

The Medical Department in the Field.

Course In Organization and Tactics.

Lecture No. 2,

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THE MEDICAL DEPARTMENT IN THE FIELD.

LECTURE No. 2.

Those of you who have read Mark Twain's "French Duel" will recall how shocked Gambetta's second was when Mark proposed axes as the weapons. "But my dear sir, have you considered what the consequences of an encounter with such weapons might be?" Mark confessed he had not. "Bloodshed, sir, Bloodshed !" replied the second. "That's about the size of it" answered Mark; "and if I might ask, what was your side proposing to shed?"

It is but a platitude to state that the sole function of an army is war, and the sole result of war so far as it concerns soldiers is bloodshed, an epidemic of disease and injuries. With the political, economical, sociological or financial outcome we as soldiers have nothing to do, our business being to kill or get killed, or better to wound our enemy, and if needs be get killed ourselves, for a wounded man is a much greater handicap than a dead one.

Of old it was the fashion to abandon the wounded to die in the gutter, or, if so fortunate, to find their way to a monastery, on the principle as quaintly expressed by an ancient authority "that it costs more to cure a soldier than to buy a recruit." This in one sense is true, but in another far from it, for the cost in demoralization, which inevitably results from the presence of a body of disabled men, particularly when their necessities are disregarded, would far outweigh the cost of their proper care. Moreover it has been well said that soldiers "have a right to the best precaution which can be taken for their protection, as well as for the safety of their lives should such become endangered by

wounds or sickness received in the service of their country. This is a right which has always been conceded by the greatest commanders as well of ancient as of modern times."

To meet these requirements there has existed in armies from the earliest days a more or less systematically organized body known as the Medical Corps of which, in *active service*, I am to speak today.

The proposed field service regulations of which you have doubtless heard, and probably will soon know more, prescribe as follows :

"The service of the Medical Department in the field is divided into service of the front comprising all medical department formations which march with troops, and the service of the rear comprising all the other formations pertaining to that department.

The lines of assistance at the front are-regimental aid, field hospitals, including ambulance company sections and advanced medical supply depots ; at the rear-stationary or rest hospitals on the *etape* lines, and general hospitals, supply, depots, convalescent and casual camps, etc.

The duties in the field are:

1. The initiation of all hygienic measures to insure the good health of 'the troops.
2. Management of epidemics among the inhabitants of the country under military control to prevent infection of new territory or of the army.
3. Care of sick and wounded on the march, in camp, on the field of battle, and after removal therefrom.
4. Methodical disposition of sick and wounded so as to assure the retention of those effective on the field of battle, and relieve the fighting force of the non-effective.
5. Transportation of sick and wounded.

6. Establishment of new hospitals and utilization of old ones sufficient in number and capacity to care for all sick and wounded.

7. Supply of troops and hospitals with all articles needed for the care of sick and wounded.

8. Preparation and preservation of individual records of sickness and injury in order that claims may be adjudicated with justice, both to the government and to the soldier."

The essentially military function of the Medical Department is set forth in the 4th paragraph, viz :-"To relieve the fighting force of the non-effectives," and to this end a very comprehensive military organization has developed *pari passu* with other branches of an army.

Those who have made no study of this important organization dismiss the subject without thought, or on the principle that each should care for its own, are content to let the medical organization cease with the regiment. This idea largely prevailed in our service during the Spanish-American war due to the medical habits, or lack of them, in the state forces, but it would have been quickly dissipated by the smokeless atmosphere of a modern battlefield; for nothing is more certain than that any army which depends upon the regiment alone for the care of its wounded will fail in this respect when the regiment moves off the field and must abandon its wounded to the chance care, or neglect, of anyone who may happen upon them.

A glance at the sanitary regulations of the armies of the world will show that all agree on the principles of sanitary organization, and as might be expected, differ in details, but in none is there any question that such organization is essentially military though not militant.

The -Division, in military organization, like the molecule in chemistry may be defined as the smallest organism that can exist alone. The Division has long been recognized

by us as the administrative military unit of an active army, but until the proposed Field Service Regulations were compiled, exactly what constituted such was like Dundreary's answer to the conundrum "why do birds of a feather flock together?" "That's something," said he, "that no fellow can find out."

We now know that the personnel of a complete division numbers 19,432 officers and men divided as follows :

	Officers.	Men.	M. O.	H. C.
Administration, (Division and 3 Brigades),	36		5	16
9 Regiments Infantry,.	471	14,328	27	108
9 Batteries Artillery,.	52	1,440	9	18
1 Regiment Cavalry,.	50	1,236	3	12
1 Battalion of Engineers,.	20	656	2	8
1 Company Signal Corps,.	4	150	1	2
4 Field Hospitals,.			28	472
3 Trains,.		278		
	---	---	---	---
* Total,	633	18,088	75	636
	- 1 -	---	-	---
Grand total,.		19,432		

of which **711** pertain to the Sanitary Department.

From which it will be seen that the service at the front requires of the medical department (including Hospital Corps) for each Division 3.66 per cent of the total strength

* The Twelfth Division of the Japanese Army, which assembled at Chemulpo in February, 1904, consisted of 14,700 men, as follows :

Infantry,	10,800
Pioneers,	700
Train,	600
Artillery,	900
Cavalry,	500
Hospital Corps, *	700
Ammunition Column, *	500

of which 4-10 per cent are medical officers, and 3.2 per cent are Hospital Corps men.

I wish to emphasize these percentages for our organization is likely to continue unstable in numbers, while adhering to names. A regiment during the civil war numbered anywhere from 150 to 1,500, and a division not infrequently contained twenty regiments.

Expressed in another way and in round numbers our army requires on the fighting line : One medical officer and ten men of the hospital corps for every 300 of strength.

Under existing regulations the lines of medical assistance are :

- 1st. First aid on the fighting line,
- 2nd. The Regimental Aid Station,
- 3rd. The Ambulance and dressing stations organized by the Ambulance Co.
- 4th. The Field Hospital,
- 5th. The organization on the *etape* lines, and
- 6th. The organizations at the base.

A knowledge of all these formations is of importance to every officer: 3 can however today do little more than touch upon those which are actually with or immediately in rear of the fighting line. With every regiment, battery, and separate battalion there are a sanitary detachment, and a field dispensary capable of meeting the emergency requirements of the command to which it is attached, but which except in a more or less permanent camp is not permitted to retain for treatment any serious case.

On the battle-field this organization establishes the regimental aid station, immediately in rear of the regiment at which the wounded of the regiment are assembled and where they remain until taken over by the Ambulance Company.

It must be understood that the regimental authorities are absolutely responsible for their own wounded back to this point.

To meet this demand, the regiment has three medical officers, one of whom would probably be requisitioned for duty at the dressing station or field hospital, one would be at the regimental aid station, and the third back of the skirmish line. There are also three non-commissioned officers and nine privates Hospital Corps.

The regimental dispensary has six litters and each company one, eighteen in all, who are to carry these litters?

We find in all foreign armies that each company has in its cadre four litter bearers, about two per cent, whose duty in action is to help carry off the wounded. Such an office was recognized in our army for a number of years, but for various reasons it was abolished, and the instruction of all men in 1st Aid substituted.

This I believe to have been a mistake so far as the company bearers are concerned, for what is everybody's business is nobody's, and the company commander theoretically will not deliberately give up a rifle bearer, unless he is specifically required to do so ; moreover higher authority would be equally disinclined to require it of him for the business of the army is to win battles. But as a practical fact if anybody but those specifically marked for this work is permitted to accompany the wounded, many more rifles will be lost to the firing line than would otherwise be the case. I am convinced from considerable study of the methods of foreign armies that nations who have followed the trade of war from time immemorial must have worked out something worth knowing, and I observe that all agree on the company bearer.

The regimental band has been utilized in this duty, but such has never proved a happy solution of the problem ; however so far as our regulations are now concerned the companies must turn their litters over to the band whose duty it

will be made to carry the wounded, under the direction and with the assistance of the Hospital Corps men, to the regimental aid station.

Immediately back of the regiments we encounter a very special organization which is the essentially military feature of the sanitary department as this it is which clears the front of the army of invalids. I refer to the organization found in all armies and variously called the flying hospital, sanitary section, bearer company, ambulance company, and, in the language of the field service regulations, the ambulance section of the field hospital.

Under existing regulations 1902 our ambulance company consists of three medical officers, 1 quartermaster (detailed from the line), 15 non-commissioned officers and 68 privates.

Under proposed regulations the ambulance section will have :

- 3 medical officers,
- 8 non-commissioned officers,
- 62 privates.

The ambulance company has as part of its equipment, ten ambulance wagons, but its name is not derived from this fact. The term ambulance, as employed in other armies, is applied to the entire mobile hospital organization and the word is used to qualify the various articles of equipment. The ambulance company's duty is to establish the ambulance station at a point as near the front as wagons can safely go, to carry the wounded from the regimental aid stations to the ambulances, and to transport them back to the dressing station. It also establishes the dressing station which is the central feature of modern battle-field sanitation.

The dressing station should be located about a mile, and a half back of the firing line, as well protected as pos-

sible from shot and shell, convenient to water, preferably at a large house or barn, on a practicable road leading to front and rear, and not difficult to find.

I will not go into the details of the interior economy of the dressing station, suffice it to say that it is divided into.

(a) Receiving and slightly wounded section,

(b) Dispensary section.

(c) Operating section,

(d) Kitchen section,

(e) Transport and property section, each with its appropriate personnel and material.

The dressing station is the first point where the wounded can receive anything like systematic care; here operations of emergency may be done, patients fed, dressed and medicated, and if needs be may be kept for twenty-four hours or even more, until the field hospital can reach the front, when the wounded are transferred back to it, and the ambulance company rendezvous at the field hospital.

The foregoing description is in accordance with existing regulations. The proposed Field Service Regulations apparently make no provision for a dressing station, the idea doubtless being to bring the field hospital right up to the fighting force.

That the field hospitals cannot always get to the field on time is evidence by our experience after the second battle of Manassas, of which the then Surgeon General wrote: Sept. 7th, 1862, to the Secretary of War, after having asked again and again, for a proper sanitary organization, "Up to this date" (a week or more after the battle) "six hundred wounded still remain on the battle field * *. Many have died of starvation, many more will die in consequence of exhaustion, and all have endured torments which might have been avoided. I ask sir, that you will give me your aid in

this matter, that you will interpose to prevent a recurrence of such consequences :”

The personnel of a field hospital as now described in regulations (1902) consists of :

3 Medical Officers,

1 Quartermaster (detailed from the line).

6 non-commissioned officers, and

48 privates.

Under the proposed field service regulations it will have :

4 Medical Officers,

8 non-commissioned officers,

40 privates.

This hospital has accommodation for 108 patients on cots, and with tent flies extended and bed sacks on the ground, could care for 216.

Such an organization requires eight wagons to transport it, (exclusive of rations, forage, and packs) the equipment consisting among other essentials of 21 hospital tents. It is observed that little hospital tentage is carried by European armies, for there the country is so thickly settled that buildings are always available for hospital purposes.

I will now invite your attention to the circular prepared for a previous class, which is explanatory of the existing Field Sanitary Organization. A subjoined table gives the personnel of the proposed Field Service Regulations. Both of these have been distributed to the class for future consideration and need not be further referred to here.

FIELD SANITARY ORGANIZATION, U. S. A.,
REGULATIONS 1902.

Detachment of Infantry-Cavalry--or a battery of Field Artillery, etc.

1 Medical officer.

2 Privates, H. C.

- 1 Ambulance.
- 1 Detached Service Chest.

REGIMENT OF INFANTRY OR CAVALRY.

- 1 Regimental Surgeon, (Major.)
- 1 Regimental Asst. Surgeon, (Captain.)
- 1 Regimental Asst. Surgeon, (1st Lieutenant.)
- 1 Sergeant, first class, H. C.
- 2 Sergeants, H. C.
- 9 Privates, H. C.

The Regimental Field Hospital Equipment requires an escort wagon to transport it when complete. 3 Ambulances are allowed a regiment (when not brigaded).

ORGANIZATION OF THE MED. DEPT. OF A BRIGADE (3 Regiments.)

- Administration : Brigade Surgeon (major).
- First Line: Three regimental detachments (regimental hospitals.)
- Second Line : One ambulance company.
- Third Line : One field hospital.

ORGANIZATION OF THE MED. DEPT. OF AN INFANTRY DIVISION.

(Three brigades of three regiments each.)

I. AT THE FRONT.

- Administration : 1 Division Surgeon (Lieut. Col.) 3 Brigade Surgeons.
- First Line: 9 regimental detachments.
- Second Line : Three ambulance companies.
- Third Line : Three field hospitals.

II. ON THE LINES AND AT THE BASE.

Fourth Line :

- | | |
|-----------------------------|----------------------------------|
| Stationary Hospitals. | } On the lines of communication. |
| Advance Med. Supply Depots. | |
| Sick Transport. | |

Fifth Line : Base Hospitals. Medical Supply Depot. Sick Transport. Reserve Personnel. Convalescent Depots.

ORGANIZATION OF A FIELD HOSPITAL.

P E R S O N N E L :

- 3 Medical officers: 1 major, 1 captain, 1 lieutenant.
- 1 Quartermaster. (Detailed from the line.)
- Hospital Corps : 6 Non-commissioned officers, 48 privates.
- Medical Officers.
 - I In Command. General supervision. Reports, records and returns.
 - 1 Executive officer. In command of Hospital Corps detachment. Summary court. In charge of mess, Medical supplies. Admissions and discharges, and patients' effects.
- 1 Ward Surgeon.

Non-Commissioned Officers :

- 1 Sergeant, first class. In general charge. In charge of medical supplies.
- 1 Sergeant. In charge of records.
- 1 Sergeant. In charge of wards and diets.
- 1 Sergeant. In charge of operating and dispensary tent.
- 1 Sergeant. In charge of mess.
- 1 Sergeant. Transportation. Police.

Privates :

- 1 First cook. 1 Artificer.
- 1 Second cook. 3 Canvasmen and police.
- 2 Cook's police. 1 Property attendant.
- 1 Dispensary attendant. 2 Clerks.
- 10 Drivers and packers. 3 Orderlies.
- 20 Nurses. 3 Supernumeraries.

ORGANIZATION OF AN AMBULANCE COMPANY.

- 3 Medical officers: 1 Major. 1 Captain. 1 Lieutenant.
- 1 Quartermaster. (Detailed from the line.)
- Hospital Corps : 15 Non-commissioned officers. 68 Privates.
- Non-Commissioned Officers :

- 1 First Sergeant.
- 1 Quartermaster sergeant. Transportation.
- 1 Sergeant. Medical supplies. Dispensary and operating sections of dressing stations.
- 1 Sergeant. Records.
- 9 Sergeants. For bearer and section work.
- 2 Sergeants. Ambulances.

Privates :

- 9 Ambulance drivers. 1 Blacksmith.
- 9 Ambulance orderlies. 1 Saddler.
- 4 wagon drivers. 2 Musicians.
- 2 Cooks. 40 Privates.

THE AMBULANCE COMPANY IN ACTION.

I. THE DRESSING- STATION.

PERSONNEL:

- 2 Medical officers.
- 9 Non-commissioned officers, Hospital Corps.
- 16 Privates, Hospital Corps. (10 attendants, 3 cooks, 1 musician and 2 medical officers' orderlies)

ORGANIZATION AND EQUIPMENT :

- (a). Receiving and slightly wounded section:
 - 1 Medical officer.
 - 2 Non-commissioned officers,
 - 3 Attendants.
 - 1 Medical officer's orderly.
 - 1 Box surgical dressings, 1 bucket, 1 portfolio, 6 pocket field registers.
- (b). Dispensary section :
 - 1 Non-commissioned officer.
 - 1 Private.
 - Medical chest, filter, 1 bucket, 1 commode chest.

- (c). Operating Section :
 - 1 Medical officer.
 - 2 Non-commissioned officers.
 - 2 Attendants.
 - 1 Medical officer's orderly.
 - Surgical chest, sterilizer chest, 2 operating tables, hospital tent, bedding cases, 3 agate basins, 3 agate buckets.
- (d). Kitchen Section:
 - 1 Cook.
 - 1 Attendant.
 - Mess pans, hospital stores, camp kettles.
- (e). Transport and Property Section:
 - 4 Noncommissioned officers.
 - 4 Drivers.
 - 1 Company cook.
 - 1 Musician.

II. AMBULANCE STATIONS.

PERSONNEL: (For one or more stations.)

- 1 Medical officer.
- 1 Quartermaster.
- 6 Non-commissioned officers.
- 9 Ambulance drivers.
- 9 Ambulance orderlies.
- 32 Bearers.
- 1 Medical officer's orderly.
- 1 Musician.

EQUIPMENT :

Litters.
 Hospital Corps and orderlies' pouches.
 Ambulance boxes of hospital stores and surgical dressings.
 One ambulance company and one field hospital are ordinarily sufficient for the medical requirements of 5,000 men (a brigade)--but these units are so organized that they can be attached to any command in any necessary number.

It will be observed that the foregoing scheme of organization makes the regiment responsible for all its wounded in front of its Regimental Aid Station who must be transported by men of the regiment back to this point. The regimental commander must see that *12 litters and 24 bearers are provided for this purpose. The regimental detachment of the hospital corps may assist in this but would usually be occupied at the aid station or in rendering first aid on the firing line.

From the Regimental Aid Station the ambulance company becomes responsible for the transportation of the wounded back to the dressing station--and thence to the field hospital.

"As soon as the dressing station is formed the rest of the ambulance company moves forward and forms an ambulance

*Exclusive of the six pertaining to the Regimental Medical Dept.

station at which the ambulance wagons rendezvous and between which and the dressing station they are constantly plying."

"As soon as the work on the field and. at the ambulance station is completed the company rendezvous at the dressing station to assist the permanent detail there, and when the work at the dressing station is completed, the wounded having been transferred to the field hospital by the ambulance wagons of the company, it, when practicable, goes into camp near the field hospital, and assists in the work of that organization." (par. 60, Manual of the Medical Department, 1902.)

Each ambulance company and field hospital is so organized that it may be subdivided into three sections capable of independent action.

The title of the senior medical officer of an army in the field (two or more corps) is "Medical Director General;" of a Corps, "Chief Surgeon;" of a Division, "Division Surgeon;" of a Brigade, "Brigade Surgeon;" of a regiment, "Regimental Surgeon;" the senior medical officer; of a field hospital or ambulance company, "Commanding Field Hospital No.," or "Ambulance Company No.-."

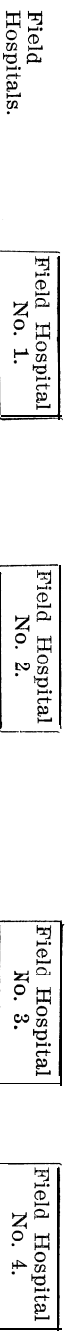
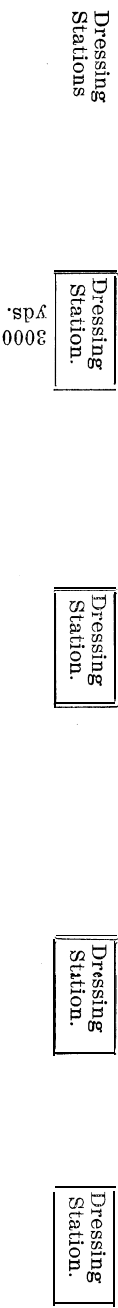
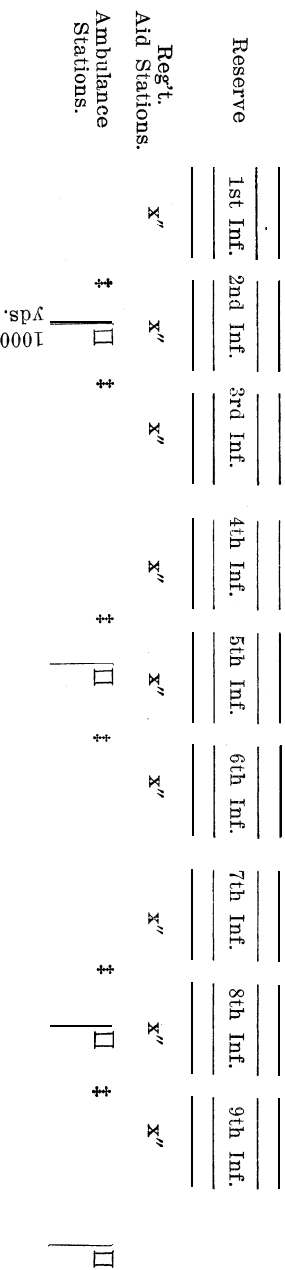
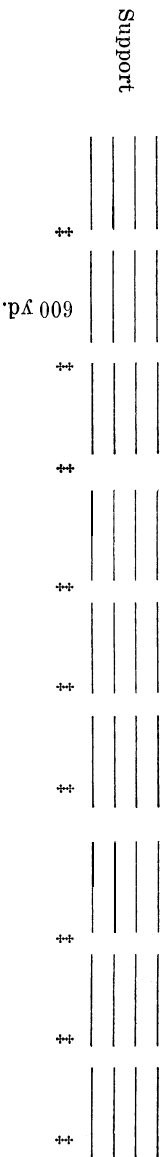
MEDICAL ARRANGEMENT OF A COMPLETE DIVISION-IN MARCH.

Advance Guard.	{	1 Squadron Cavalry.
		1 Company Engineers.
		2 Battalions 1st Infantry.
		Headquarters 1st Brigade.
		1 Battalion 1st Infantry.
		1 Battery Field Artillery.
		1 Battalion 2nd Infantry.
	{	1 Ambulance Co., Section 1.
Headquarters Division :		
Main Body.	{	3 Squadrons Cavalry.
		3 Companies Engineers.
		1 Company Signal Corps.
		2 Battalions 2nd Infantry.
		3 Batteries Field Artillery.
		1 Regiment 3rd Infantry.
		1 Field Hospital No. 1,
		less Ambulance Co. Section,
		Headquarters 2nd Brigade.
		1 Regiment 4th Infantry.
		1 Regiment 5th Infantry.
		1 Regiment 6th Infantry.
		2 Batteries Field Artillery.
		Headquarters 3rd Brigade.
		1 Regiment 7th Infantry.
		1 Regiment 8th Infantry.
		1 Field Hospital No. 2.
		Ammunition Wagon Train.
		Provost Guard.

Rear Guard.

{ 1 Battalion 9th Infantry.
 { 1 Field Hospital No. 3.
 Division Headquarters' Wagons.
 1st Brigade Wagons.
 2nd Brigade Wagons.
 3rd Brigade Wagons.
 Artillery Wagons.
 { 1 Field Hospital, No. 4.
 { 2 Battalions 9th Infantry.

MEDICAL ARRANGEMENTS OF A COMPLETE DIVISION, IN ORDER OF BATTLE.
1ST BRIGADE. 2ND BRIGADE. 3D BRIGADE.



**PROPOSED
PERSONNEL AND TRANSPORTATION
of**

*Medical Service of a Complete Division 19,432 Strong.

Mounts. Transport.

STRENGTH.

UNITED STATES ARMY

Majors.		
Cpts. & Lieuts.		
Total Commissioned.		
Sergeants First Class.		
Sergeants.		
Privates, First Class.		
Privates.		
Total Enlisted.		
Grand Total.		
Officers.		
Men.		
Total.		
Ambulance Wagons.		
Transport Wagons.		
Pack Animals.		

15	Division Headquarters,	1	1	2	1	4	2	7	9	2	3	5			
21	Brigade Headquarters,	3		3		3	3	9	12	3	6	9			
14799	Infantry (9 regiments),	9	18	27	9	18	54	27	108	27	54	81	9		
1286	Cavalry (1 regiment),	1	2	3	1	2	6	3	12	3	10	13	1		
676	Engineers (1 Battalion),		2	2		2	2	4	8	10	4	6			
1492	Artillery (9 Batteries),		9	9		9	9		18	27	18	27			
154	Signal Corps. (1 Company),		1	1		1	1		2	3	1	3			
500	Field Hospitals (4)*,	4	24	28	12	52	228	180	472	500	28	76	104	40	32
211	Medical Depts., with troops														
278	Trains (Divisional)														
19432	Total	18	57	75	23	87	307	219	636	711	75	173	248	40	42

*Field Service Regulations, U. S. Army, 1904.

†Including Ambulance Co. Section.

INFANTRY AND CAVALRY SCHOOL AND STAFF COLLEGE.

Fort Leavenworth, Kansas, November 19th, 1904.

A wounded man falls on the firing line; if able to do so he renders himself 1st aid by applying the contents of the packet which every man carries for this purpose, or else he awaits the arrival of the regimental bearers, unless, as has happened, a considerable body of his comrades constitute themselves a guard of honor to escort him off the field. In due time he finds himself at the regimental aid station where if necessary his bandages are readjusted, and from whence, if unable to walk he is carried by the bearers of the ambulance company to the ambulance station where he is loaded into an ambulance wagon and is driven back to the Dressing Station.

Thence in due time he is carried back to the field hospital, and thence through the fixed hospitals on the *etape* lines, by wagon, rail, or boat to the base, where he is disposed of as his case may require.

As previously stated the proposed field service regulations have apparently done away with the dressing station feature of the ambulance company, with the idea doubtless as also previously stated, of moving the field hospital right up to the dressing station location, thus rendering unnecessary the second move. This is a very radical departure from anything proposed or adopted by other nations, though we had no "dressing stations," so called, in the civil war, and it remains to be seen whether it is an inspiration of genius or otherwise. It certainly is an experiment.

Let us now consider what demands are likely to be made upon the divisional sanitary organization.

The current sickness, more or less serious, is not likely to be less than 4 per cent, say 800 daily. The net result of a battle may be estimated at 10 per cent *hors de combat*. A total sick and wounded of say, 2,800. Of this number 560 would be killed, 2,240 would require care, and 558 transportation in ambulance wagons, or by other means.

To accommodate these 2,240 invalids there are available 432 cots and a like number of bed sacks, so that 1,376 of the whole would have to be provided for as circumstances might permit. Even if we reduce our estimate of ill and injured one half to 7 per cent, there would still be nearly 700 men unprovided for. Germany and Japan mobilize 1,200 beds per division against our 864 (including bed sacks) and yet the proposed field service regulations as issued for comment authorize but two field hospitals per division. Fortunately, it is understood, this has been increased to four, upon which our estimate is based, and we are now only 33 per cent behind the best.

To move 558 patients requiring transportation there are now to be allowed 40 ambulance wagons. As the present pattern will carry 4 recumbent patients, each will be required to make at least three round trips of about three miles each, taking say five hours, which is not excessive; but had the allowance been continued at the proposed number (20) it would have required ten hours to get the wounded from the aid station to the dressing station.

A report by the Medical Director of the Army of the Potomac in the civil war furnishes a glimpse of the organization, equipment and working of a field hospital in that army. He wrote:

"The first division of the second army corps numbered 8,000 men in twenty-one regiments, organized into four brigades. To it were allowed for medical purposes 22 hospital tents, **14** army wagons, and 4 medicine wagons. Six of the army wagons were loaded with regimental medical property, 4 with brigade supplies, two with hospital tents, one with cooking utensils and three hundred rations, and one with blankets, beef stock, whiskey, chloriform, bandages, lint, etc. An operating table was established for each brigade, with corresponding (medicine) wagon beside it, otherwise brigade and regimental organizations were ignored.

“The surgeons in chief were ex-officio the operating surgeons. Thirty-six regular hospital attendants, in a distinctive uniform prepared and distributed food, dressed wounds, and generally cared for the patients. During battle the drum corps of the division, 350 men and boys, organized into companies, and properly officered, was put on duty in the hospital. From these details were made to pitch and strike tents, move the wounded, procure water and wood, bury the dead, and do general police duty. A provost guard was present with the hospital during an engagement to arrest malingerers and restore stragglers to their commands. In a few divisions of the army the hospital tents were pitched by brigades.”

From front to rear and throughout the country the best authorities agree that the sanitary department should have available hospital beds equaling in number 25 per cent of the forces.

5 per cent of these should be at the front,
 5 per cent on the lines of communication,
 10 per cent at the base,
 5 per cent in reserve.

Another illustration borrowed from our civil war. “On December 7, 1864, the capacity of the military general hospitals of the United States was **118,057** beds, of which number 83,400 were occupied.” At this date the roster strength of the army was 950,000 so that it will be seen that in these hospitals alone the medical department was responsible for 9 per cent of the army, and this was in addition to the thousands of sick in the field organizations, convalescent camps, en route, etc. Certainly not less than 6 per cent more.

The tactical handling of the medical department on the march is a matter of some moment, which seems to have been lightly touched upon in our proposed field service regulations. The tentative publication of these as shown in the

cavalry journal placed the ambulance companies, field hospitals, etc., "at the end of the main body, ahead of the rear guard."

By this arrangement there would not be a single ambulance wagon within five miles of the advance guard. Attention was invited to this fact and the regulations recently issued in preprint read (215) "when an engagement is confidently expected * * * one of the field hospitals for each division should also be close at hand, if possible ahead of the ammunition sections, again 648" On ordinary marches the field hospitals will march in rear of the last regiment of the division. Par. 647 would indicate that ambulance wagons are to be detailed to regiments as the succeeding paragraph reads "The regimental ambulances will rejoin the ambulance company sections before an engagement"

In my reading of orders issued by our various commanders, I recall but one locating a field hospital and that was General Bell's order at Manassas. In this connection I venture to quote from Home's *Precis*. "It is always most useful and instructive to examine marches that have been really made and to see how in the face of actual war the theories that have been thought out in time of peace have been put into practice." Home then follows with the order of march of the 5th corps of the Prussian Crown Prince's army prior to the action of Wiessenberg on August 4th, **1870**. In this order it is observed that a half sanitary detachment marched with the advance guard that with the main body there were two and a half sanitary detachments and five field hospitals distributed throughout the column and seven reserve hospitals marched with the train.

It must be that the Crown Prince, like the French second, expected bloodshed. Should not we also?

A British Division has a bearer company with the advance guard, one together with a field hospital with the main body, and two field hospitals with the train.

A typical order of march of a French Infantry Divis-

ion shows with the advance guard an ambulance detachment, in advance of the *train de combat*, and in advance of the heavy baggage two field hospitals.

The following is suggested as a proper distribution of the proposed field medical organization of a division en route

With advance guard, 1 ambulance company section,

With main body, 2 field hospitals (less 1 ambulance section) ,

With Rear Guard, 1 field hospital,

With Train, 1 field hospital.

The foregoing sketch of the organization of the medical department of an army in active service touches only the high places of a subject regarding which libraries have been written, but a knowledge of which seems to be slow in reaching those most interested ; the line officers. At a gathering of officers sometime since, was read a paper on the field sanitary organization of some armies: This apparently excited quite an interest in the minds of the foreigners present, who seemed for the first time to have heard of the details of such organization in their own forces. This was gratifying in a sense, since it proved that our officers knew as much of this subject as those of other armies. Not so many years ago an officer of some prominence in our service asked me if anything had been written on the subject of military sanitary organization, saying that he had never run across anything. Ye Gods ! If I have succeeded in impressing upon your minds the fact that there is such a thing as military sanitary organization and, as a corollary, that it demands of its administrators and executors not only a knowledge of the scientific treatment of disease and injury but a very exact military training and execution, then will this effort not have been in vain.

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QUESTIONS.

1. How is the service of the Medical Department in the field divided? Name the organizations in each part.

2. Give the strength of the sanitary personnel of the different organizations of a division.

3. What percentage of medical officers and enlisted men of the Hospital Corps is required with service at the front?

4. Give an outline of the prescribed duties of the Medical Department in active service.

5. What is the duty of the regiment to its wounded? State how this is met, giving personnel, material, etc.

6. Describe the Ambulance Section of the field hospital :

(a) Personnel.

(b) Equipment.

(c) Function.

7. What is the maximum accommodation of a field hospital ?

8. What demands will probably be made upon the sanitary organization of a division in battle, and how are they to be met?

g. Give the different steps by which a man wounded on the firing line finally reaches the base hospital.

10. How would you distribute the sanitary department of a division en route in the vicinity of an enemy?