Rifle Brigade Hospitals.*

*Uniform and Arms.*—Rifle uniform is worn by the men with the brigade number and **J** (*lazaret*) on the shoulder straps. Otherwise, as given above for the *personnel* of a divisional hospital.

*For Mobile Hospitals.*

*Uniform and Arms.*—The uniform is the same as that of the 4th regiment of an infantry division, with the number of the hospital on the shoulder strap, their numbers running through the army. The arms are the same as in the divisional hospital, and the Red Cross badge is worn in the same way.



SERVIA.

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THE sanitary organisation of the Servian army is under the superintendence of the head of the sanitary section of the Ministry of War, one of the principal military medical men, with the rank of colonel, who superintends all the arrangements.

A chief of the sanitary staff (*referendaire sanitaire*) who acts under the instructions of the above-mentioned chief of the sanitary department of the Ministry of War is attached to each division. He is charged with the direction of the sanitary staff of the military hospitals and ambulances.

The medical service in the military hospitals and in the Servian army generally is carried on by medical officers (*officiers de sante*) and orderlies (*infirmiers*).

There is in each regiment a medical officer charged with the sanitary service of the troops, who superintends the ambulances in which only slight cases of illness are treated. The more serious cases are sent to the military hospitals, which are divided into two sections, permanent and provisional hospitals. The permanent hospitals are established in towns, e.g., Belgrade, Nisch, which are the headquarters of a division (one in each town), and there are provisional hospitals in the other less important garrison towns. Every permanent as well as provisional hospital is under the direction of a military medical officer, who is also at the head of the sanitary staff of the hospital.

Ambulances and military hospitals are established on the basis of five beds to each hundred men of the troops for which they are set apart ; they are provided with all instruments and necessary appliances.

Servian military medical officers are chosen from among medical students who have been sent abroad at the charge of the Minister of War to complete their studies, by preference to Paris, Vienna, or St. Petersburg. The Servian military medical men are health officers, and enjoy all the rights and honours enjoyed by officers of the same rank in the army.

According to the last law on the organisation of the army, officers of health remain for  $11\frac{1}{2}$  years in the inferior grades, after which they pass their examination for the grade of major and become superior officers of health. The highest grade to which they can attain is that of colonel.

The service in ambulance and military hospitals is carried on by orderlies, who are recruited for two years' service, they must be able to read and write, and must be of good constitution. All those who distinguish themselves by their zeal in the service, and who after two years' regular duty remain in it, are promoted to the grade of corporal and afterwards to that of sergeant.

Each division includes an ambulance company which instructs its recruits for the service of orderly (*infirmier*).

The service of military pharmacies is carried on by military chemists who must be master chemists. There are two depôts for sanitary and chemical stores in Belgrade which provide for the entire sanitary service of the army.

The matter of hospitals and ambulances in war is at present under consideration,\* but at present there

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\* Further information, when decisions have been arrived at, may be furnished at a later period.



are five sanitary companies, one in each divisional district. At each divisional headquarters there are divisional depôts for medical stores.

The uniform of the medical service is similar to the infantry, but with brown plume to kepi, brown collar to tunic, and white metal buttons ; arm badge with Geneva Cross.

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## SPAIN.

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THE military hospitals, both in peace and war, are directed by chiefs of the military sanitary corps (*cuero de sanidad militar*) who have command of the establishment, charge of the sick, and arrange for drugs, instruments, and all hospital requisites.

The staff of each hospital consists of—

- (1) Director.
- (2) A deputy director.
- (3) Visiting medical officers.
- (4) Apothecaries.
- (5) Soldiers\* (sanitary orderlies) and nursing orderlies of the brigade of the military sanitary troops.

The director has authority over both the military and civil staff, also over all officers temporarily or permanently employed, and over the patients; in short, has equal authority with a colonel, and is directly responsible for the discipline and government of the establishment.

The deputy director has visiting and inspectorial duties connected with the hospital, *e.g.*, supervision over the museum, library, meteorological observations, and the duties of the staff subordinate to him.

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\* There is a distinction between the sanitary and nursing orderlies; the first are "*sanitarios practicautes*," the second "*enfermeros*." Each is separately named.



There are medical officers of "clinics" responsible to the director. The number of the sick of each clinic is regulated so as not to exceed 40 surgical, 50 medical, and 67 syphilitic cases. The medical officers of clinics visit the hospital morning and evening at fixed hours.

The subordinate staff perform duty in the wards under the medical officers.

There is a consulting board of the hospital, composed of the director, deputy director, the chiefs of clinics, and pharmaceutical officers; there is also a secretary of junior rank. All have a vote, and meetings take place twice a month, or at extraordinary times when the director considers it advisable. This board recommends improvements in hygiene, medicaments, sanitary materials, &c., for the approval of the superior board of the section of military health of the Ministry.

Laboratories for analysis and diagnosis are in course of formation, divided into five sections: photography and micro-photography, micrography and clinical bacteriology, urology, radiography, electro-therapy, and all matters connected with disinfection of military buildings.

There is a military medical academy where special study on subjects associated with military service is undertaken.

A sanitary park furnishes materials to hospitals and replenishes district parks.

A central laboratory works up medicaments in various forms, prepares antiseptics, &c. Finally, the Institute of Hygiene is the chief centre of teaching.

The numbers in the various ranks of the military medical corps with the titles and corresponding military ranks of the medical officers are as follows:—

Inspectores de 1ª clase (generals of division)	2
Inspectores de 2ª clase (generals of brigade)	9
Sub-inspectores de 1ª clase (colonels) ....	20
Sub-inspectores de 2ª clase (lieut.-colonels)....	40
Medicos mayores (majors) ....	234
Medicos primeros (captains) ....	214
Medicos segundos (lieutenants) ....	96
Total ....	615

APOTHECARIES (*Seccion de Farmacia*).

Inspectores de 2ª clase ....	1
Sub-inspectores de 1ª clase ..	3
Sub-inspectores de 2ª clase ....	3
Farmaceuticos mayores ....	11
Farmaceuticos primeros ..	34
Farmaceuticos segundos ....	41
Total ....	93

FIELD SERVICE.

The field medical service is directed and performed by the chiefs and officers of the military sanitary corps, under the authority of the general officer commanding-in-chief, by the requisite staff of the military administration corps, clergy, ambulances, stretcher bearers, railways, ships, &c., and voluntary aid societies.

The *personnel* of the headquarters staff of the army of operations is composed of :—

- 1 medical inspector, 1st class (director-in-chief).
- 1 medical sub-inspector, 1st class (deputy-director).
- 1 principal secretary (medico mayor).
- 1 assistant secretary (captain).
- 1 principal apothecary.



With the number of medical officers and rank and file of the sanitary brigade appointed to its ambulance.

### ARMY CORPS.

The *personnel* of an army corps consists of :—

- 1 medical sub-inspector, 1st class.
- 1 secretary (medico mayor) (major).
- 1 apothecary.

With the number of officers, rank and file of the sanitary brigade belonging to the ambulance of its headquarters staff.

### *Divisions.*

The *personnel* of a division is composed of :—

- 1 medical sub-inspector, 2nd class, who is chief and director of the divisional ambulance.
- 1 medical officer, secretary.

### *Brigades.*

The *personnel* of a brigade consists of 1 medico-mayor (major), who is principal medical officer of the brigade, and of the corresponding ambulance section.

### *Battalions.*

The staff of a battalion consists of 2 medical officers; and in cavalry and artillery one more, if possible.

The subordinate staff of each army corps is composed of two divisionary companies of sanitary orderlies (*sanitarios practicantes*), two companies of nursing orderlies (*enfermeros*), and two sections of the mounted ambulance (*seccion montada de Ambulancia*).

The divisional ambulance consists of 1 medical sub-inspector, 2nd class (director), and as many medico-

mayors (medical officers of major's rank) as there are sections of it, and 4 medical officers.

#### FIELD HOSPITALS (*Hospital de Campana*).

The field hospital is furnished with the medical and apothecary staff fixed by the principal medical officer of the army corps, and, besides, has a commissary, an official as administrator, a chaplain, a storekeeper, a steward, and a cook.

#### EVACUATION HOSPITALS (*Hospitales de Evacuacion*).

Each has one medico-mayor (medical officer of major's rank), who is director, and is otherwise organised as a field hospital.

#### CONVALESCENT DEPÔTS (*Depositos de Convalecientes*).

The *personnel* of these is distinct from the military sanitary corps. They are appointed by the military authorities, and are in charge of garrison medical officers.

The inspector-general is responsible for the sanitary service of the army, and directs it.

The principal medical officers of army corps, divisions, and brigades, &c., are responsible for and direct the medical service of their respective corps, divisions, and brigades when working separately.

The deputy inspector directs the formation of field hospitals and hospitals of evacuation.

The chiefs of the sanitary corps have power to utilise the staff and medical officers of corps for ambulances and hospitals if necessary under special circumstances.



## FIRST LINE.

The medical service in the line of combat has the following equipment:--Stretchers of the corps (*camillas de los cuerpos*), leather saddle bags (*bolsas sanitarias*) containing dressing case, bandages, splints, tourniquets, &c., &c., field haversacks of the battalion (*mochilas de batallon*), and medical and surgical panniers (*botiquines de cirugía*).

In case any of the above cannot be carried, the articles necessary shall be selected, and these may be supplemented by cacolets and ambulance carts when the nature of the country permits.

## SECOND LINE.

The divisional ambulance, which is to be taken as an example of medical aid in the second line, is divided into as many sections as there may be brigades constituting the division. It is organised according to the action contemplated, forms part of the medical service, and is utilised as special tactics require.

## THIRD LINE.

The medical aid of the third line is furnished by field and stationary hospitals, which are subject to the usual regulations for field service. They receive convoys of sick. Convoys are formed for the transmission of sick and wounded from the field and evacuation hospitals to stationary hospitals, so that the sick and wounded may receive special care.

### VOLUNTARY AID SOCIETIES (*Sociedades de Socorro y Asistencia Privada*).

These societies work under regulations approved by the War Ministry, and are under obligation not to withdraw until the authorities free them. They are under compulsion to submit absolutely to military authority. A military medical officer, deputed by the military authorities, is in charge of the medical attendance and sanitary establishments founded by these societies. The staff and equipment of these societies are distinct from the military medical service.

The movements are indicated by the military authorities. When an important action is foreseen, the sites on which the voluntary aid societies must work are fixed by the military authorities. After the fighting is over, these societies may be called to the field of battle to aid the military medical service in carrying the wounded or burying the dead.

### BRIGADE OF MILITARY SANITARY CORPS.

Each division has in reserve a divisional sanitary section, composed of mounted troopers (ambulances) and infantry (service of field hospitals). There exists besides a sanitary *personnel* on foot attached to line of communications and stationary hospitals. Another sanitary *personnel* is destined for the withdrawal of sick and wounded by means of hospital trains and hospital ships (*ambulancias maritimas*). The number of orderlies (*soldados sanitarios*) of the divisional section is fixed according to the forces constituting the division, so as to help to remove and aid the calculated number of sick and wounded.



# THE PERSONNEL OF THE BRIGADE OF SANITARY TROOPS.

The following is the strength :—

1	sub-inspector, 1st class, chief (rank of colonel).
2	sub-inspectors, 2nd class (rank of lieutenant-colonel).
2	medical officers (rank of majors).
11	medical officers (rank of captains).
24	medical officers (rank of lieutenants).
46	sergeants.
150	corporals.
4	trumpeters.
339	sanitary orderlies.
200	nursing orderlies.
140	cart drivers.
1	shoeing smith.
1	blacksmith.

N.B.—There is a distinction between the sanitary orderlies (*sanitarios practicantes*), and the nursing orderlies (*enfermeros*).

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Total 881

The number is increased when mobilisation takes place by having recourse to the reserves.

# SUMMARY OF EQUIPMENT IN THE FIELD FOR A DIVISION.

	Company.	Squadron.	Battalion.	Regiment.	Brigade Ambulance.	Divisional Ambulance.
Packets of individual field dressing...	260	160	1,040	640	—	—
Bag of needfuls for first aid ...	2	—	8	—	8	8
Saddle bags of medical necessities...	—	2	—	8	4	4
Field companions ...	—	—	1	—	2	2
Ambulance saddle bag ...	—	—	—	1	2	2
„ panniers ...	—	—	1	1	1	1
Reserve panniers ...	—	—	—	—	10	10
Field stretchers ...	—	—	—	—	50	50
Bearing seats ( <i>sillas suecas</i> , i.e., <i>angüiz</i> ) ...	—	—	—	—	—	8
Cacolets ( <i>artolas</i> )* ...	—	—	—	—	—	8
Sterilizing filter ...	—	—	1	1	—	3
<i>On Wheels.</i>						
Carriage for removing the wounded	—	—	1	1	—	8
Wagon, mixed, surgery and pharmacy	—	—	—	—	—	2
Carts for luggage ...	—	—	1	1	—	2
Wagons for tents ...	—	—	—	—	—	4
„ for field hospitals ...	—	—	—	—	—	1½
Ambulance train, one for each army corps.	—	—	—	—	—	—

\* See, for further information regarding medical equipment, the Army Medical Report for 1897, "Notes on the Medical Department of the Spanish Army," by Major W. G. Macpherson, R.A.M.C.



SWEDEN.

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THE general conduct of military hospitals in Sweden may briefly be stated as follows :—

The management of hospitals, both military and naval, rests with the chief army surgeon, under the superintendence of the directors of the medical service.

The chief army surgeon works out, in consultation with the chief of the general staff, the surveyor-general, and the head of the naval staff, a plan, in time of peace, for the necessary measures and provisions ensuing on mobilisation of both the military and naval medical staffs, and reports such measures to the Government as are necessary to facilitate the execution of the plan formulated. He also keeps himself in constant communication with the army medical officers serving under him and informs these, and dispensing officers, of the conditions of hospitals in the country, the addition of new hospitals, the approximate number of beds available in the hospitals, &c., and also meets propositions made by general officers as regards hospital matters.

To the chief army surgeon (principal medical officer) are attached :—

- 1 surgeon.
- 1 commissary.
- 1 veterinary surgeon.
- 1 assistant surgeon.
- 2 assistant secretaries.

The chief army surgeon also has the superintendence over the general hospital reserve stores common to both army and navy, and also veterinary stores. From these stores are supplied the army and navy

hospitals in proportion to the material used by medical and veterinary departments. He communicates to his deputy divisional surgeons all orders concerning new hospitals or extensions necessary to those already existing; he also consults and works with the president of the executive committee of the "Red Cross" regarding the use, in the most profitable manner, of the staff, materials, and hospitals which this institution places at the disposal of the military medical department.

The duties of medical officers and assistant medical officers in the garrison hospital at Stockholm may be summed up as follows :—

The medical staff is presided over by a principal medical officer, a second as deputy surgeon, and six other medical officers. The regimental surgeon of the Svea\* transport battalion is the principal medical officer of the hospital, presides over one of its divisions, and has authority over the whole staff of the hospital, as well as over all the sick. He is immediately under the directors of the medical department, and is responsible for details of medical attendance on the sick, and for the efficient performance of the duties of his subordinates.

A medical officer is appointed as orderly medical officer for 24 hours.

The deputy to the principal surgeon is a battalion surgeon appointed from the Svea transport battalion, and presides over one division of the hospital, and has authority over the staff serving under him and over the sick. He is responsible to the principal surgeon, and keeps the latter informed of every matter of importance occurring in his division. He, with the assistant medical officers and N.C.O.'s, instructs students in the hospital.

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\* "Svea" is the name of the tutelary Goddess of Sweden. The Svea battalion is a guard corps occupying in Sweden a position analogous to, say, our Grenadier Guards. The word "Svea" forms part of the official style and designation of the corps.



The chief medical officer and his deputy are allowed six weeks' leave annually, and the former can grant eight days' leave to the staff under him.

The assistant medical officers, limited to six at the garrison hospital at Stockholm, perform the usual duties assigned to them. They are appointed for a period of six months, from 1st April or 1st October.

These assistant medical officers do not belong to the corps of field surgeons. They are granted only a week's leave by the chief medical officer, and can obtain 24 hours' leave through their divisional chief. If these assistant medical officers give proof of skill and industry, they qualify for vacancies in the corps of field surgeons.

In the fortress at Karlsborg a garrison medical officer is appointed who is the regimental surgeon of the Göta transport battalion. He is under the commandant, and has the direction over medical attendance in the fortress, and supervises the general hygienic conditions. He has authority over the staff working under him.

The battalion surgeon of the Vaxholm Artillery Corps serves as medical officer at the fortress of that name and Oskar Frederiksborg.

The organisation of the medical service in the field of the Swedish army is as follows :—

The Swedish army comprises divisional troops and one cavalry division.

The direction of the army medical service in the field is entrusted to a principal medical officer (*médecin inspecteur*).

The *personnel* of the headquarter staff (*quartier général de l'armée*) includes—

The principal medical officer, mounted.

2 surgeon majors, 2nd class, or 1 surgeon major, 1st class, and 1 surgeon major, 2nd class, all mounted.

2 clerks.

3 corporals, hospital staff, of whom 2 are mounted and provided each with a pair of surgical saddle bags.

1 mounted orderly.

1 corporal, mounted, in charge of transport.

4 drivers.

2 horse holders, mounted.

1 orderly, personal for principal medical officer.

1 cook.

There are 9 saddle horses and 8 draught horses, 1 surgery wagon, 1 supply wagon, 1 general wagon, and 1 cart.

To the headquarter staff is attached a field hospital for 20 sick or wounded, under the command of a mounted N.C.O. (hospital staff). The *personnel* comprises :—

1 assistant surgeon.

1 corporal (hospital staff).

3 privates (hospital staff).

2 drivers.

1 cyclist.

1 fatigue man.

The *matériel* is carried on 2 field hospital wagons drawn by 2 horses.

To the headquarter staff of an army division the following *personnel* of the medical service is attached :—

1 principal medical officer, 2nd class divisional medical officer, mounted.

1 surgeon major, 1st class (assistant or deputy), mounted.

1 commissariat officer.

1 clerk (army).

2 corporals (hospital staff), 1 is mounted and equipped with a pair of surgical saddle bags ;



the other is provided with a field companion, and is given charge of medical canteens Nos. 1 and 2, which are carried in a requisitioned conveyance.

1 mounted orderly.

2 drivers.

1 horse holder, provided with a pair of surgical saddle bags (Pattern No. 1).

1 cook.

There are 5 saddle horses and 4 carriage horses, 2 for a supply wagon, and 2 for the conveyance to be requisitioned for.

A division of the army is divided into several groups :—

- (a) 2 infantry brigades (4 regiments, 12 battalions).
- (b) 1 cavalry regiment (4 squadrons).
- (c) Divisional artillery, formed of 2 groups each of 3 batteries.
- (d) A field company of engineers, with a pontoon section and sometimes a telegraph section.
- (e) Ambulance (bearer companies).
- (f) 2 ammunition columns for infantry and 2 for artillery.
- (g) 4 field hospitals.
- (h) A commissariat detachment, consisting of 4 sections of supply, a field bakery, a field butchery.
- (i) A mobile remount dépôt.

#### ARMY DIVISION.

The details of the *personnel* and equipment of the medical service of an army division is as follows (see Table) :—

PERSONNEL AND MATÉRIEL OF THE MEDICAL SERVICE FOR A DIVISION OF THE ARMY.

(To face p. 168.)

	PERSONNEL.						HORSES.				CARRIAGES.						EQUIPMENT.								
	Officers.	Medical Officers.	Chaplains.	Officers, Commis-sariat.	N.C. Officers.	Privates.	Total.	Saddle.	Draught.	Reserve.	Total.	Wagons for Medi-cal Department.	Transport Wagons.	General Service Wagons.	Supply Wagons.	Requisitioned Wagons.	Total.	Surgical Haver-sacks.	Field Companions.	Surgical Bags.		Medical Car-rens.		Stretchers.	Pack Saddles.
																				I.	II.	I.	II.		
Headquarters staff ... ..	—	2	—	1	1	7	11	5	4	—	9	—	—	—	1	1	2	—	1	2	—	1	1	—	—
1 infantry regiment ... ..	—	3	—	—	1	63	67	—	6	—	6	3	—	—	—	—	3	12	6	—	—	—	—	12	—
3 infantry regiments ... ..	—	9	—	—	3	189	201	—	18	—	18	9	—	—	—	—	9	36	18	—	—	—	—	36	—
Total for infantry ... ..	—	12	—	—	4	252	268	—	24	—	24	*12	—	—	—	—	12	48	24	—	—	—	—	48	—
Cavalry ... ..	—	1	—	—	—	6	7	7	—	—	7	—	—	—	—	—	—	—	—	1	5	1	1	—	4
Artillery ... ..	—	2	—	—	—	40	42	4	—	—	4	—	—	—	—	—	—	12	6	2	—	6	2	12	—
Engineers ... ..	—	—	—	—	—	33	3	—	—	—	—	—	—	—	—	—	—	—	3	—	—	1	—	—	—
Ambulance ... ..	3	12	—	—	26	339	380	18	50	6	74	†4	12	6	—	‡3	25	48	24	—	—	1	—	48	—
Ammunition supply columns	—	1	—	—	—	6	7	1	2	—	3	*1	—	—	—	—	1	—	5	—	—	—	—	—	—
Commissariat staff ... ..	—	1	—	—	1	14	16	3	6	—	9	§3	—	—	—	—	3	—	8	1	—	—	—	—	—
1 field hospital... ..	—	3	1	—	15	54	73	6	30	4	40	‡3	—	12	—	—	15	—	—	—	—	—	—	—	—
3 field hospitals ... ..	—	9	3	—	45	162	219	18	90	12	120	9	—	36	—	—	45	—	—	—	—	—	—	—	—
Field bakeries and butcheries	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Remount dépôt (mobile) ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total to 5 above ... ..	—	13	4	—	61	230	308	27	126	16	169	15	—	48	—	—	63	—	8	1	—	—	—	—	—
Hospital of evacuation ... ..	—	6	1	—	23	31	61	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Reserve medical service ...	—	6	—	—	25	49	80	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Permanent ambulance train	—	2	—	—	2	32	36	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total lines of communication ...	—	14	1	—	50	112	177	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Total ... ..	3	57	5	1	142	995	1,203	62	206	22	290	32	12	54	1	4	103	108	71	6	5	9	4	108	4

\* Medical wagons attached to regiment.  
† Ambulance carts, wagons (surgical).  
‡ Provision wagons.

§ 1 regimental medical wagon, and two surgical wagons in reserve.  
|| Surgical field hospital wagons.



# PERSONNEL AND MATERIAL

PERSONNEL					
Infantry	Artillery	Engineers	Medical	Signal	Transport
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9
10	10	10	10	10	10
11	11	11	11	11	11
12	12	12	12	12	12
13	13	13	13	13	13
14	14	14	14	14	14
15	15	15	15	15	15
16	16	16	16	16	16
17	17	17	17	17	17
18	18	18	18	18	18
19	19	19	19	19	19
20	20	20	20	20	20
21	21	21	21	21	21
22	22	22	22	22	22
23	23	23	23	23	23
24	24	24	24	24	24
25	25	25	25	25	25
26	26	26	26	26	26
27	27	27	27	27	27
28	28	28	28	28	28
29	29	29	29	29	29
30	30	30	30	30	30
31	31	31	31	31	31
32	32	32	32	32	32
33	33	33	33	33	33
34	34	34	34	34	34
35	35	35	35	35	35
36	36	36	36	36	36
37	37	37	37	37	37
38	38	38	38	38	38
39	39	39	39	39	39
40	40	40	40	40	40
41	41	41	41	41	41
42	42	42	42	42	42
43	43	43	43	43	43
44	44	44	44	44	44
45	45	45	45	45	45
46	46	46	46	46	46
47	47	47	47	47	47
48	48	48	48	48	48
49	49	49	49	49	49
50	50	50	50	50	50
51	51	51	51	51	51
52	52	52	52	52	52
53	53	53	53	53	53
54	54	54	54	54	54
55	55	55	55	55	55
56	56	56	56	56	56
57	57	57	57	57	57
58	58	58	58	58	58
59	59	59	59	59	59
60	60	60	60	60	60
61	61	61	61	61	61
62	62	62	62	62	62
63	63	63	63	63	63
64	64	64	64	64	64
65	65	65	65	65	65
66	66	66	66	66	66
67	67	67	67	67	67
68	68	68	68	68	68
69	69	69	69	69	69
70	70	70	70	70	70
71	71	71	71	71	71
72	72	72	72	72	72
73	73	73	73	73	73
74	74	74	74	74	74
75	75	75	75	75	75
76	76	76	76	76	76
77	77	77	77	77	77
78	78	78	78	78	78
79	79	79	79	79	79
80	80	80	80	80	80
81	81	81	81	81	81
82	82	82	82	82	82
83	83	83	83	83	83
84	84	84	84	84	84
85	85	85	85	85	85
86	86	86	86	86	86
87	87	87	87	87	87
88	88	88	88	88	88
89	89	89	89	89	89
90	90	90	90	90	90
91	91	91	91	91	91
92	92	92	92	92	92
93	93	93	93	93	93
94	94	94	94	94	94
95	95	95	95	95	95
96	96	96	96	96	96
97	97	97	97	97	97
98	98	98	98	98	98
99	99	99	99	99	99
100	100	100	100	100	100

\* Medical wagon attached to regiment.  
 † Ambulance (with wagon integral).  
 ‡ Provision wagon.

## INFANTRY REGIMENT.

To each infantry regiment is attached—

- 3 surgeon majors, 2nd class, or assistant surgeons.
- 6 corporals (hospital staff).
- 1 sergeant (stretcher bearer).
- 6 corporals, stretcher bearers, each provided with a field companion.
- 48 stretcher bearers.
- 3 drivers.

The stretcher bearers are divided into squads of 4 men, each squad carries its own stretcher. The separate parts of the stretcher are carried as follows :—

- No. 1 the field haversack.
- No. 2 the traverses and the canvas and the strings.
- Nos. 3 and 4 the poles.

Two squads form a patrol, two patrols a group, and the 3 groups of the regiment a section.

The equipment consists of :—

- 3 ambulances (4-wheeled).
- 6 field companions.
- 12 surgical haversacks.
- 12 stretchers.

## CAVALRY REGIMENT.

*Personnel.*

- 1 surgeon major, 2nd class, or 1 assistant surgeon.
- 5 hospital staff (corporals).
- 1 orderly, all mounted.



*Equipment.*

- 1 medical canteen, No. 1.
- 1       "       "       No. 2.
- 1 pair surgical saddle bags, No. 1.
- 5 pairs       "       "       No. 2.
- 4 pack saddles.

## ARTILLERY.

Each group of 3 batteries has :—

- 1 surgeon major, 2nd class, or assistant surgeon, mounted.
- 1 corporal (hospital staff), mounted, and provided with a pair of surgical saddle bags, No. 1.
- 1 horse holder.
- 3 corporals (hospital staff).
- 3 stretcher bearers, corporals, each provided with a field companion.
- 24 stretcher bearers.

The equipment consists of :—

- 1 pair surgical saddle bags, No. 1.
- 3 medical canteens, No. 1.
- 1 medical canteen, No. 2.
- 3 field companions.
- 6 surgical haversacks.
- 6 stretchers.

## ENGINEERS.

The field company, the pontoon section, and the telegraph section have each a corporal (hospital staff) provided with a field companion. The field company has besides a medical canteen.

## THE DIVISIONAL AMBULANCE TRAIN.

*Personnel (Bearer Company).*

- 1 captain commanding, mounted.
- 2 lieutenants or second lieutenants, company commanders, mounted.
- 2 surgeon majors, 1st class, mounted.
- 10 surgeon majors, 2nd class, or assistant surgeons, of whom 2 are mounted.
- 1 sergeant-major, adjutant, mounted.
- 6 sergeants (4 stretcher bearers).
- 2 sergeants in charge of wagons, mounted.
- 1 N.C.O., commissariat.
- 2 apothecaries.
- 12 assistant surgeons.
- 2 clerks.
- 24 corporals (hospital staff).
- 24 stretcher bearers, corporals, provided with a field companion.
- 3 corporals in charge of wagons, mounted.
- 5 orderlies, mounted.
- 1 cyclist.
- 2 trumpeters.
- 192 stretcher bearers.
- 3 drivers of reserve horses, mounted.
- 8 horse holders (grooms).
- 25 drivers.
- 48 fatigue men.
- 4 cooks.

— —  
Total 380

There are 18 saddle horses, 50 draught horses, and 6 reserve horses (2 saddle and 4 draught).

The equipment comprises :—



- 4 surgery wagons.
- 6 general service wagons.
- 12 transport wagons (4-wheeled) for wounded.
- 3 requisitioned vehicles for provisions.
- 24 field companions.
- 48 surgical haversacks.
- 48 stretchers.

#### *Ammunition Train.*

To this are attached :—

- 1 assistant surgeon.
- 1 corporal (hospital staff), mounted.
- 4 corporals (hospital staff).
- 1 driver.
- 1 regimental transport wagon.
- 5 field companions.

#### *The Commissariat Staff.*

This comprises :—

- 1 surgeon major, mounted.
- 1 apothecary.
- 1 transport corporal, mounted.
- 9 corporals (hospital staff), of whom 8 (2 to each section) are provided with field companions.
- 3 drivers.
- 1 horse holder (groom) provided with a pair of surgical bags, mounted.
- 1 regimental surgical wagon.
- 2 surgical wagons in reserve.
- 1 pair surgical saddle bags, No. 1.
- 8 field companions.

#### *Field Hospital.*

This is organised for 150 sick or wounded, and is divisible into 3 sections.

The *personnel* consists of :—

- 1 surgeon major, 1st class, in command mounted.
- 2 surgeon majors, 2nd class, or assistant surgeons, mounted.
- 1 chaplain.
- 6 senior assistant surgeons.
- 1 apothecary.
- 2 assistant apothecaries.
- 1 sergeant, adjutant, mounted.
- 3 sergeants (hospital staff).
- 2 clerks.
- 6 corporals (hospital staff).
- 12 hospital attendants.
- 1 corporal in charge of transport.
- 1 trumpeter.
- 1 mounted orderly.
- 1 cyclist.
- 15 drivers.
- 3 horse holders.
- 2 drivers in reserve, mounted.
- 3 fatigue men.
- 9 cooks.

---

Total 73

#### *Equipment.*

The equipment is carried by 3 surgical wagons and 15 transport wagons.

#### *Lines of Communication.*

The principal medical officer of the 2nd class is assisted by the following *personnel* :—

- 2 assistant surgeon majors, adjutants.
- 1 officer of supplies.
- 1 assistant surgeon.
- 2 clerks.
- 2 orderlies.



*Hospitals of Evacuation.*

To each division of the army there is a calculation of one evacuation hospital, a reserve of the medical service, and a permanent sanitary train.

The hospitals of evacuation are, in necessary numbers, established at the station on the lines of communication nearest to the fighting line, where also are the reserves of the medical service.

At each station, the point of departure of the troops on the march to the front, a reserve hospital of evacuation is established.

The *personnel* of an evacuation hospital, capable of division into six sections, is as follows :—

- 1 surgeon major, 1st class, in command.
- 5 surgeon majors, 2nd class, or assistant surgeons.
- 1 chaplain.
- 1 sergeant, adjutant.
- 3 sergeants (hospital staff).
- 12 assistant surgeons.
- 4 clerks.
- 1 apothecary.
- 2 assistant apothecaries.
- 6 corporals (hospital staff).
- 24 hospital attendants.
- 1 surgical instrument maker.

---

Total 61

At the reserve hospital of evacuation there are only three surgeons and no chaplains ; in other respects it is the same as above.

## RESERVE OF THE ARMY MEDICAL SERVICE.

The Reserve, which is divided into the *personnel* and equipment, is created for the following purposes :—

- (1) To establish improvised hospitals to relieve already established field hospitals.
- (2) To organise dépôts for convalescents.
- (3) To improvise trains for the removal of wounded and trains for sitting up cases.
- (4) To transport sick and wounded evacuated by water or road.
- (5) To replace the *personnel* and equipment of the medical staff at the front and on the lines of communication.

This Reserve can be divided into seven sections.

The *personnel* of the Reserve comprises :—

- 1 surgeon major commanding.
- 5 surgeon majors, 2nd class, or assistant surgeons.
- 1 sergeant, adjutant.
- 2 sergeants (hospital staff).
- 12 assistant surgeons.
- 1 N.C.O., commissariat.
- 5 clerks.
- 2 apothecaries.
- 2 assistant apothecaries.
- 6 corporals (hospital staff).
- 24 hospital orderlies.
- 1 surgical instrument maker.
- 1 saddler.
- 1 carpenter.
- 1 tinsmith.
- 15 fatigue men (and drivers).

---

Total 80



## PERMANENT AMBULANCE TRAIN.

Has the following *personnel* :—

- 1 surgeon major, 2nd class, commanding.
- 1 assistant surgeon.
- 1 sergeant (hospital staff).
- 1 clerk.
- 4 corporals (hospital staff).
- 24 hospital orderlies.
- 3 cooks.
- 1 handy man.

Each such train consists of 31 carriages :—

- 1 covered wagon for stores, kit.
- 1     "             "             equipment.
- 1     "             "             soiled linen.
- 10 3rd class carriages, each for 10 sick or wounded.
- 1 carriage (2nd and 3rd class) for 23 sick or wounded.
- 1 3rd class carriage for surgery, pharmacy, office, and dining saloon.
- 1 2nd class carriage for the *personnel* (surgeons and clerks).
- 1 3rd class carriage for the hospital attendants.
- 1 3rd class carriage for 23 sick or wounded.
- 10 3rd class carriages for 10 sick or wounded.
- 1 3rd class carriage for kitchen.
- 1 goods wagon attached to kitchen, scullery, &c.
- 1 covered wagon for provisions.

Sick or wounded to the number of 246 can be carried by this train.

The principal medical officer on the lines of communication is responsible for the establishment of the requisite hospitals, the transport of sick and wounded, and the administration of the *personnel* on the lines of

communication. He reports to the field army principal medical officer as to the sites of hospitals and available room in them. He is also in communication with the Red Cross Society's commissioner, and sees that the *personnel* and *matériel* intended for the lines of communication are employed to the best advantage.

The principal medical officer of the army keeps up communication with the field army principal medical officer and also with the principal medical officer of the lines of communication. Under his orders the medical officers at dépôts establish additional or increase existing hospitals.

Base hospitals are established for receiving men until they can be sent on to the dépôt hospitals.

The volunteer nursing societies are employed principally on the lines of communication and for the home hospitals. At the head of them is the Royal Commissioner, who places himself in communication with the principal medical officer.

#### UNIFORM OF MEDICAL SERVICE.

*Tunic*.—Dark blue, black collar and cuffs, red piping, epaulettes.

*Trousers*.—Dark blue, black piping.

*Head Dress*.—Shako with black horse hair plume, gold cross belt.



## SWITZERLAND.

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THE general medical arrangements in peace may be stated tersely as follows:—Mild cases of illness, not likely to last longer than a few days, are treated in corps infirmaries; but the more severe cases are removed to civil hospitals. Military hospitals exist in Berne, Thun, Lucerne, &c., but these are ordinarily open only during the training seasons. Where such hospitals do not exist, a soldier during training is treated, if sick, in a civil hospital at the expense of the Confederation.

The Swiss army is really a compulsory national militia, in which all males must serve for a certain number of years, and it is called out for training by districts.

In common with all males, in the country all medical men practising in Switzerland are liable for service as medical officers in the national army between certain ages.

The Swiss Medical Corps are really civil physicians called in annually, at certain centres, for compulsory drill and training in hospital administration by permanent instructors. Every autumn such local mobilisations occur in the districts when medical officers and N.C.O.'s of the medical corps undergo drill before the rank and file join. When the men join they are posted (after drilling) to the various units of field hospitals. They are then again drilled and lectured, and finally take part in the manœuvres. Care is taken that only educated and thoroughly



trustworthy men are allowed to serve in the medical corps. The quartermasters of the medical corps are attached for duty and wear the dress of the Army Quartermaster Corps. There is also a small separate body of apothecaries belonging to the medical corps. The officers of the medical corps hold military titles and actual rank, and are invariably addressed by their military titles.

The technical training of officers and men of the medical corps consists of instruction in infantry drill, ambulance drill, including the pitching and administration of field hospitals. The principal medical officer of divisional mobilisation lectures his officers on field routine and administration, and on antiseptic surgery, &c. The Swiss code frees the principal medical officer from petty details, and thus makes him in truth a commander and instructor of, and completely responsible for, his corps. The principal medical officer has his staff of secretary, adjutant, and two mounted orderlies (permanent). The medical officers have complete military command of themselves and their men, and also control of the transport assigned to the corps. The field hospital in Switzerland may be looked on as a medical battalion, consisting of a staff and five sections or companies, the latter being called "ambulances."

In the troops of the Confederation there are in the *Élite*\* (active army) 12 field hospitals, and, in the *Landwehr*, 16 ambulances, 5 transport columns, 3 sanitary railway trains, and 8 hospital sections.

The head of the military department is assisted in

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\* On leaving the "*Élite*" men pass to the "*Landwehr*." A third category of troops for home defence is furnished by the "*Landsturm*," which is composed of all able-bodied citizens between the ages of 17 and 50 years, who are not embodied in the "*Élite*" or "*Landwehr*," and are not exempt from service, as well as of volunteers under 17 and 50 years of age, and of officers up to 55 years of age.



the medical section by the surgeon-in-chief nominated by the Federal Council.

The active army consists of army staff, 4 army corps, and units not incorporated in army corps.

The army corps has 1 field hospital, so also has the division.

To the staff of a principal medical officer army corps are attached (*a*) 1 assistant medical officer, who deals with personal correspondence, and may, in fact, be described as a medical assistant adjutant-general; (*b*) 1 medical officer, chief of the transport, who deals with the movement of the sick, convoys, and all correspondence as to transport; (*c*) 1 medical officer, chief of the field hospital service, who may be described as an assistant quartermaster general, who deals with the location and administration of the war hospitals; (*d*) 1 chief medical storekeeper (a staff apothecary) who is responsible for the special medical stores of all kinds needed by the army corps; (*e*) 1 chief of the Voluntary Aid Service (a delegate of the Red Cross Societies).

The divisional medical staff consists of 1 principal medical officer (lieutenant-colonel), 1 adjutant, and 1 secretary.

The battalion staff consists of 2 mounted medical officers, 1 warrant medical officer, 2 orderlies, 1 ambulance sergeant of bearers, 12 bearers, and, in addition, 1 hospital orderly.

The cavalry staff consists of 1 medical officer and 1 orderly per squadron, mounted.

A battery staff consists of 1 medical officer, 1 hospital orderly, and 2 stretcher bearers.

One medical officer and 2 hospital orderlies are attached to the staff surgeon for the staff.

Medical officers, 1 each, are also attached to half battalion engineers, bridging detachment, and telegraph company.

## FIELD ARMY.

The medical units with the field army consist of divisional and corps hospitals :—

The divisional hospital consists of—

A staff.

3 ambulances, which we should call field hospitals.

1 train detachment, supplied by the Landwehr.

The staff consists of—

1 medical officer.

1 commissariat officer.

1 or 2 chaplains.

1 N.C.O.

Each ambulance numbers—

6 officers.

4 N.C.O.'s.

30 privates (of whom 10 are hospital attendants and 20 are stretcher bearers).

The train detachment consists of—

1 officer.

3 N.C.O.'s.

20 drivers.

The transport consists of—

3 4-horse medical store wagons.

6 2-horse sick transport wagons.

3 2-horse supply wagons.

1 1-horse travelling kitchen.

The corps hospital consists of a staff numbering—

4 medical officers.

1 commissariat officer.

1 or 2 chaplains.

3 N.C.O.'s and privates.

4 ambulances, similar to those of the divisional hospital.



The train detachment, furnished by the Landwehr, consists of—

- 3 officers.
- 91 N.C.O.'s and privates.
- The transport comprises—
  - 4 4-horse medical store wagons.
  - 8 2-horse sick transport wagons.
  - 4 4-horse reserve wagons.
  - 32 requisitioned 2-horse carts for transport of sick and wounded.
  - 4 2-horse supply wagons.
  - 1-horse field kitchens.

#### LINE OF COMMUNICATION.

For the medical services on the line of communications and at the base, the following units are provided by the Landwehr :—

- 16 ambulances.
- 3 medical trains.
- 5 transport columns.
- 8 hospital sections.

The Landwehr ambulance consists of—

- 6 officers.
- 34 N.C.O.'s and privates.

With a train detachment consisting of—

- 1 corporal.
- 6 drivers.
- 1 medical store wagon.
- 1 sick transport wagon.
- 1 regimental wagon.

Medical trains for transport of sick and wounded by rail :—

The *personnel* with each comprises—

- 3 officers.
- 17 N.C.O.'s and privates.

The train consists of—

- 1 locomotive.
- 2 wagons for the *personnel*.
- 40 axles for the transport of 200 sick.
- 2 luggage vans.

The staff of a transport column consists of—

- 2 officers.
  - 12 N.C.O.'s and privates.
  - 32 requisitioned wagons.
  - 3 baggage and supply wagons.
- A hospital section is comprised of—
- 7 officers.
  - 20 hospital attendants.
  - 10 stretcher bearers.

And is reckoned sufficient for a hospital  
200 beds.

#### UNIFORM.

*Medical Officers*.—Tunic, light blue, with black collar and facings. Blouse, dark blue, with black facing on collar. Trousers, dark grey, with black piping. Shako, with light blue pompon. Cloak, same as infantry, but with black facings.

*Apothecaries*.—Tunic, dark blue, with light blue collar and facings. Blouse, dark blue, with light blue facing on collar. Cloak, same as infantry, but with light blue facings. Trousers, dark grey, with light blue piping.

The men wear tunics and trousers as for infantry, but with black shoulder straps with blue numbers, light blue collar and piping.

The cloak and blouse are dark blue with light blue facings.

Side arms with brass handle.



## TURKEY.

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THE military hospitals, both in the capital and in the provinces, are generally kept clean and tidy, although the buildings set apart for the treatment of sick are more or less dilapidated. As personal cleanliness is characteristic of the Turkish race, so the general arrangements for the personal cleanliness of patients are good and satisfactory; owing to causes that are pretty generally known, the supply of up-to-date drugs and instruments in hospitals leaves much to be desired. The attendants on the sick are all men, and, however deficient their training may be, they are reported to be reliable, gentle, kind, very patient with sick comrades, and, what is notable, honest in the preparation and disposition of their food.

### THE MILITARY MEDICAL STAFF.

The regimental system prevails. To every battalion or equivalent unit is attached 1 physician, 1 surgeon, and 1 apothecary. The distinction between the physician (doctor) and the surgeon is very sharply defined, both adhering to their respective branches. It is impossible to obtain accurate and reliable figures as to the precise strength of the three branches named, as no Army List has been published for several years, but, roughly speaking, a total of 3,400 may be divided among the three branches. This number seems large, but is explained by the fact that each year the strength is constantly swelled by

batches of young officers joining, while there is no retirement scheme ; consequently, the pay lists include the names of many who have long passed the age of usefulness.

The Army Medical Service is the only branch of the Turkish Army into which non-Mussulmans are permitted to enter, (and a very large proportion decreasing of late years) consists of Jews, Greeks, and Armenians. This is especially noticeable in the apothecary class.

#### FIELD HOSPITALS, AMBULANCES, AND BEARER COMPANIES.

The Turks have their own methods of attending to their sick and wounded in war, and, therefore, no organisation as to *personnel* and *matériel* of such establishments seems to exist. In the Græco-Turkish War a Swiss medical man, by name Lardy, organised an ambulance and Field Hospital Service on the part of the Imperial Ottoman Bank and did excellent work, treating over 800 cases altogether, but it was disbanded after the necessity for its existence passed away and has left no permanent mark or impression behind it.

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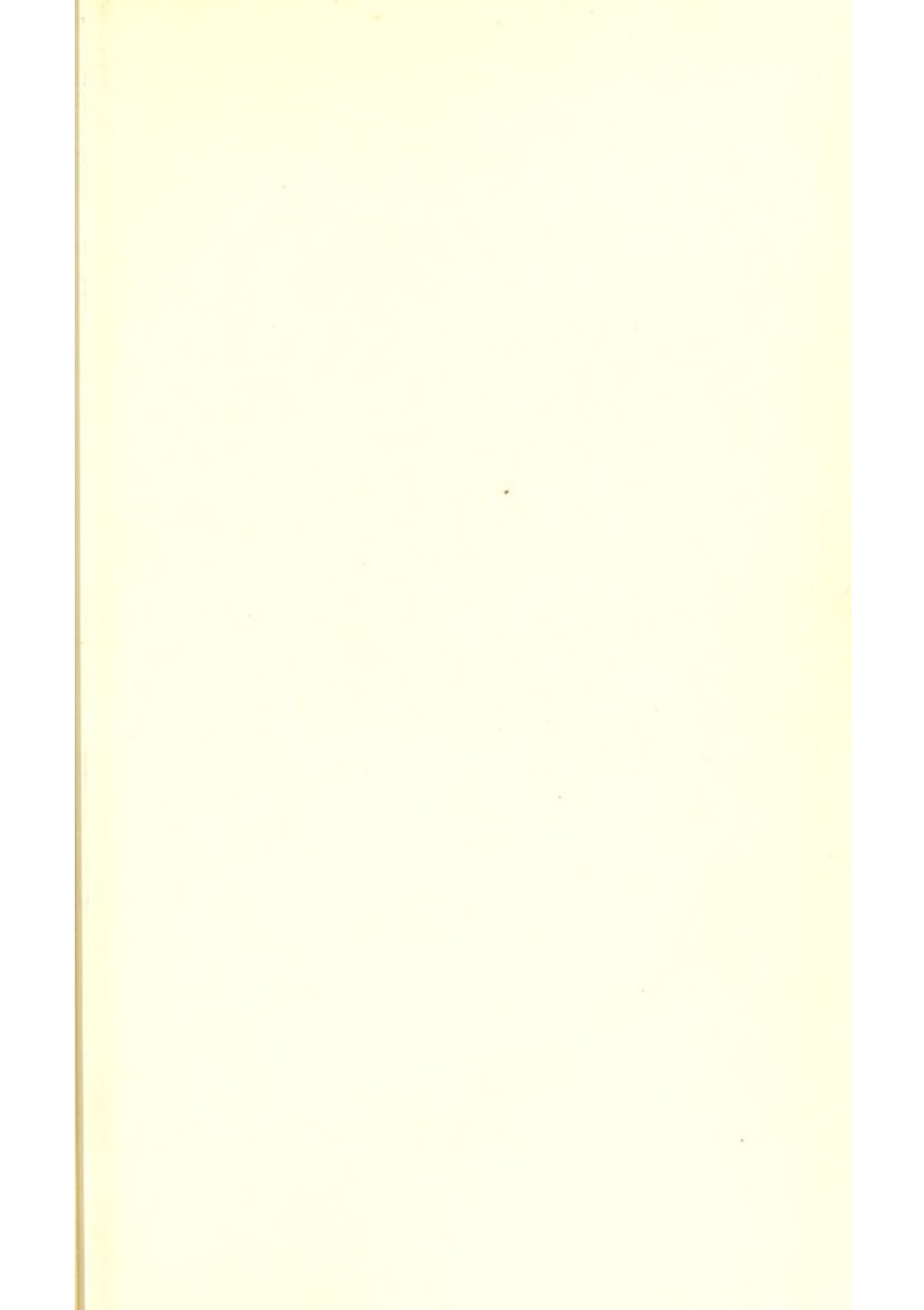
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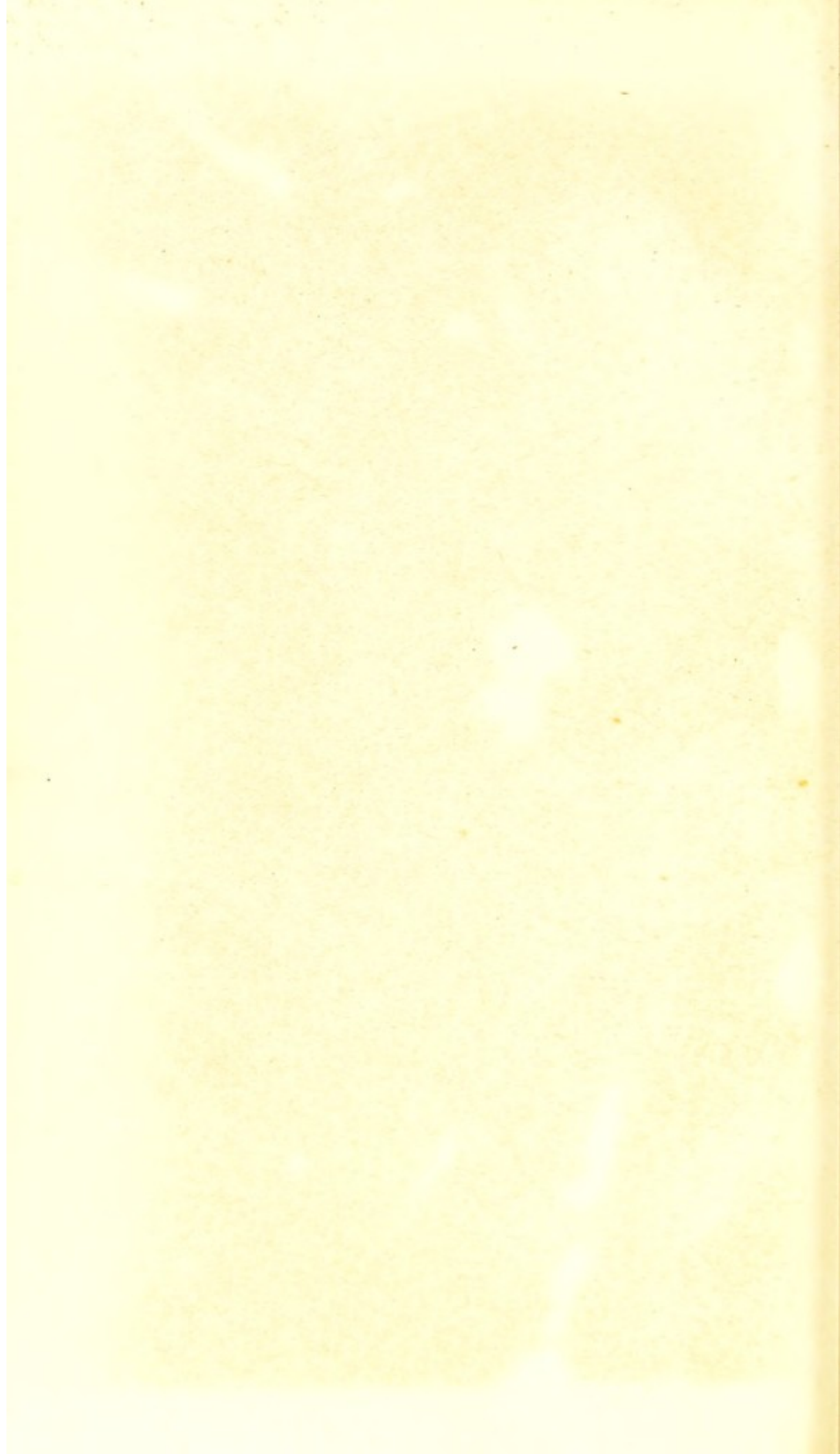
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