

## **Manual of exercises for stretcher-bearers and bearer companies**

### **Publication/Creation**

1878

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MANUAL OF EXERCISES  
FOR  
STRETCHER-BEARERS AND  
BEARER-COMPANIES.



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MANUAL OF EXERCISES  
FOR  
TRAINING STRETCHER-BEARERS  
AND BEARER-COMPANIES.

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Published by Authority.

WAR OFFICE, HORSE GUARDS, *February, 1878.*

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*C.A. Millman*  
*Capt: Surgt:*  
*1st N.D.E.V.*

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MANUAL OF EXERCISES

TRAINING STRETCHER-BEARERS

AND BEARER-COMPANIES

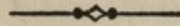


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MANUAL OF EXERCISES  
FOR  
TRAINING STRETCHER-BEARERS  
AND BEARER-COMPANIES.\*

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PRELIMINARY REMARKS.†

1. On taking the field the medical department with an army corps will be made to include a distinct military organization, designed exclusively for the purpose of speedily removing the wounded from the battle-field.

2. The soldiers by whom this duty is to be performed are designated "Stretcher-Bearers," or "Bearers," and the unit of the organization the "Bearer-Company."

3. The following is a detail of one "bearer-company," including the ambulance wagons of the 1st and 2nd line:—

\* By Sandford Moore, B.A., F.S.S., Instructor at the Training School of the Army Hospital Corps.

† See Field Hospital Regulations issued with Army Circulars, dated 1st January, 1878.



## DETAIL OF A

Officers and Men.	Cadre.	To be added on taking the Field.			
		Reserve from Aux. forces.		A.S.C. for Transport purposes.	
		Bearers.	Bâtmén.	Drivers.	Others.
OFFICERS.					
Surgeon-Major (in command) .. ..	1	..	..	..	..
Surgeons-Major .. .. .	3	..	..	..	..
Surgeons .. .. .	4	..	..	..	..
OTHER OFFICERS.					
Captain of Orderlies .. .. .	1	..	..	..	..
Lieutenant of Orderlies .. .. .	2	..	..	..	..
Transport Officer .. .. .	..	..	..	..	1
Total Officers .. .. .	11	..	..	..	1
N.-C. OFFICERS AND MEN.					
	A. H. C.				
Serjeant-Major .. .. .	1	..	..	..	..
Serjeants .. .. .	10	..	..	..	2
Corporals .. .. .	10	..	..	..	2
Corporal Saddler .. .. .	..	..	..	..	1
" Wheeler .. .. .	..	..	..	..	1
" Farrier .. .. .	..	..	..	..	1
Private Shoeing-smith .. .. .	..	..	..	..	1
Privates .. .. .	15	95	..	..	..
Drivers .. .. .	..	..	..	{ 24 }	..
Bâtmén, &c. .. .. .	..	..	11	{ 23 }	1
Total N.-C. Officers and Men	36	95	11	47	{ 9 }
					{ 1 }
Total Cadre { Officers .. ..	11				10
{ A. H. C. .. ..	36				
Total to be added on taking the Field	163				
Grand Total .. ..	210	163			



# PRELIMINARY REMARKS.

3

## BEARER-COMPANY.

Horses, Saddlery, and Harness.		Tentage and Camp Equipment.	
	Number.		Number.
<b>HORSES.</b>		<b>TENTS.</b>	
Riding {	Officers { private	Operating tents (double circular, without lining), one with each surgery wagon	2
	public		
	N.-C. Officers ..		
Total Riding ..	15	Tents for Officers (circular single) ..	6
		„ N.-C. Officers and Men, do.	17
			23
Draught .. .. .	88		
Spare .. .. .	6		
Total Draught..	94		
Grand Total Horses	109		
<b>SADDLERY.</b>		<b>CARRIAGES.</b>	
N.-C. Officers ..	11	G. S., for Tentage, 4-horsed .. ..	2
		Ambulance, 2-horsed .. .. .	10
			23
		Surgery (pattern not yet approved), 2-horsed .. .. .	2
		Wagon for Equipment (any Service pattern available), 2-horsed .. ..	2
			39
<b>HARNESS.</b>		Water Carts .. .. .	2
Double sets, interchangeable, lead and wheel .. ..	47	Supply Cart .. .. .	1
Spare .. .. .	1	Total Carriages .. .. .	42



4. The bātmen and reserve bearers shown in the foregoing tables, under the heading "to be added on taking the field," are obtained from the Militia Reserve; and the transport officer, the non-commissioned officers and drivers, required for transport purposes, from the Army Service Corps.

5. The wagons shown as "surgery wagons" are carriages specially fitted with instruments, medical and surgical appliances, and a supply of medical comforts, beef tea, arrowroot, port wine, and brandy. They are so arranged that the contents can be got at instantly. These, and the other store wagons, will remain at the "dressing station."

6. A certain fixed proportion of the wheeled transport provided per "bearer-company" is *reserve* transport, and consists of twenty-three ambulance wagons, which are known as the *wagons of the 2nd line*, and which generally are made to follow the army corps at a distance of half a march, being brought up only when a necessity for their employment arises.

N.B.—The *wagons of the 2nd line* may be locally supplied. It is recommended, however, that as far as possible regulation ambulance wagons should be used, and only the horses be procured on the spot.

7. When the wounded begin to arrive at the "dressing station," the *wagons of the 2nd line*, or as many of them as are wanted, under an officer of orderlies, will be brought up in order to transport the wounded to the field hospitals.



8. "Bearer-companies," with the exception of the *wagons of the 2nd line*, as a rule are to move immediately in rear of the troops to which they are attached.

9. One "bearer-company" is attached to each of the infantry divisions of the army corps and one to the corps troops, including the cavalry brigade, making a total in all of four "bearer-companies" for service with the army corps.

10. A "bearer-company" attached to a division will be under the command of the general commanding the division; the principal medical officer being responsible for its movements and disposal.

11. When operations are about to be carried on in a hilly country, one of the four "bearer-companies" attached to the army corps will be supplied with mountain equipment in place of the usual amount of wheeled transport. The detail of a "bearer-company" with mountain equipment is as follows:—



## DETAIL OF ONE BEARER-COMPANY,

Officers and Men.	Cadre.	To be added on taking the Field.			
		Reserve.		A.S.C. for Transport purposes.	
		Bearers.	Batmen.	Muleteers.	Others.
OFFICERS.					
Surgeon-Major (in command) .. ..	1	..	..	..	..
Surgeons-Major .. .. .	3	..	..	..	..
Surgeon .. .. .	4	..	..	..	..
OTHER OFFICERS.					
Captain of Orderlies .. .. .	1	..	..	..	..
Lieutenant of Orderlies .. .. .	2	..	..	..	..
Transport Officer .. .. .	..	..	..	..	1
Total Officers .. .. .	11	..	..	..	1
N.-C. OFFICERS AND MEN.		A. H. C.			
Serjeant-Major .. .. .	1	..	..	..	..
Serjeants .. .. .	10	..	..	..	2
Corporals .. .. .	10	..	..	..	2
Corporal Saddler .. .. .	..	..	..	..	1
" Wheeler .. .. .	..	..	..	..	1
" Farrier .. .. .	..	..	..	..	1
Private Shoeing-smith .. .. .	..	..	..	..	1
Privates .. .. .	15	95	..	..	..
Muleteers .. .. .	..	..	..	50 or 56	..
Bâtmen, &c. .. .. .	..	..	11	..	1
Total N.-C. Officers and Men	36	95	11	50 or 56	9
					1
Total Cadre { Officers .. ..	11	166			
{ A. H. C. .. ..	36				
Total to be added on taking the Field	166				
If Tents are carried, add .. .. .	6				
Grand Total .. .. .	219				



# PRELIMINARY REMARKS.

7

## WITH MOUNTAIN EQUIPMENT.

Horses, Saddlery, and Harness.			Number.	Equipment.			Number.	
HORSES.					(50) (26) CACOLETS AND LITTERS.			
Riding	{	Officers { private	4	Pairs	.. .. .	76		
		public	8					
		N.-C. Officers ..	3					
Total Riding Horses			15	TENTS.				
Pack Animals	{	for Patients .. ..	76	Operating Tents .. .. .	}	2		
		for Equipment ..	11					
		for Operating Tents	2					
		for Surgery Appli- ances .. .. .	2					
		for Water Bags ..	4					
		Spare .. .. .	5					
Total .. ..			100	Blankets.. .. . 820 lbs. Kettles, Flanders .. 212 lbs. Ropes and picketing imple- ments .. .. . 571 lbs. Officers' baggage } 560 lbs. " cooking pots }	}	2163 lbs.		
If tents are carried, add .. .. .			12					
Total Pack Animals			112					
Grand Total .. ..			127	CAMP EQUIPMENT.				
SADDLERY.					Field Panniers for Surgery Appliances .. .. .			2 pairs
Fing P. r	{	Saddles .. .. .	100	Water Bags or Barrels ..	}	4 pairs		
		.. .. .						
		If tents are car- ried add .. .. .	12					



12. It is intended to vary the general plan of assisting the wounded according to the extent and character of the fight. In minor actions, where the number of wounded is inconsiderable, assistance will be rendered, not by the "bearer-company," but by the regimental\* bearers, employed for this purpose, under the direction of the medical officers attached to regiments, the object being strictly to limit the use of "bearer-companies" to those occasions alone when large numbers of wounded have to be collected and removed.

N.B.—Should the numbers appear to be more than even the "bearer-companies" themselves can cope with, supplementary aid may be obtained by a proportion of regimental bearers being detached for duty with each "bearer-company" as a temporary measure.

13. A "bearer-company" is to be divisible into a right and a left half-company, each complete in every way, and capable of acting separately. The company or half-company, as the case may be, is to be under the entire control of the medical officer in command, who is responsible through the officer commanding the troops, to the principal medical officer, for its efficiency at all times. The horses are to be maintained by the commissariat, but are not to be removed except by order of the general.

---

\* Two men per company throughout the infantry regiments of the service are now directed to be trained to act as bearers. Stretchers for their especial use are to be carried for them on a company cart.



## Part I.—THE TRAINING OF BEARERS.

---

THE main purpose for which the bearer is designed is, as has already been stated, to assist during the progress of an engagement in collecting and removing to the rear those who fall wounded. It must not be lost sight of, however, that there are other subsidiary duties which occasionally devolve upon him. In the absence of a surgeon, for instance, he must be prepared to give such *immediate attention* to the severely wounded as the nature of the case demands, and he must also give water to any wounded man who may require it (for this purpose every fourth bearer will carry a dressing pouch and a tin water-bottle). The bearer must likewise collect the equipment, weapons, &c., belonging to the wounded and the slain, and remove them to a place of safety; and lastly, he must take his share of the guards which require to be found for the wagons, &c., of the "bearer company" when on the line of march.

So far, then, as technical training is concerned, it will be evident that not only must the bearer be thoroughly grounded in all that appertains to the transport of the wounded, but he must receive such instruction as will enable him to apply what is technically known as the "first dressing" on the battle-field; in point of fact, the bearer, to a certain extent, must also be a dresser.

The period of training will, as a general rule, occupy



about four weeks. The theoretical and practical portions of the instruction—for there are both—should be carried on at the same time; in this way, by practical application, the theoretical part will be much more easily and firmly impressed.

As to theoretical training, this will be given by the instructor in the following elementary subjects:—

1. The general anatomy of the human body, including a brief account of the osseous, muscular, and nervous systems; the important organs and their uses; and of the circulation of the blood; in all of which large anatomical diagrams will be found an invaluable assistance.

2. The different appliances used as a “first dressing”; lint, tourniquets, splints, and bandages.

3. A description of the wounds most commonly met with in the field, and especially gun-shot wounds, and their early treatment.

4. The immediate treatment of the apparently drowned, suffocated, or strangled; of cases of sun-stroke, epilepsy, &c., and other cases of emergency.

5. The mode of distinguishing real from apparent death.

6. And lastly, a description of ambulance material generally; the mode of handling, and the position of the wounded, according to the nature of the injury, when being carried on the same, and the medical arrangements on the modern battle-field; the instructor being particularly careful to dwell at considerable length on the part played by the individual bearer, and to represent to him the very great importance of his calling.



The practical training will of course include the application of the "first dressing," the lifting and laying of "wounded," and the loading and unloading of the various forms of ambulance material, as well as handling the same. On no account whatever should the instructor allow the class to pretend to load or unload. "Dummy" wounded should be provided on all occasions that loading or unloading is undertaken, else correct handling and transport of the wounded cannot be attained.

The drills and exercises which will be found in the succeeding chapters are arranged with a view to facilitate and expedite the instruction of a large number of men at a time in the transport of the wounded; these and such instruction in the more strictly professional and theoretical subjects as are needful to fit the bearer to undertake the duty of dresser, should invariably be imparted by, or in the presence, and under the direction of a medical officer. The instructor should constantly bear in mind that, particularly in the rank and file, he has to deal with men of very different powers of comprehension, many of whom have no previous knowledge whatever of the subject; great patience and the utmost distinctness of expression therefore are necessary on his part.

It will perhaps be found advantageous for surgeons acting as instructors to pursue the following daily routine: to begin the work of the day by a lecture on one of the elementary subjects above mentioned; then for a drill with ambulance material of some sort to take place, to be succeeded by an exercise in the practical application



of dressings, tourniquets, &c., and, finally, to close the work of the day by a second drill with ambulance material.

No one of these drills, exercises, or lectures should occupy longer than one hour. If intermixed in the manner indicated, an hour may, however, with safety and without the least fear of exhausting the would-be bearer's attention, be devoted to each—making a total of four hours of daily instruction. At the end of a month the bearer systematically and thoroughly instructed in this way will be quite prepared to join the “bearer-company,” or to act in the capacity of regimental bearer when so required.



## SECTION I.—Stretcher\* Exercise.

THERE are two different descriptions of stretcher in the service, viz. the old and the new pattern (Figs. 1, 2, and 3); these, though differing from each other in certain essential points of construction, agree in their capability of being folded up into a small compass with a view to economize space in stowage. For a full account of the various points of difference, a description of each, and other matters connected with the carriage of wounded men on stretchers, reference should be made to the 'Manual of Instructions for the Army Hospital Corps,' pages 166, *et seq.*† Suffice it briefly here to say that the parts of a stretcher are the two poles, two traverses, a canvas bottom, a pillow, and two slings.

A detachment of bearers should be told off to accompany each stretcher, two men to carry it at a time, and

---

\* Called *hospital bearer* in the 'Vocabulary of Stores,' p. 70.

† Quite recently (April 27th, 1877) the new pattern stretcher has been altered in the following particulars:—

The canvas is tanned a darker colour, two rollers are fitted to the legs, and the keys securing the latter are so formed as to hold them rigid when down.

The fittings of the new pattern stretcher will for the future be made of cast steel.

The stretcher so altered is the one referred to throughout this Manual.



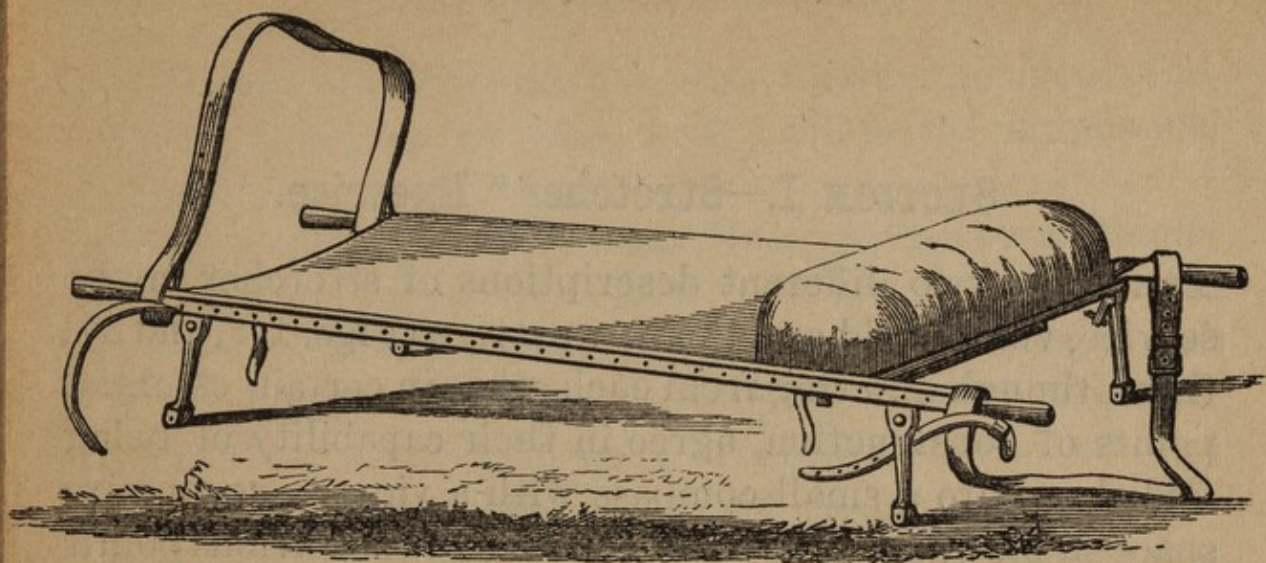


FIG. 1. The New Pattern Stretcher.  
(Pillow used only in the wagon.)

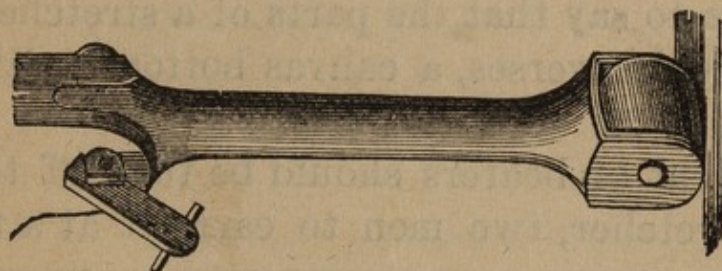


FIG. 2. One Leg of the  
New Pattern Stretcher.

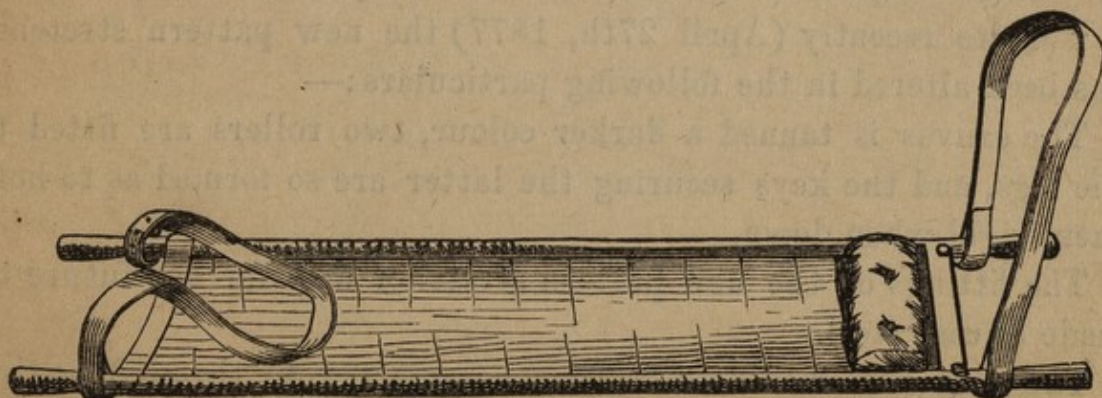


FIG. 3. The Old Pattern Stretcher.



two to act as a relief. It should be distinctly understood, however, that upon the reserve men will likewise devolve in addition the duty of removing from the field the arms and accoutrements of the wounded and slain.

Every such detachment is called a *stretcher detachment*; four *stretcher detachments* constitute a *section*, which when practicable will invariably be under the command of a serjeant or other non-commissioned officer.

The collective bearers of a "bearer-company" are consequently divisible into six *sections*, each under the command of a serjeant: the remaining spare serjeants and bearers are intended for service at the "dressing stations" and for replacing casualties.

On active service, or for drill purposes, troops detailed to carry stretchers will parade in drill order without arms, or if armed, with side-arms only.

Previous to the parade the folded-up stretchers will be laid on the ground wherever the parade is ordered, in a row at intervals of thirty inches, in such a manner as to allow of the bearers being drawn up a dozen paces in rear of and facing them, the head end of each stretcher next the parade, and the total number of stretchers to correspond with the number of *stretcher detachments* about to be exercised.

If from any cause there be not time before the parade, or the nature of the ground from accumulations of mud, water, &c., forbid it, the stretchers may in that case be left in a heap on the ground or in a wagon in rear of the company: after the formation of the com-



pany into *stretcher detachments*, the guides will march the No. 3 bearers to the heap or wagons, where the men will receive their stretchers while filing past, and then be marched back to their respective *stretcher detachments* and directed to *ground stretchers*.

#### THE FIRST FORMATION OF A COMPANY OF STRETCHER-BEARERS.

"*For stretcher exercise from right to left, Size.*"

"*Number.*"

"*Fours deep. On the right, close.*" "*Quick march.*"

"*Front rank, No. 1 bearers.*"

"*Second rank, No. 2 bearers.*"

"*Third rank, No. 4 bearers.*"

"*Rear rank, No. 3 bearers.*"

"*No. 1, No. 2, &c., bearers.*" "*Stand at ease.*"

*Company* : "*Attention.*"

"*Number by fours from the right*" and "*Post commanders.*"

"*Number the sections.*"

"*Stand to stretchers.*" "*Quick march.*"

"*Take up stretchers.*"

"*Ground stretchers.*"

"*For stretcher exercise from right to left, Size.*" The troops detailed for stretcher exercise, and who will have fallen in two deep, are first sized from right to left of both ranks, so that each stretcher detachment may be composed of men of as nearly as possible the same height. Having been once sized the men should remember their places, and when required for drill fall in accordingly.

"*Number.*" "*Fours, deep.*" "*On the right, close.*" "*Quick march.*" Fours deep are next formed, and the company



is then closed on the right. Each four men as they now stand, taking them from front to rear, constitute a stretcher detachment, and belong to the same stretcher, the front-rank man being the No. 1 bearer, the two middle ranks the Nos. 2 and 4 bearers respectively, and the rear-rank man the No. 3 bearer of the stretcher.

*"Front rank, No. 1 bearers; second rank, No. 2; third rank, No. 4; and rear rank, No. 3 bearers."* The numbers are now proved by the instructor as follows:—"No. 1 bearers, No. 2, &c.," in succession, *"Stand at ease."*

*"Company, Attention."* *"Number by fours from the right, and post commanders."* The company is then numbered from the right in sections of fours; and the captain, on receiving the order *"Post commanders,"* posts a commander to each section, the guides to the flank sections, the markers or other non-commissioned officers to the intermediate ones, each commander falling in two paces in rear of the centre of his section, and as a fifth or supernumerary rank, the captain himself in his usual place.

On the command *"Number by fours from the right,"* the right-hand man of the front rank calls out *"One,"* the second from the right *"Two,"* the third *"Three,"* the fourth *"Four,"* the fifth from the right *"One,"* and so on again to the left of the company successively by fours.

*"Number the sections."* The sections are then told off and numbered, and the numbers proved by the instructor. On the word *"Sections"* the commander of each section calls out the number of his section, *"No. 1," "No. 2,"* &c., in succession, from right to left.



“*Stand to stretchers.*” “*Quick march.*” If the stretchers have been laid out in a row in the manner already described, the company will now be marched on them. On the word “*March,*” the whole step off in the direction of the row of stretchers, the No. 1 of each detachment selecting a point to the left of the stretcher intended for his detachment to march upon. Each bearer on reaching his post on the left of the stretcher halts without further word of command, No. 1 taking care to have his toes in a line with the front end of the stretcher poles, No. 3 his heels in a line with the rear or pillow end of the poles, No. 2 one pace in rear of No. 1, and No. 4 one pace in front of No. 3, every man close up to and touching the poles with the right foot. On the other hand, should the stretchers not have been laid out, but lie in a heap or in a wagon in rear of the company, the command will be given by the instructor, No. 3 bearers “*Left (or right) turn.*” “*File on stretchers.*” “*Quick march.*” And after the men have received their stretchers and passed the heap, the guide who has marched them over will give the command “*Left (or right) about wheel,*” and on reaching the left (or right) of the company “*Left (or right) form.*” “*Ground stretchers.*” The stretchers during this movement will be carried by each man on the right shoulder at the slope, pillow end uppermost, until the order to *ground* them is given.

When the order to “*Ground stretchers*” is given, No. 3 stoops down without moving his feet, places the stretcher quietly on the ground, pillow end to the rear, and rises to attention.



“*Take up stretchers.*” The stretchers will next be taken up. To do this the Nos. 1 and 3 stoop down, and lay hold of both handles of the poles with the right hand, and then rise to attention together, holding the stretcher at the full extent of the arm. To *ground stretchers* from this position, Nos. 1 and 3 stoop down, place the stretcher on the ground, and rise up together.

The stretchers having been issued in this manner to the various detachments, the company may in the next place be practised in marching to the front and rear in close and extended order, all of which movements will be conducted on the principles laid down in Part II., Sections 1-24, ‘Field Exercise,’ and also in moving in column of *sections*.

N.B.—When the company in line is ordered to retire, or if retiring to advance, the men will be made to turn about towards the folded-up stretcher, the Nos. 1 and 3 transferring the handles from the right (or left) to the left (or right) hands at the same time.

In a subsequent part of the drill, where the stretchers are *opened out*, the line will be retired, or if retiring, advanced, by each stretcher detachment wheeling to the right-about, No. 3 marking time on his own ground until the stretcher becomes square.

“*Change stretchers.*” The folded-up stretcher may at any time be changed from one hand to the other. If required to be done at the halt, on the word “*Stretchers*” the Nos. 2 and 4 take two side paces to the left (or right), upon which the Nos. 1 transfer the poles from their right



(or left) to their left (or right) hands, behind their backs, and the Nos. 3 giving the Nos. 1 time to make the transfer, advance the stretcher in front of their bodies and transfer the poles to the opposite hands. On the march the change can be effected in a similar manner, the Nos. 2 and 4 moving to their places by the diagonal march.

“*Move to the right (or left) in fours.*” “*No. 2 (or 4) to take the stretcher.*” “*Right (or left) turn.*” When circumstances necessitate a quick movement to either flank, instead of wheeling by sections, the men will be turned in the direction required by the words “*right (or left) turn.*” No. 2 (or 4), whichever number is named, taking the stretcher and placing it on his right shoulder at the slope, and with the pillow end uppermost. To resume the forward movement, the command “*left (or right) turn*” is given, upon which every man will turn to the front, the stretcher will be brought to the trail and the handles grasped again by the Nos. 1 and 3.

At this stage of the drill the company will be formed up preparatory to being dismissed, or to the repetition of the exercise, by the following words of command:—  
“*Ground stretchers.*” “*Right-about turn.*” “*Quick march.*” “*Halt.*” “*Front.*” “*From the right re-form two deep.*” “*Quick march.*” “*Right dress.*” “*Right turn.*” “*Dismiss.*” —or, “*Fours deep,*” &c., &c., “*Stand to stretchers.*” “*Quick march.*”



## TO PREPARE STRETCHERS FOR USE.\*

*“Open out stretchers.” “Prepare stretchers.” “Fold up stretchers.”*

Bearers having been thoroughly instructed in the foregoing drill, will next be taught the mode of preparing stretchers for use, and for this purpose (the company having taken up stretchers) will be extended at intervals of four paces, then halted, and the order given to ground stretchers.

*“Open out stretchers.”* On receiving this order, Nos. 1 and 3 of each detachment turn to the right, immediately stoop down, kneel on the left knee, and unbuckle the transverse straps of the leather slings by which the poles are kept together, and separate the poles. They then each take up a sling, double it twice, keeping the dressed side of the leather and the buckle outside, and then lay hold of it at the centre with the right hand in such a manner as to have the thumb in front of the loop, the fore-finger inserted in the loop, and remaining fingers in rear of the loop—buckle of the sling to the front. This done, the Nos. 1 and 3 of each detachment simultaneously stand up,—those on the left working by the Nos. 1 and 3 of the right stretcher detachment, who will look to the left and give the time—and stand to stretchers. Nos. 2 and 4 of each detachment, while this is being done, remain steady.

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\* It will be found advantageous to parade the men with knee-caps for this and all other exercises with stretchers.



“*Prepare stretchers.*” If of the *old pattern*, the stretchers will be prepared as follows :—On receiving the command Nos. 1 and 3 of each detachment take a side pace to the right over the pole of the stretcher, No. 1 then turns to the right-about so as to face No. 3, Nos. 2 and 4 of each detachment now turn to the right, and immediately the whole kneel down on the left knee. Having placed the slings on the ground, Nos. 1 and 3 insert the hooks of the iron traverses in the openings of the poles, taking care to have the staples to which the traverses are attached on the inner side of the poles and facing each other, and then proceed to stretch the *canvas bottom* to the full extent and distribute it equally between the traverses—not nearer one traverse than the other. While this is being done, No. 4 of each detachment passes the leather thongs of the pillow through the eyelet-holes in the canvas bottom and ties them in a bow knot underneath and the cord lashes\* are made fast by being wound three or four times round the end of the traverse and the pole and then tied in a bow knot. Nos. 1 and 2 of each detachment securing the cord lashes on their left, Nos. 3 and 4 those on their right hand respectively. Directly the cord lashes are secured Nos. 1 and 3 of each detachment take up slings, and the whole acting simultaneously stand

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\* The cord lashes are meant not only to retain the hooks of the traverses in the openings in the poles, but also, by keeping the canvas on the stretch, to assist in preventing its bagging when the stretcher is loaded.



up, those on the left working by the right stretcher detachment, who give the time, and then stand to stretchers in the following order:—No. 1 fronts, Nos. 1 and 3 take a side pace to the left, and Nos. 2 and 4 turn to the left.

The *new pattern* stretcher, on the other hand, will be prepared in the following manner:—Nos. 1 and 3 of each detachment take the side pace to the right, No. 1 turns to the right-about, and Nos. 2 and 4 turn to the right as in the case of the old pattern stretcher, but before proceeding to kneel down Nos. 1 and 3 in this case first reverse the stretcher over towards Nos. 2 and 4, and then all kneel down. Nos. 1 and 3, having placed the slings beside them on the ground, now straighten the traverses and run the binder over the joint of each, Nos. 2 and 4 set free the legs and arrange the keys so as to make them rigid, upon which Nos. 1 and 3 immediately reverse the stretcher again over towards Nos. 2 and 4, and set it on its legs; whereupon Nos. 1 and 3 of each detachment take up slings, and working by the right all stand up and stand to stretchers precisely as in the case of the old pattern stretchers.

When it becomes necessary to "*fold up stretchers*" Nos. 1 and 3 of each detachment step in between the poles, and Nos. 2 and 4 turn to the right, and, if the stretcher is the old pattern, all kneel down as in the manner already indicated for preparing. These preliminaries attended to, No. 4 at once unfastens the pillow at the end nearest to him and turns it in along the opposite pole, Nos. 1 and 2 unfasten the cord lashes on their left,



Nos. 3 and 4 those on their right, Nos. 1 and 3 then unhook the traverses and turn them in along the poles, and the near pole is then brought over on top of the opposite one; as soon as this has been accomplished every man stands up, Nos. 1 and 3 of each detachment still facing each other, lift the stretcher off the ground, and proceed to wrap the canvas round the poles, supporting it while so doing by resting the ends of the poles against their thighs. In the meanwhile Nos. 2 and 4 take up the slings and extend them on top of the package, taking care that they are free from any twist, that the dressed side of the leather is outside, and a transverse strap at either end. The transverse straps are then buckled tightly round the poles and canvas so as to confine these in as small a compass as possible, upon which every man fronts, Nos. 1 and 3 retaining hold of the stretcher poles. The only point of difference in *folding up the new pattern stretcher* is that after the men step into their places, the stretchers must first be reversed towards Nos. 2 and 4 before the whole kneel down; the binders are then slipped from over the joints of the traverses and the legs set loose and buttoned up, when the poles can be approximated and the package confined by the transverse straps of the leather slings and the men front, as in the case of the old pattern stretcher.

To repeat the exercise the order "*Ground stretchers*" will have to be given, and then to proceed as before.



## TO LIFT AND LOWER STRETCHERS.

"*Lift stretchers.*" "*Two.*" "*Three.*"

"*Lower stretchers.*" "*Two.*"

The principal point to be attended to in lifting and lowering stretchers is unity of action on the part of Nos. 1 and 3 bearers of each stretcher; No. 3 must be habituated from the first to work simultaneously with No. 1, to wait for No. 1 should the latter not happen to be ready to lift or lower as soon as he is, or to call out "*Stand fast,*" should No. 1 be in advance of him, and then "*Go on,*" when ready. When the men, standing to prepared stretchers, are directed to lift them it will be done in the following manner:—

"*Lift stretchers.*" Nos. 1 and 3 of each detachment take a side pace to the right over the pole and close their heels; they then each place a sling over their shoulders, dividing it equally and with the buckle end over the right shoulder.

"*Two.*" They stoop, slip the loops of the slings over the ends of the poles, commencing with the left, and then firmly grasp the poles; after a short pause the word "*Three*" is given by the instructor, upon which Nos. 1 and 3 of each detachment steadily raise the stretcher off the ground and stand up holding the stretcher at the full extent of the arms; during the operation No. 3 must closely conform to the movements of No. 1, so that the horizontal position of the stretcher may be maintained throughout. Directly Nos. 2 and 4 perceive that Nos. 1



and 3 have stood up, No. 2 takes a pace to his front and then wheels to the right-about in front of No. 1, No. 4 turns to the left-about, and both men then adjust the slings on the neck and shoulders of Nos. 1 and 3 respectively, taking care not only that the leather is well below the level of the collar of the frock, but that they lie accurately in the hollow of the shoulder in front. As soon as these points have been attended to, No. 2 turns to the right and wheels to the left-about into his place, upon which Nos. 2 and 4 front together, the whole working by the right stretcher detachment, which will look to the left and give the time.

*"Lower stretchers."* On the caution, *"Lower,"* Nos. 1 and 3 of each detachment will be prepared to stoop; and on the word *"Stretchers,"* both men lower the stretcher very cautiously on the ground, No. 3 again closely conforming to the movements of No. 1. They then each proceed to slip the loops of the slings off the ends of the poles; stand up, remove the slings from off their shoulders, double them, and hold them in the right hand in the manner already described. On the word *"Two,"* Nos. 1 and 3 stand to stretchers.

This exercise may then be repeated, or the stretchers folded up.

#### TO MARCH WITH STRETCHERS.

*"Advance."* *"Retire."* *"Right (or left) incline."* *"Halt."*

[ The main purposes to be kept in view in marching with a stretcher are as follows:—Firstly, the mode of progres-



sion of the bearers should be so regulated as to avoid any impulses being thereby communicated to the stretcher. This can be best accomplished by the broken step, a short pace not exceeding twenty inches, allowing no springing from the fore part of the foot; and, lastly, by keeping the knees well bent while the advance is being made. And, secondly, the stretcher must be maintained on all occasions in the horizontal position, or in a position as near to the horizontal as possible, the inclination downwards, in the latter case, being towards the feet of the patient, so as to ensure the greatest amount of safety to the person who is being carried upon it. Men of the same height are therefore selected to act together as bearers; and, on sloping ground, the general rule\* for the bearers is, to carry the foot end of the stretcher foremost down hill, but the head end foremost up hill.

“*Advance.*” The stretchers having been lifted, and the order “*Advance*” given, No. 4 of each detachment at once doubles round by the head of the stretcher to the centre of the opposite pole, and No. 2 steps short two paces, which brings him also to the centre of the stretcher. In the meantime, No. 1 of each detachment steps off with the left foot, and No. 3 with the right; both taking a short pace, not to exceed twenty inches in length, in quick time, keeping the knees well bent, feet close to the ground, and using the hip joints as little as possible. At “*Retire,*” each stretcher detachment will wheel to the right-about,

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\* Further particulars are given in the Appendix.

Also vide General Rules pp 100 et seq.



the No. 3 of the detachment marking time till the stretcher is square. At "*Halt*," Nos. 1 and 3 halt; No. 2 takes a pace to his front, and No. 4 doubles round by the head of the stretcher to his former position on the left of the stretcher.

N.B.—The *broken step* will require much practice and frequent repetition before the proper carriage of wounded men on stretchers can be secured.

#### TO LOAD AND UNLOAD STRETCHERS.

"*Take post at the right (or left) of the wounded.*" "*Advance.*"

"*Ground slings.*"

"*Lift wounded.*" "*Two.*" "*Three.*"

"*Lower wounded.*" "*Two.*"

"*Lift wounded.*" "*Two.*" "*Three.*"

"*Lower wounded.*"

"*Two.*"

To place a patient on a stretcher involves three separate operations, viz.:—

The patient must be lifted off the ground by three men of the detachment;

The stretcher must then be laid on the ground immediately under him by the fourth man;

And the patient must then be lowered on the stretcher by the three men, assisted by the fourth.

The most essential point in conducting the lifting and laying is unity of action on the part of the bearers to whom it is entrusted, including, as it does, the proper distribution of the power (the bearers' hands and arms) under



the weight. No. 1 under the chest; No. 2 under the pelvis and buttocks; and No. 3 under the lower extremities. It must be distinctly understood by them that, although each man is to raise a certain part of the weight of the patient's body, all must act in concert, or else his injuries and sufferings may be seriously aggravated by want of attention to this point.

For this exercise, the company will be formed in extended order at six paces interval, and the men standing to prepared stretchers will ground slings, and be allowed to stand at ease. A party of men, proportionate to the number of stretcher detachments, and provided with canvas suits to protect their clothing, will now be marched in front of the company and directed to lie down: each patient will place himself perpendicular to the company, with his head towards it,\* and at about one dozen paces in front of a stretcher. The instructor will now order the slings to be taken up and the stretchers to be lifted.

*"Take post at the right (or left) of the wounded."* *"Advance."* The caution will now be given to the company at which side of the wounded the stretchers are to be placed; which, on service, will vary according to the nature of the ground, and this will immediately be followed by the word *"Advance."* Each stretcher detachment then

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\* It will be readily understood that the precise position of the wounded, laid down here, is for purposes of drill only. When the bearers are thoroughly acquainted with the exercise, the wounded may be distributed at random, in any position.



moves off towards its corresponding patient; having reached his side, a halt is made without further word of command, the No. 4 of the detachment being held responsible for the position of the stretcher. When lowered, it should be but one pace distant, and in a line with the patient's body, its head and foot corresponding with his head and feet respectively. The instructor, seeing that this has been correctly carried out, then will order the stretchers to be lowered; the men to stand to them and to ground slings. (To "ground" slings, Nos. 1 and 3 stoop down, place the sling on the canvas, close up to the pole and opposite their feet, each sling resting on edge of the leather and with loop to the rear.)

"*Lift wounded.*" On receiving this order every detachment moves off.

If the stretcher has been placed on the *right* of the patient, Nos. 1, 2, and 3 wheel to the left-about, close round by the patient's feet, and No. 4 to the right-about, round by the foot of the stretcher, continuing the wheel in every instance until No. 1 comes opposite the patient's shoulders, No. 2 opposite the pelvis, No. 3 opposite his knees, and No. 4 opposite the centre of the uncovered side of the stretcher. Each man, on reaching his appointed place, halts, and the whole turn inwards together; No. 4 to the right, Nos. 1, 2, and 3 to the left, and facing No. 4.

If the stretcher has been placed on the *left* of the patient, No. 4 stands fast, while Nos. 1, 2, and 3 wheel to the right-about past the foot of the stretcher and close round by the patient's feet to the appointed places before



described; the whole then turn inwards together, i. e. to the right, Nos. 1, 2, and 3 facing No. 4.

“*Two.*” The whole stoop down and kneel on one knee (the left of the stretcher has been placed on the right of the patient, and *vice versâ*). No. 4 now lays hold of the poles of the stretcher at their centre, grasping the near pole with his left hand and the opposite with his right, and stands ready, immediately on the patient being raised, to place it under him. In doing so he is to take care, firstly, not to knock it against the three other bearers’ feet and legs; and, secondly, to lay it exactly under the patient, and also to arrange the slings properly upon it.

At the same time, Nos. 1, 2, and 3 proceed to lay hold of the patient’s body. No. 1 passes one hand round by the opposite axilla, under the patient’s neck, the other under the patient’s shoulder which is nearest to him, and he is to avoid touching a broken arm. No. 2 passes one arm under the patient’s loins, and the other below his buttocks. No. 3 passes both arms under the lower extremities; if there should be a fracture, one hand above and one below the seat of the fracture, in order to support it. As it facilitates the lifting, the patient, if he possibly can, is now to clasp one or both arms round the neck of No. 1.

At “*Three*,” Nos. 1, 2, and 3, acting together, slowly rise from the stooping posture, and stand up; the horizontal position of the patient’s body being maintained throughout the movement. No. 4 places his stretcher and falls in opposite the three bearers, and, for additional security, assists in supporting the patient.

“*Lower wounded.*” All four bearers will now lower



the patient and place him in the centre of the stretcher, and one after the other carefully remove their hands from under him, and stand up, the right detachment giving the time to the remainder, as usual.

"*Two.*" The men now stand to stretchers by the shortest road. This will vary, according to which side of the patient the stretcher has been placed originally. *If on the right*, Nos. 1, 2, and 3 now turn to the right, and No. 4 to the left, and all wheel to the right-about round to their places.

*If on the left*, the whole now make a left turn, and Nos. 1, 2, and 3 wheel to the right-about round to their places.

Slings may then be taken up, the stretchers lifted, and the company practised marching with loaded stretchers; after which the stretchers will be lowered, slings grounded, and the stretchers unloaded.

"*Lift wounded.*" At this order each detachment moves off. Nos. 1, 2, and 3 wheel to the left-about, and No. 4 to the right-about, to their appointed places; the whole halt, and turn inwards together.

At "*Two*," all proceed, as before described, to lay hold of the patient and stretcher; No. 4, in this instance, being prepared to draw away the latter on the patient being raised.

At "*Three*," the patient is raised and the bearers stand up. No. 4 draws away stretcher, and then assists Nos. 1, 2, and 3, until the patient is lowered, passing round by the head of the stretcher for this purpose.



*"Lower wounded."* The patients will be lowered, made to stand up, and marched to the front again, with a view to repeating the exercise.

On the word *"Two,"* the men will stand to stretchers, as follows: the whole turn to the right; Nos. 1, 2, and 3 left-about wheel to their places, No. 4 subsequently closing in to his place.

#### TO CHANGE THE NUMBERS.

In order to qualify each member of the stretcher detachment to perform all the duties, the numbers must be changed. This will be done by the following words of command, when the men are standing to prepared stretchers:—

*"Nos. 2 and 4 two paces left-close." "Quick march."*

*"Nos. 1 and 4 right-about turn."*

*"The whole Quick march." "Mark time." "Front turn."*  
*"Halt."*

*"Stand to stretchers." "Quick march."*

The Nos. 2 and 4 now become the Nos. 1 and 3.

Or, Nos. 1 and 2 can be made to change places with Nos. 3 and 4, by

*"Nos. 1 and 2 two paces left-close." "Quick march."*

*"Nos. 1 and 2 right-about turn." "The whole Quick march."*

*"Mark time." "Front turn." "Halt."*

*"Stand to stretchers." "Quick march."*



## SECTION II.—Loading and Unloading Ambulance Wagons.

AMBULANCE wagons, like stretchers, are of two different descriptions in the service, viz. those of the old and new patterns. For a full account of these reference should be made to the 'Manual of Instructions for the Army Hospital Corps,' pages 205-213.\* It is sufficient here to say that six wounded men are intended to be carried in each wagon, no matter what the pattern; two severely wounded lying down in the body of the wagon, and two lightly wounded sitting on both the front and hind seats.

In each pattern the front seat is approached by a ladder and the hind seat by a step attached to the tail-board, and the recumbent patients are carried on stretchers resting on the floor of the wagon, the new pattern stretcher alone, however, being adapted for use in the new pattern

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\* Quite recently (27th April, 1877) several alterations and additions have been made in the new pattern wagons. Rollers being now added to the legs of the new pattern stretchers, all previous fittings for the stretchers (page 211 of the 'Manual') are removed. The front and hind standards are fitted with straps, so as to admit of four stretchers being carried folded up, two on each side of the wagon, and straps are fixed to the centre of the roof to carry the pillows belonging to the stretchers. Straps, with buckles and loops, are attached to the bottom of the wagon, under the stretcher, for securing rifles. In future the flanges of the wheels will be of cast iron. The wagon, so altered, is the one referred to throughout this Manual.



wagons, a special "wagon stretcher" for use in the old pattern wagons. From this, as a matter of necessity, it follows, that the introduction of recumbent patients into the old pattern wagons must always—into the new must sometimes, when the patients happen to be brought to the wagon on any but new pattern stretchers—be preceded by all the inconveniences of a transfer of the wounded man from one form of stretcher to another.

#### LOADING AND UNLOADING WOUNDED REQUIRING THE RECUMBENT POSTURE.

(a) Wagons of the Old Pattern.

(b) Wagons of the New Pattern.

##### (a) WAGONS OF THE OLD PATTERN.—LOADING.

"Stand to stretchers." "Quick march."

"For loading, take post at the wagons." "Advance."

"Lower stretchers." "Two."

"Ground slings." "Stand at ease."

"Right stretcher detachments." "Attention."

"Lift wounded." "Two." "Three."

"Lower wounded." "Two."

"Lift wagon stretchers." "Two." "Three."

"Load." "Two." "Three."

"Stand to stretchers." "Quick march."

"Stand at ease."

"Left stretcher detachments." Do. Do. Do.

"Company." "Attention." "Take up slings."

"Lift stretchers." "Two." "Three." "Retire."

Previous to the parade the wagons, in the proportion of one to every two stretcher detachments about to be



exercised, will be drawn up in single rank at one end of the parade ground, at half intervals, and with the hind part towards the ground on which the parade of the company is ordered to be held. The company will then be paraded at a point about thirty paces in rear of the line of wagons, and the instructor will form it into stretcher detachments in the manner already laid down in Section I., and tell off the detachments as right and left detachments, the odd numbers being the right, the even the left, detachments.

Half-way between where the company parades and the line of wagons, a row of prepared stretchers, old or new pattern, according as the wagons are old or new pattern, will be laid out at four paces interval, and at the foot of each a patient, wearing a canvas suit to protect his clothing, and with or without a rifle and valise, will be directed to stand. The order will now be given, "*Stand to stretchers.*" "*Quick march,*" upon which each detachment will proceed by the shortest road to its stretcher. The patients will at the same time be directed to lie down at full length on the stretchers, and the company on reaching the stretchers to take up slings and lift stretchers, preparatory to a move being made to the immediate rear of the wagons for loading.

"*For loading, take post at the wagons.*" "*Advance.*" On the word "*Advance,*" the line of stretcher detachments advances in the appointed manner towards the line of wagons, every pair (a right and left) of stretcher detachments selecting a common point, the wagon intended for



them, to march upon: the right pair of detachments marches by the shortest road to the wagon on the extreme right of the line of wagons, the next pair to the wagon next to it, and so on in succession to the left of the line, the advance in each instance being continued until a point one stretcher's length in rear of the wagon is reached by the No. 1 of the detachment; a halt is then made without further word of command, No. 3, if need be, immediately closing to his right or left the distance required to bring the stretcher directly in line with the floor of the wagon. The right stretcher detachment to be directly in rear of the off compartment, and the left directly in rear of the near.

While the advance is being made, and when the stretchers are ten paces distant from the wagon, Nos. 2 and 4 of each detachment double out in front of the stretcher and proceed to the hind end of the wagon, and lay down the rifle, valise, &c., belonging to the patient on the ground, outside the near hind wheel, withdraw the linch pins, pull down the tail-board, lift up the back-board and place it on the ground alongside the patient's equipment; by the time that this is done the detachment to which they belong will have halted, and this they now proceed to rejoin. The instructor will then direct the stretchers to be lowered and the men to stand to them. "*Lower stretchers.*" "*Two.*" "*Ground slings.*" "*Stand at ease.*"

As both stretchers cannot be introduced or removed at one and the same time, on account of the limited space



in rear of the wagon for the men to work in, the right stretcher detachments will be directed to load, or unload, as the case may be, first, and the left allowed to remain standing at ease during the operation.

With wagons of the old pattern the patients must first be transferred from the ordinary stretcher to the "wagon stretcher." The lifting and laying for this purpose is to be conducted in the usual manner, as described in Section I., and by the following words of command, "*Right stretcher detachments.*" "*Attention.*" "*Lift wounded.*" "*Two.*" "*Three.*" At "*Three,*" No. 4 of each detachment, the moment the patient is lifted clear, draws the stretcher away four paces to the right of the detachment, doubles to the end of the wagon, and commences to draw out the off "wagon stretcher," looking to the No. 4 of the detachment on the extreme left for the time; then standing on the right of the stretcher, and laying hold of it at its centre, left hand over on the pole opposite him, right hand under on the pole nearest him, so as to keep the stretcher horizontal after its removal from the wagon, he draws it completely clear of the wagon, moves with it to the rear, and places it on the ground immediately underlying the patient (taking care in doing so not to knock it against the feet or legs of the other men of the detachment), and then, for additional security, assists in supporting the patient. While supporting the patient in this position, every man of the detachment will place the fore part of his left foot on the stretcher pole, so as to help to steady himself and the stretcher. "*Lower wounded.*"



“*Two.*” The patient is next lowered, and the men ordered to stand to stretchers.

“*Lift wagon stretchers.*” On this command, No. 3 of each detachment turns to the left about, and then Nos. 1 and 3 move round by the head and foot of the stretcher respectively to the opposite side, and halt opposite the ends of the pole; at the same time Nos. 2 and 4 take a pace, the former to the front, the latter to the rear, so as to be opposite Nos. 1 and 3. All the numbers now turn inwards together towards the patient, Nos. 2 and 4 facing Nos. 1 and 3.

“*Two.*” The whole stoop and lay hold of the poles of the stretcher. Nos. 2 and 3 grasp the ends of the poles with their left hands, and the centre of the poles with their right. Nos. 1 and 4, on the other hand, grasp the ends of the poles with their right hands, and the centre with their left, palms of the hands in every case to be uppermost: care must also be taken not to insert the fingers in the space between the upper and lower framework of the stretcher, lest they may get jammed.

“*Three.*” The four bearers of each detachment by a simultaneous movement now lift the stretcher off the ground and stand up, holding it at the full extent of the arms.

“*Load.*” The men advance with the stretcher towards the end of the wagon, the front and rear rank men breaking step during the advance, and carrying the stretcher very steadily, and halt one pace distant from the floor without further word of command. On the word “*Two,*”



the stretcher is raised on a level with the floor, and the front pair of wheels are placed resting upon it. Nos. 1 and 2 now retire in rear of Nos. 3 and 4, and the latter give the stretcher the proper direction for insertion, and then, avoiding all jerking and jolting, slowly introduce it, until the rear pair of wheels touch the end of the floor. At the same time No. 1 doubles round by the off side of the wagon, and springs up on the fore-carriage, so as to be ready to guide the poles of the stretcher, when they come within his reach, into the openings prepared for them in the front-board.

“*Three.*” The rear end of the stretcher is lifted up, and the rear pair of wheels placed resting on the floor, and the stretcher then pushed home. This accomplished, No. 1 jumps down from the fore-carriage, the No. 1 of the detachment on the extreme right giving the time to the remainder, and rejoins his detachment, which now falls in in single rank in rear of and facing the wagon, No. 3 being on the right, No. 1 on the left, and Nos. 2 and 4 between.

On the command “*Stand to stretchers,*” every man of the right detachments turns to the right, and on “*Quick march,*” the whole move to the right until the No. 3 of each detachment reaches a point opposite his stretcher; each detachment then makes a right wheel, files on the stretcher, halts, fronts, and takes post in the usual manner. The right detachments will then be allowed to stand at ease.

The left detachments having been called to attention will be directed to load in a similar manner, the only



points of difference being that, on the patient being lifted No. 4 of each detachment will draw away the stretcher only as far to the right of his detachment as to be just clear of the line of the off hind wheel; and further, before standing to stretchers, No. 2 of each detachment will replace the back-board *in situ*. Both stretcher detachments of each wagon having in this way loaded, the company will be directed to "*Take up slings,*" "*Lift stretchers,*" and "*Retire*" to the original alignment, where the detachments will be formed up as before, the stretchers lowered, and slings grounded, preparatory to unloading.

#### WAGONS OF THE OLD PATTERN.—UNLOADING.

"*For unloading, take post at the wagons.*" "*Advance.*"  
 "*Right stretcher detachments.*" "*Unload.*" "*Two.*" "*Three.*"  
 "*Lower stretchers.*" "*Two.*"  
 "*Left stretcher detachments.*" *Do. Do. Do.*  
 "*Company.*" "*Attention.*" "*Return wagon stretchers.*"  
 "*Retire.*" "*Stand to stretchers.*"

"*For unloading, take post at the wagons.*" "*Advance.*"  
 The stretcher detachments in pairs now advance to the wagons, the right pair to the wagon on the extreme right, the next pair to the wagon next to it, and so on from right to left, each detachment halting directly in rear of its wagon, and opposite and at one pace distant from the compartments, the right detachments opposite the off, and the left detachments opposite the near compartments, as before, No. 1 to be next the wagon, and



Nos. 2, 4, and 3 to be correctly covering No. 1. The left detachments will then be allowed to stand at ease.

“*Right stretcher detachments.*” “*Unload.*” On this command, Nos. 1 and 3 of each detachment take a side pace to the right, No. 2 a pace to his front, and No. 4 a pace to his rear.

“*Two.*” No. 2 of each detachment now lifts up the back-board and places it on the ground outside the near hind wheel; he then returns to the end of the wagon, when both he and No. 1 lay hold of the off “wagon stretcher,” both men grasping the poles nearest to them, the former with his left hand and the latter with his right, and both then very steadily and slowly commence to draw it out until its front wheels rest on the end of the floor.

“*Three.*” The bearers of each detachment standing nearest the wagon—Nos. 1 and 2—now transfer the head end of the stretcher to the Nos. 3 and 4, and then themselves proceed to lay hold of the foot end, upon which it is lifted clear of the wagon, and carried a stretcher’s length direct to the rear, when the detachment will halt without any further word of command. The men will next be directed to “*Lower stretchers,*” and stand to them, the patients to stand up and move to the foot of the stretchers, where they are to remain until ordered to the rear for a repetition of the exercise.

The left detachments will then unload in a similar manner. On the command “*Return wagon stretchers,*” the Nos. 4 of the right detachments double round to the



opposite side of the stretchers, lay hold of them as before, and then working by the left replace them in the wagons, and return to their detachments; the same thing is then done by the Nos. 4 of the left detachments, who, however, in addition will replace the back-boards before rejoining.

The company, and "wounded"—having procured their rifles and valises—will then be retired in rear of the line of stretchers, the former directed to stand to stretchers, and the latter to lie down on them if the exercise is to be repeated.

(b) WAGONS OF THE NEW PATTERN.—LOADING AND UNLOADING.

The new pattern wagon is loaded and unloaded in almost a precisely similar manner to the old, and by the same words of command, with one exception, and that is, since the new pattern stretcher is adapted for use in the new pattern wagon, the patient requires no transfer. Of course, should a patient happen to be conveyed to the new pattern wagon on any other than the new pattern stretcher, a transfer will still be necessary.

Words of command, no transfer being necessary:—

LOADING.—

*"For loading, take post at the wagons." "Advance."*

*"Lower stretchers." "Two." "Fix slings." \* "Stand at ease."*

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\* Nos. 1 and 3 of each detachment now attach the slings to the traverses of the stretcher by buckling the transverse straps round the traverses, in such a manner as to have the slings extended between the traverses below the canvas bottom; here they are not in the way, and will be ready for use when the stretcher is unloaded.



*"Right stretcher detachments."* *"Attention."*  
*"Lift stretchers."* *"Two."* *"Three"* (as if wagon stretchers).  
*"Load."* *"Two."* *"Three."*  
*"Right turn."* *"Right wheel."* *"Halt"* (abreast of left stretcher detachments). *"Front."*  
*"Left stretcher detachments."* *Do. Do. Do.*  
*"Company."* *"Retire."*

UNLOADING.—

*"For unloading, take post at the wagons."* *"Advance."*  
*"Right stretcher detachments."* *"Unload."* *"Two."* *"Three."*  
*"Lower stretchers."* *"Two."* *"Remove slings."*  
*"Left stretcher detachments."* *Do. Do.*  
*"Company."* *"Lift stretchers."* *"Two."* *"Three."*  
*"Retire."*

The company will then be retired, and the exercise repeated.

LOADING AND UNLOADING WOUNDED ABLE TO SIT  
 UPRIGHT.

After the stretchers have been introduced, and the men thoroughly instructed in the exercise, they will be taught to assist patients who are supposed to be able to sit, into hind and front seats. They should be practised in lowering the ladder provided to facilitate ingress and egress to the latter, and in lashing it up again; also in putting away articles of equipment, rifles, valises, &c., in the various positions assigned for them in the wagon.



### SECTION III.—Improvised Methods of removing the Wounded.

WHEN stretchers and other regular means of conveyance are not available, wounded men may be transported short distances by various improvised methods. The principal of these are the 2, 3, and 4-handed seats, by which two bearers can form a seat adapted for the removal of a patient able to assume the sitting posture, and the *musket stretcher*, by which four bearers can remove a patient in the recumbent posture.

The company will first be practised in *forming* these seats and stretchers.

#### TO FORM 2, 3, OR 4-HANDED SEATS.

“*Rear rank two paces step back.*” “*Slow march.*”

“*Form 2, 3, or 4-handed seats.*” “*Two.*”

“*Front.*”

“*Close order.*” “*March.*”

“*Rear rank two paces step back.*” “*Slow march.*” The company having been sized as for stretcher exercise, will first have the ranks opened. “*Form 2, 3, or 4-handed seats.*” The right files make a turn to the left and the left files turn to the right, so as to face each other. “*Two.*” A 2, 3, or 4-handed seat is now made. *The 2-handed seat, by the bearers joining the front pair of hands together, the left files locking the fingers of the left hand with the*



fingers of the right hand of the right files, palms uppermost, at the same time crossing the unoccupied hands and arms as if they were placed round the loins of a patient sitting in the seat. *The 3-handed seat* by the right files grasping the thick portion of the left forearm with the right hand—the left files then grasping the right forearm of the right files with the left hand, and the right files the left forearm of the left files with the disengaged hand. The hand which the left files have still disengaged is then made to rest on the adjoining shoulder of the other bearers so as to form a back support. *The 4-handed seat* by both bearers grasping the left forearm with the right hand, and then grasping the disengaged forearms with the disengaged hands, backs uppermost; they thus mutually support each other and are mutually supported.

“*Front.*” On the word “*Front,*” the men smartly drop the hands to the sides and turn to the front. “*Close order.*” “*March.*”

#### TO FORM MUSKET STRETCHERS.

*Stores required, Rifles and Rugs.*

“*Prepare musket stretchers.*” “*Take up arms and rugs.*”

The company having been sized as for stretcher exercise, the rifles (with bayonets fixed) and rugs will be served out, the rifles to every right file, front, and rear rank (or No. 1 and No. 4), and the rugs to every front-rank man (or No. 2) of the left files. The rifles to be held at the order, and the rugs rolled and fastened by a strap to be worn across the right shoulder. The formation of the company



will then be proceeded with on the principles laid down in Section I., and the stretcher detachments extended at four paces interval.

*"Prepare musket stretchers."* On this command all the Nos. turn to the right, Nos. 2 and 4 of each detachment remain steady, but Nos. 1 and 3 take two paces to their then front, halt, and turn to the right-about—as soon as Nos. 2 and 4 see this they each close outward so as to cover Nos. 1 and 3—upon which No. 2 takes the rug off his shoulder, unbuckles the strap, and throws one end of the roll to No. 3, who assists him in unrolling it and then spreading it out evenly lengthwise between the four men; as soon as Nos. 1 and 4 perceive that the rug is ready they stoop down and lay the rifles on the ground under the edges of the rug, one on either side, muzzles to the front, butts to the rear, hammers facing inwards (if old pattern). All the Nos. now proceed to roll the rugs tightly round the rifles, a like number of rolls round each, until the space between the two rifles measures thirty inches, the rolling then ceases, the men stand up and stand to stretchers, as follows:—Nos. 2, 3, and 4 of each detachment turn to the left, No. 1 to the right; No. 1 then wheels to the left-about to his place, halts, and fronts. No. 3 wheels to the right-about round by the head of the stretcher to his place. No. 2 steps back and No. 4 steps forward a pace, while Nos. 1 and 3 are wheeling.

*"Take up arms and rugs."* No. 3 of each detachment now turns to the left-about, Nos. 1 and 3 go round to the opposite side, Nos. 2 and 4 close outwards and cover



Nos. 1 and 3. The whole then turn inwards together, and kneel down on left knee and unroll the rug. Nos. 1 and 4 take up the rifles while Nos. 2 and 3 roll up the rug as follows:—The foot end will be brought up to the head end and the whole then rolled from the head end towards the foot, upon which the strap is buckled round the ends. No. 2 then puts the rug over his shoulder and all the Nos. stand up, Nos. 2 and 4 still facing Nos. 1 and 3. The whole immediately form detachment as follows: Nos. 2 and 4 take two side paces inwards, Nos. 1 and 3, two paces to their then front, upon which the whole front together.

#### TO LIFT AND CARRY WOUNDED BY IMPROVISED SEATS.

##### TWO-HANDED SEATS.

*"Rear rank right-about turn."* *"Quick march."* *"Halt."*  
*"Front."*

*"Ranks from the left (or right) extend."*

*"By 2-handed seats lift wounded."* *"Two."* *"Three."*

*"Lower wounded."* *"Two."*

*"Ranks on the left (or right) close."*

*"Rear rank."* *"Quick march."* *"Halt."*

*"Rear rank right-about turn."* *"Quick march."* *"Halt."*  
*"Front."* The company having been sized, the rear rank will be retired to ten paces from the front rank. A party of "wounded," in the proportion of one to every two bearers, will then be extended at four paces interval in front of both ranks, and directed to sit down, back towards the bearers.



N.B.—The wounded should wear canvas clothing and the company be provided with knee-caps.

“*Ranks from the left (or right) extend.*” On the word “*Extend*,” the two men on the flank named stand fast, the remainder turn outwards and extend, the supernumeraries pacing along the line and seeing that every two men halt immediately in rear of a patient.

“*By 2-handed seats lift wounded.*” The right half files now take an oblique pace to the right front with the right foot, and the left to the left front with the left foot, each man then makes a left and right turn respectively so as to face each other. “*Two.*” Both bearers kneel on the knee next the patient’s feet, and at once form a 2-handed seat beneath his thighs. “*Three.*” They steadily rise together, lifting the patient off the ground, close their heels, and jam the patient’s body in between and against their own, passing their unoccupied hands and arms round his loins and pelvis to give him support.

If required to advance, both bearers will step off with opposite feet, the right half files with the right and the left half files with the left feet; the left half files looking to the right for the dressing.

If to retire, the right half files will mark time and bring the left round, both men moving on when square.

“*Halt.*” “*Lower wounded.*” At this command both men stoop and kneel down and place the patient sitting on the ground, disengage their hands quietly, and rise to the erect position.

“*Two.*” Both men front and take an oblique pace to



the rear, the right half file to the left rear, and the left half file to the right rear. This will bring them to their original position; the ranks can then be closed, the wounded marched to the rear, the rear rank advanced, and the parade dismissed, or the exercise be repeated.

### THREE AND FOUR-HANDED SEATS.

*"Rear rank right-about turn." "Quick march." "Halt." "Front."*

*"Ranks from the left (or right) extend."*

*"By 3 or 4-handed seats lift wounded." "Two." "Three."*

*"Lower wounded." "Two."*

*"Ranks on the left (or right) close."*

*"Rear rank quick march." "Halt."*

The company and "wounded" parties will be arranged as in the former exercise, except that the wounded will be placed standing.

*By 3 or 4-handed seats, lift wounded."* The bearers now turn so as to face each other, preparatory to forming 3 or 4-handed seats. *"Two."* 3 or 4-handed seats are formed. The bearers then stoop, bending the knees slightly, and place the seat under the patient's buttocks. The patients at the same time are to pass both arms over the bearers' heads, and place them on their shoulders. *"Three."* The bearers steadily rise together, lifting the patient off the ground and closing in as they do to his body. Advancing and retiring will then be practised, as in the former exercise.

*"Lower wounded." "Two."* The patients are placed



standing, and the bearers take up their original position; when the exercise may be repeated, or the company dismissed, as in the former exercise.

#### LOADING AND UNLOADING, AND MARCHING WITH MUSKET STRETCHERS.

*"Take post at the right of the wounded." "Advance."*

*"Prepare musket stretchers."*

*"Lift wounded, &c."*

*"Lift musket stretchers." "Two." "Three."*

*"Lower musket stretchers."*

*"Lift wounded."*

*"Take up arms and rugs."*

Rifles and rugs having been served out to the company, and detachments formed, and a party of "wounded" extended in front at four paces interval, the musket stretcher detachments will be directed to *"Take post at the wounded,"* to *"Prepare musket stretchers,"* and then to *"Lift"* and *"Lower"* the wounded in the manner before detailed. On the command, *"Lift musket stretchers,"* the men will range themselves round the stretcher in precisely the same manner as described in Section II. for lifting the "wagon stretcher," with this one exception, that on the word *"Three,"* a very firm grasp of the rug must be taken by every man, else the weight of the patient will cause the rug to unroll, and so expose the patient to the risk of a fall.

In advancing or retiring, it will also be remembered



that Nos. 2 and 4 must step off with the left foot if Nos. 1 and 3 step off with the right, a broken step being necessary. After some practice in marching, the stretchers will be unloaded, and arms and rugs taken up. If requisite to change the numbers, the command "*Ground arms and rugs*" will be given, upon which the rifles and rugs will be laid down on the ground, close to the men's feet, muzzles of the rifles to the front, and the numbers changed, as detailed in Section I. To repeat the exercise the command will be "*Take up arms and rugs.*" "*Take post at the right of the wounded.*" "*Advance,*" &c., &c., as before.



## SECTION IV.—Exercises with Mountain Equipment.

ON reference to the detail of a “bearer-company” with mountain equipment (page 7), it will be found that seventy-six pack animals (mules), each in charge of a muleteer, are to be provided per army corps for the conveyance of patients in mountain warfare. Fifty of this number are to be equipped with cacolets, or folding chairs, for the conveyance of those able to sit upright, and the remainder (twenty-six) with litters for those whose disability necessitates the recumbent posture.

Cacolets in pairs, and litters in pairs, are constructed to be hooked on pack-saddles, one on each side.

The pack-saddle used is the general service pattern, and that known as size No. 1. It consists of the following parts:—

One bit T bridoon, with rein.	One rein chain, tinned.
„ breeching, circular web.	„ saddle tree.†
„ collar, breast, circular web.	„ seat.
„ „ head-stall, circular web.	„ straps, baggage sets.
„ crupper, circular web.	„ „ crupper.
„ girths, circular web.	„ „ girth attached to tree.
„ pannels,* pairs.	„ surcingle, circular web.

\* The pannels are of straw, quilted into a canvas casing faced with curled hair and covered over with tanned canvas and cream drill linings. The harness is principally of circular web, with thongs of Priller's hide, in lieu of leather straps and buckles.

† The trees of these saddles are composed of iron arches and four



## TO SADDLE AND UNSADDLE.

"— *files on the right take post at the mules.*" "*Quick march.*"

"*Unsaddle.*"

"*Saddle.*"

The company will first be taught how to saddle and unsaddle. For this purpose, any number of mules not exceeding half a dozen, properly saddled and bridled in the first instance, will be led out in front of the company by the muleteers, and drawn up in line in extended order at six paces interval, and at about six paces from the front rank, facing the same direction as the company.

"— *files on the right take post at the mules. Quick march.*" On this command a file from the right of the company will move off to each mule; the right file to the mule on the right of the line, the second file from the right to the mule next to it, and so on in succession from right to left. On arriving at the hind-quarters of the mule, the front and rear rank men in each instance separate; the front-rank man to proceed to the near side, and the rear-rank man to the off. Both halt without any further word of command on reaching the saddle, and with the shoulders next the mule close in to the pannels, facing the front.

"*Unsaddle.*" The front-rank man now turns to the

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side-bars of beech, the lower ones on each side being designed to prevent undue pressure upon the animal's ribs, folding outwards by means of hinges to any required extent, but only inwards to a fixed angle, assumed to be that of greatest comfort to the animal.



right and sets loose the girths, commencing with the rear one. The rear-rank man moves round under the mule's head to the near side, and sets loose the breast and neck straps, and then returns to the off side, where he proceeds to pick up the breast and neck straps and the girths, all of which he then places upon the seat. Both men then sweep the saddle back on the mule's hind-quarters; the rear-rank man removes the crupper and places it upon the seat, seeing which the front-rank man grasps the saddle tree with both hands—hands between the hooks, palms downwards—and lifts it clear of the mule, taking a pace to his then rear as he does so.

“*Saddle.*” The front-rank man takes a pace towards the mule, and as he does so raises the saddle up and places it on the hind-quarters, whereupon the rear-rank man proceeds to pass the crupper, and then both men help to draw forward the saddle. The rear-rank man now draws down the girths and breast-straps. He then throws the neck-strap over the mule's neck, and with the breast-strap in his left hand goes under the mule's head to the near side, and buckles both in their appointed places, the latter to the pannel casing, the former to the breast-strap itself, returning to the off side in time to turn to the front with the front-rank man. Meanwhile the front-rank man girths, commencing with the front one, and both men then front together.

The first party of men having in this way been instructed how to saddle and unsaddle, they will be turned about, directed to rejoin the company, and allowed to



stand at ease, while the remainder of the company is put through the exercise.

#### CACOLETS.

A pair of the latest pattern cacolets weigh 56 lbs. Each cacolet consists of the following parts:—a seat, or cushion; two hanging bars, terminating in hooks by which the cacolet is attached to the pack-saddle, and certain parts designed to prevent the patient from falling out of the cacolet; a foot-board, and slings; two uprights, and a side rail, and back and waist straps. When not required for use, the pair of cacolets are constructed to fold up against the saddle, against which they can then be kept closely approximated by means of a surcingle.

#### TO HOOK ON AND UNHOOK CACOLETS.

*“—files on the right take post at the mules.” “Quick march.”*

*“Unhook cacolets.” “Two.”*

*“Ground cacolets.”*

*“Take up cacolets.”*

*“Hook on.” “Two.”*

For this exercise the mules (with cacolets folded up) will be placed by the muleteers in front of the company, in the same manner as directed for saddling.

*“—files on the right take post at the mules.” “Quick march.”* On this order, a file proceeds to each mule and takes post as in saddling. *“Unhook cacolets.”* Both men turn in-



wards towards the mule. The front-rank man loosens the surcingle, removes it, and places it on the ground at the muleteer's feet. Both men then simultaneously grasp the hooks of cacolets, fingers on the hooks, thumbs on the seats, so as to preserve the compact form of the package.

"*Two.*" They unhook the cacolets and take a pace to their then rear.

"*Ground cacolets.*" The packages are laid down on the ground at the men's feet, cushions uppermost, hooks pointing away from the mule, and foot-board on top, and both men rise up.

"*Take up cacolets.*" The men stoop, draw the foot-board aside, and lay hold of the cacolets as before, fingers on the edge of the cushion, so as to keep it close to the hanging bars, and rise up.

"*Hook on.*" Both men take a pace in the direction of the mule and raise up the cacolets to the requisite height for hooking on. "*Two.*" The four hooks are simultaneously dropped into their places, the surcingle passed, and the men turn to their front together.

The exercise will now be repeated with a fresh party of men.

#### TO PREPARE CACOLETS FOR USE.

"— *files on the right take post at the mules.*" "*Quick march.*"

"*Prepare cacolets.*"

"*Fold up cacolets.*"

The mules in front of the company, as before.

"— *files on the right take post at the mules.*" "*Quick march.*"



On the order a file proceeds to each mule and takes post as in the former exercise.

*"Prepare cacolets."* Both men turn inwards towards the mule. The front-rank man removes the surcingle, and places it on the ground at the muleteer's feet. The seats are then drawn down horizontal, the side rails raised, and the waist and front straps unbuckled.

*"Fold up cacolets."* The converse of the above. The waist and front straps are buckled, the side rails lowered, the seats pushed up to the saddle, the foot-boards placed on top and between the hanging bars, the surcingle then passed, and the men turn to the front together.

The exercise may then be repeated with a fresh party of men.

#### TO LOAD AND UNLOAD CACOLETS.

*"For loading. — files on the right take post at the mules."* *"Quick march."*

*"By 2-handed seats lift wounded."* *"Two."* *"Three."*

*"Load."* *"Two."*

*"Unload."* *"Two."*

*"Lower wounded."*

The mules in front of the company as before. The patients, provided with canvas clothing, will be placed sitting on the ground (backs towards the company), three paces in front of the cacolets.

*"For loading. — files on the right take post at the mules."* *"Quick march."* Two files now proceed to each mule, the right files to the near side, the left to the off. On reach-



ing the saddle they halt without further word of command. If the cacolets are found to be folded up the order will be given to prepare them, which will be carried into effect principally by the front-rank men. The rear rank will of course render what assistance they can. If on the other hand the cacolets are already prepared, the order will be given, "*By 2-handed seats lift wounded,*" upon which the men will advance and place themselves on each side of the patients, the front-rank men on their right, the rear-rank men on their left. On "*Two,*" they kneel down and form 2-handed seats, and on "*Three,*" they very steadily rise up together, lifting the patients off the ground as they do.

"*Load.*" Every file steps back to a cacolet, halting immediately in front of it.

"*Two.*" The patients are raised up as high as the cacolets, and put sitting in the seats, being directed to assist the bearers as much as possible while this is being done. The front-rank men then arrange the foot-boards under the patients' feet and secure the front straps, while the rear-rank men at the same time pass the waist-straps round the patients' waists and secure them. Each file then takes post outside the cacolet.

"*Unload.*" The converse of the above. The front-rank men unbuckle the front straps and remove the patients' feet from the foot-boards, and the rear-rank men unbuckle the waist-straps. This done, the whole place themselves about the patients, preparatory to forming 2-handed seats. On the near side the front-rank man takes post



between the mule's shoulder and the patient, the rear-rank man outside the patient. On the off side the rear-rank man goes inside, the front-rank man outside. Each file then forms a 2-handed seat under the patient's thighs, and both men circle the patient's waist with their disengaged hands and arms as far as possible.

"*Two.*" The patients are lifted clear and firmly grasped, and each file takes three paces to the front and halts. "*Lower wounded*" follows when the patients are put sitting on the ground and the men take post.

The exercise can then be repeated with a fresh party of men.

#### TO LOAD AND UNLOAD WITH REDUCED NUMBERS.

##### 3 BEARERS.

"*For loading. — detachments on the right take post at the mules.*"

"*Quick march.*"

"*By 2-handed seats lift wounded.*" "*Two.*" "*Three.*"

"*Load.*" "*Two.*"

"*Unload.*" "*Two.*"

"*Lower wounded.*"

When three bearers only are available, the cacolets will be loaded or unloaded one at a time, and one after the other.

The mules and patients will be drawn up as for the last exercise, and the company will be formed three deep, each three men constituting a detachment, as follows:—

Number by threes.

Threes right (or left).

Left (or right) turn.



On the right close. Quick march.

Front rank, No. 1 bearers; centre rank, No. 2; and rear rank, No. 3 bearers.

*"For loading. — detachments on the right, take post at the mules."* *"Quick march."* One detachment now moves off to each mule, Nos. 1 and 2 to the near side, No. 3 to the off. On reaching the saddle they halt, No. 2 in rear of No. 1. If folded up, the cacolets will first be prepared. If already prepared, the loading will be at once proceeded with. *"By 2-handed seats, lift wounded."* *"Two."* *"Three."* *"Load."* *"Two."* The patient opposite the near cacolet is first lifted and put into the near cacolet by Nos. 1 and 2, in the manner already described. No. 3 on the word *"Wounded,"* however, turns to the left and grasps the side rail of the off cacolet, so as to be prepared to counteract the weight of the patient when placed in the near cacolet, retaining hold until such time as the off cacolet is loaded, when he can let go his hold. The patient opposite the off cacolet is then lifted by Nos. 1 and 2 and put into the off cacolet, upon which No. 3 releases his hold, and proceeds to secure the straps and foot-board on the off side, while Nos. 1 and 2 do the same on the near. All the numbers then take post.

*"Unload."* No. 3 of each detachment doubles round to the near side, and falls in close behind the cacolet; Nos. 1 and 2 unbuckle the straps, &c., and form 2-handed seat; No. 3 then grasps the side rail, so as to counteract the weight in the opposite cacolet when the near is unloaded. *"Two."* *"Lower wounded."* The patient is



then lifted clear, and lowered. Then the off cacolet is quickly unloaded in a similar manner. All the numbers take post, are turned about, directed to rejoin the company, and the exercise repeated with others.

#### LITTERS.

A pair of the latest pattern litters weigh 106 lbs. As the cacolets are sometimes called *folding chairs*, the litters may with equal right be called *folding stretchers*. Each consists of an iron framework, jointed, in three parts—head, centre, and foot-piece (the head-piece is protected by a hood and provided with a pillow)—a canvas bottom, two uprights, and a side rail, hanging bars terminating in hooks by which the litter is suspended from the hooks of the pack-saddle, belly-band and suspension straps, and an apron.\*

When not required for use, the pair of litters are con-

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\* The apron is made of Russia duck, sufficiently large to cover the exposed portion of the litter with its sick or wounded occupant. The aprons are attached to the litters at their ends, the front end having seven button-holes corresponding with the leather buttons on the hood of the litter, and the rear having two leather thongs, each with button and button-hole for attachment to the bottom of foot-piece. The top of each apron is also provided with three beech toggles  $2\frac{1}{2}$  inches in length, with strong loops and one leather button; the former are for the purpose of securing the sides when rolled up for additional ventilation, and the latter for securing the front when turned back for the same purpose. The inner edge of the apron is notched in two places, to clear the hanging bars of the litter. (*Changes in War Materiel.*)



structed to fold up against the saddle, and are there retained by a surcingle.

TO HOOK ON AND UNHOOK LITTERS (FOLDED UP).

"— *files on the right take post at the mules.*" "*Quick march.*"

"*Unhook litters.*" "*Two.*"

"*Ground litters.*"

"*Take up litters.*"

"*Hook on.*" "*Two.*"

The mules will be brought on the ground with litters folded up, and placed by the muleteers in the same position as for cacolet exercise, but facing the company. "*— files on the right take post at the mules.*" "*Quick march.*" On this order a file proceeds to each mule, the front-rank man to the near side, the rear-rank man to the off. "*Unhook litters.*" Both men turn inwards; the front-rank man sets loose the surcingle, removes it, and places it on the ground at the muleteer's feet. The litters are then drawn down horizontal, and both men lay hold of them, the front-rank man right hand on outer rail, left hand on inner; the rear-rank man, left hand on outer rail, right hand on inner. At "*Two,*" both litters are unhooked, and the men take a pace to their rear. "*Ground litters.*" The litters are placed on the ground, hanging bars nearest the mule, and the men rise up. "*Take up litters.*" The men stoop, take hold of the litters as before, and rise up. "*Hook on.*" A pace is taken in the direction of the mule, and the litters raised to the requisite height for hooking on. "*Two.*" All four hooks are simultaneously dropped into their



places, the litters turned up against saddle, the surcingle passed, and the men front.

The exercise will then be repeated with fresh numbers.

TO PREPARE LITTERS FOR USE.

"— *files on the right take post at the mules.*" "*Quick march.*"

"*Prepare litters.*"

"*Fold up litters.*"

The mules in front of the company as before, with litters folded up.

"— *files on the right take post at the mules.*" "*Quick march.*" A file proceeds to each mule and takes post as in the former exercise.

"*Prepare litters.*" Both men turn inwards. The front-rank man removes the surcingle and then the litters are drawn down and opened out. First the foot-pieces are raised up and extended and then the head-pieces (the belly-band and suspension straps generally stowed away in the near litter are now removed and placed on the ground along with the surcingle). The joints are next fixed—beginning with the inner joint between the head and centre-pieces, then proceeding to the outer joint, then to the outer joint between the foot and centre-pieces, and ending with the inner joint between foot and centre-pieces—by passing a linch-pin through the holes in the iron framework and the thongs through the linch-pins to prevent them slipping out.

This done, the aprons are to be rolled lengthwise and placed on the inner side of the litter close to the hanging



bars—extended from the pillow to the footrail—the end with leather thongs at foot, the hood-rod straps are then laid at full length on top of the roll, upon which both men take up a position outside the centre-pieces facing the front.

“*Fold up litters.*” The converse of the above. The hood-rod straps are rolled up and put away in the hood at the top of the pillow, the aprons are folded up square, not so large as the pillow, and placed on the pillow, the belly-band and suspension straps placed on the centre-piece of the near litter, linch-pins withdrawn, commencing with the one inside the foot-piece and ending with the one inside the head-piece, each man returning to the centre-piece then folds up the litter, head-piece first, then foot-piece. The folded-up litters are now pushed up against the saddle, the surcingle passed, and the men front.

The exercise may then be repeated with fresh numbers.

#### TO LOAD AND UNLOAD LITTERS.

The following are the steps which must be undertaken for loading; first the litters must be prepared, then unhooked and lowered, then the patients lifted and laid on the litters, and finally the litters rehooked on the pack-saddle. For unloading, the litters must be unhooked first, then lowered, and then the patients removed.

This can be best accomplished with 8 or 6 bearers, it can also be done with 4.

The mules will be drawn up in front of the company



as before, with litters folded up. A patient will be directed to lie down on the ground in front of each litter, head next the litter and body in line with it when opened out.

#### TO LOAD AND UNLOAD WITH 8 BEARERS.

*"For loading. — detachments on the right take post at the mules." "Quick march."*

*"Prepare litters."*

*"Unhook litters." "Two."*

*"Lower litters." "Two."*

*"Lift wounded." "Two." "Three."*

*"Lower wounded." "Two."*

*"Lift litters." "Two." "Three."*

*"Hook on." "Two."*

*"Fix back suspension straps."*

*"Fix hood-rod straps, belly-band straps, and aprons."*

*"Prepare litters for unhooking, &c."*

The company will be formed four deep, and have the detachments numbered, the odd being the right and the even numbers the left detachments, the front rank<sup>a</sup> being the No. 1 bearers and the rear rank the No. 3 bearers, as in stretcher exercise. Two detachments per mule are required for the exercise.

*"For loading. — detachments on the right take post at the mules." "Quick march."* On this command the right detachments proceed to the near litters, the left to the off, and halt with Nos. 2 and 4 opposite the saddle. *"Prepare litters"* as before described, but the work will be done by Nos. 2 and 4 alone, Nos. 1 and 3 closing



outwards to make room. "*Unhook litters.*" All the Nos. place themselves round the litters in the following order, No. 1 inside the foot-piece facing the hanging bar, and between the litter and the hind-quarters of the mule; No. 3, turning about, goes inside the head-piece and faces the hanging bar; and Nos. 2 and 4 each take a pace, the former to the front, the latter to the rear. As soon as each man reaches his post, he stoops and places his shoulder next the litter under it; on the off side, Nos. 1, 2, and 4 their right shoulders, No. 3 his left; but on the near side, Nos. 1, 2, and 4 their left shoulders, No. 3 his right; at the same time Nos. 1 and 3 grasp the hanging bars with the hands nearest the mule, backs up, thumbs pointing downwards, and Nos. 2 and 4 the framework in front of them, with the hands away from the mule.

"*Two.*" The litters are steadily raised together and unhooked, upon which Nos. 1 and 3 drop their hands. The detachments then close outwards two paces, halt, and remain steady.

"*Lower litters.*" All the Nos. put up their hands and grasp the framework, and lift the portion of the litter on the shoulder off, and all then acting together very slowly lower the litters to the ground, turning inwards towards them as they do so, and taking care that the horizontal position is strictly preserved throughout. The whole then rise up. "*Two.*" The men now stand to litters—*outside* both the near and off litter.

The patients will next be lifted and laid on the litters.

"*Lift wounded.*" The near detachment now takes up



the usual position on the right and the off on the left of their respective patients, while the Nos. 4 take post at the hanging bars.

At "*Two*" the patients are laid hold of, and at "*Three*," are lifted; Nos. 4 immediately bring over the litters, place them under the patients, and then assist in supporting them. "*Lower wounded*." "*Two*." follows; upon which the patients are lowered, and the men form detachment outside the litters.

"*Lift litters*." The Nos. place themselves round the litters as for unhooking, or as for lifting the wagon stretcher, Nos. 1 and 3 facing Nos. 2 and 4. "*Two*." The whole stoop down and lay hold of the framework. "*Three*." The litters are very slowly and steadily raised, being kept perfectly horizontal, and placed on the shoulder, by Nos. 1, 2, and 4 on the right shoulder and by No. 3 on the left on the off side, and *vice versâ* on the near side.

"*Hook on*." On this command each detachment steps back to the side of the mule, halting when the centre-piece is opposite the saddle. Preparatory to hooking on, Nos. 1 and 3 now grasp the hanging bars with the hands next the mule, whereupon the whole stoop slightly and place the hooks over the hooks of the pack-saddle.

"*Two*." All four hooks are simultaneously dropped into their places, and the men remain perfectly steady. "*Fix back suspension straps*." The Nos. 3 disengage their shoulders from under the litters and take post outside the centre-pieces, facing each other. The No. 3 of the near side



having taken up the suspension strap on his way, now throws one end over the litters and saddle to the other No. 3, who buckles it to the strap attached to the outer rail of the centre-piece, and then the near end is buckled on the near side in a similar manner. "*Fix hood-rod straps, belly-band straps, and aprons.*" The remaining Nos. remove their shoulders from under the litters. No. 1 of each detachment proceeds to the front of the foot-piece, lays hold of the hood-rod straps, pulls them towards him, thus raising the hood, and then fastens them to the upright bars of the footrail, securing the ends in a slip knot. He next secures the end of the apron to the lower bar of the footrail.

Nos. 2 and 4 in the meantime pass and secure the belly-band straps, the short one to a strap attached to the inner rail, the longer one to the outer rail; No. 3 unrolls the apron, spreads it out over the hood-rod straps, but under the back suspension strap, toggles outside, and then buttons the head end of the apron to the hood, commencing with the inside button. The two detachments then take post together.

To repeat the exercise, the order will first be given: "*Prepare litters for unhooking,*" on which the aprons will be unbuttoned and rolled, the hood-rod straps unfastened and the hoods lowered, and the belly-band straps set loose. "*Unhook.*" "*Two.*" "*Lower litters.*" "*Two.*" then follows, as before, except that on the word "*Unhook*" the Nos. 3 will let loose the back suspension strap.

When the litters have been lowered the patients may



be directed to get up, and then to lie down in front of the litters; from which point the exercise can be proceeded with in the manner already described.

TO LOAD AND UNLOAD WITH REDUCED NUMBERS.

6 BEARERS.

*Words of Command as for last Exercise.*

The mules and patients as for the last exercise. The company formed three deep, as directed at page 60. It will then be explained, that three men form a detachment; and that the odd detachments are right detachments, and the even are left; and that two detachments per mule are required for loading. "*— detachments on the right take post at the mules.*" "*Quick march.*" The right detachments now proceed to the near litters, the left to the off. "*Prepare litters,*" as before described; the work being done principally by No. 2, Nos. 1 and 3 closing outwards to make room. "*Unhook litters.*" Nos. 1 and 3 take up a position inside the foot and head pieces respectively. No. 2 stands fast at the centre-piece until Nos. 1 and 3 take post. All the Nos. then simultaneously put their shoulders under and grasp the framework and hanging bars; on the off side, Nos. 1 and 2 their right shoulders and No. 3 his left; on the near side, Nos. 1 and 2 their left shoulders, and No. 3 his right. At "*Two,*" the litters are steadily raised and unhooked, and the detachments close outwards two paces. At "*Lower litters,*" the litters are lowered as before described; and at "*Two,*" the men take post outside the litters.

The patients are next lifted and laid on the litters.



*"Lift wounded."* *"Two."* *"Three."* *"Lower wounded."*  
*"Two."* One litter is loaded at a time, the near one first; the No. 2 of the opposite detachment in each case acting as a No. 4 during the lifting and laying, the men subsequently taking post.

*"Lift litters"* now follows, when the Nos. place themselves round the litters in the manner above indicated for unhooking. *"Two."* *"Three."* *"Hook on."* *"Two."* *"Fix back suspension straps"* (by the Nos. 3). *"Fix hood-rod straps, &c."* (Nos. 1 take the same duty as in last exercise; Nos. 2 the belly-band straps, and Nos. 3 the aprons) as before; after which the detachments take post.

To repeat the exercise, the orders will be given, *"Prepare litters for unhooking,"* *"Unhook,"* &c., as before.

#### TO LOAD AND UNLOAD WITH REDUCED NUMBERS.

##### 4 BEARERS.

*"— detachments on the right take post at the mules."* *"Quick march."*

*"Prepare litters."*

*"Unhook near litters. Two."*

*"Lower near litters. Two."*

*"Unhook off litters. Two."*

*"Lower off litters. Two."*

*"Lift near litters. Two."* *"Three."*

*"Hook on. Two."*

*"Lift off litters. Two."* *"Three."*

*"Hook on. Two."*

*"Fix back suspension straps."*

*"Fix belly-band straps."*

*"Prepare litters for unhooking."*



Mules and patients as before. The company four deep, and the ranks numbered as for stretcher exercise. One detachment only is required per mule for the exercise, as only one litter is to be hooked on or unhooked at a time.

"— *detachments on the right take post at the mules.*" "*Quick march.*" A detachment now proceeds to each mule. Nos. 1, 2, and 3 file to the near side and No. 4 to the off. "*Prepare litters.*" This is done by Nos. 2 and 4. "*Unhook near litters.*" Nos. 1 and 3 take up a position inside the foot and head piece respectively. Nos. 1, 2, and 3 then put their shoulders under the framework of the near litter, and grasp it and the hanging bars, while No. 4 places himself under the centre-piece of the off litter, ready to support it on his back the moment the other litter is unhooked. "*Two.*" The near litter is raised and unhooked, and the three bearers close outwards two paces. "*Lower near litters.*" "*Two.*" as before. "*Unhook off litters.*" Nos. 1 and 2 double round to the foot and head piece of the off litter, No. 3 to the near side, where he grasps the saddle-trees with both hands, so as to keep it steady while the off litter is being unhooked. Nos. 1, 2, and 4 in the meanwhile put their shoulders under the off litter, and at "*Two,*" unhook it and close outwards two paces. "*Lower off litters.*" "*Two.*" then follows, on which the litter is lowered and the men take post, Nos. 1, 2, and 3 outside the near litter, No. 4 outside the off.

The litters are then loaded one at a time, the near one first, and then the off, after which the men take post as before.



"*Lift near litters.*" Nos. 1, 2, and 3 take up a position at near litter, No. 4 at off side of saddle, and grasps the trees with both hands, so as to be ready to counteract the weight of near litter when hooked on, until No. 2 places his back under it. "*Two.*" "*Three.*" "*Hook on.*" as before. At "*Two*" the hooks are dropped into their places, and No. 2 gets his back under the centre-piece, so as to support the litter. "*Lift off litters*" now follows. Nos. 1 and 3 to the foot and head pieces, and No. 4 outside the centre-piece. "*Two.*" "*Three.*" "*Hook on.*" as before. At "*Two*," the hooks are dropped into their places, and No. 4 gets his back under centre-piece.

"*Fix back suspension straps*" (by Nos. 1 and 3. No. 1 on near, No. 3 on off side).

"*Fix belly-band straps, &c.*" (Nos. 2 and 4 the belly-band straps, Nos. 1 and 3 the aprons and hoods.) The detachment then takes post, and the exercise can be repeated with fresh detachments, beginning with the word of command, "*Prepare litters for unhooking,*" and then *unhook*, &c., as before.



**SECTION V.—Loading and Unloading Country Carts and General Service Wagons, when used for purposes of Sick-Transport.**

COUNTRY carts, or general service wagons, are most frequently employed to effect the evacuation of wounded men from the field hospitals to the base hospitals. When used for this purpose the floors should be well covered with straw, and the stretchers conveying wounded requiring the recumbent position should be placed on this.

For this exercise the company, the carts or wagons, new pattern stretchers, and the "wounded," will be drawn up on the parade ground, in the same manner as detailed in Section II., and the same steps taken to load and unload as are taken in the case of new pattern ambulance wagons. In loading, however, the Nos. 1 and 2 of each detachment, after the end of the stretcher has been placed resting on the floor, will spring into the wagon, and with the assistance of the other Nos. on the ground, lift the stretcher in to any required position.

Sometimes the recumbent wounded have to be put into the wagons without stretchers, no material being available. When this happens, four bearers will lift each wounded man in the usual manner and carry him to the wagon. On arriving at the back of the wagon, No. 4 will spring into the wagon and grasp the wounded man under



both shoulders and lift him in, assisted by the other Nos. on the ground; the other Nos. will now get into the wagon, and all will help to place the wounded man in the most advantageous position possible.

Unloading is the converse of this proceeding. Neither operation should ever be practised with less than four bearers to each patient, so as not to expose the patients to the danger of a fall.



## SECTION VI.—Loading and Unloading Railway Wagons.

THE railway wagons in this country which can be made use of for the purpose of transporting wounded men, are second-class carriages and goods wagons.

N.B.—No special instructions appear to be necessary for loading and unloading such wounded men as are able to walk and assume the sitting posture, recumbent patients alone being alluded to in the text.

### LOADING AND UNLOADING A TRAIN COMPOSED OF SECOND-CLASS CARRIAGES.

*“Stand to stretchers.” “Quick march.”*

*“Lift stretchers.” “Two.” “Three.”*

*“In succession from the right (or left), load.”*

*“In succession from the left (or right), unload.”*

For each compartment the following stores are required:—Two cross supports\* to place upon the opposite seats, and two old pattern ambulance wagon stretchers.

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\* The cross supports require to be specially constructed, so as to prevent shifting of the stretchers during transit.

They should be made of wood, and measure 4 ft. 8 in. in length, 6 in. in breadth, and 1½ in. in thickness.

A centre block and two side blocks should be nailed on one side, leaving two gaps, into each of which the pole of one stretcher when *in situ* fits.



For this exercise the company will be drawn up on the platform facing the train, and formed into stretcher detachments in the manner detailed in Section I. A row of "wagon stretchers," at two or more paces interval, and with the head end of each stretcher next the company, will be laid out on the platform between where the company parades and the carriages, and on these then the "wounded" will be directed to lie down.

"*Stand to stretchers.*" "*Quick march.*" The bearers will first be ordered to stand to stretchers, and then to lift them in the manner described in Section II. for lifting wagon stretchers. "*Lift stretchers.*" "*Two.*" "*Three.*"

"*In succession from the right (or left), load.*" The stretcher on the flank named is now carried to the doorway of the farthest compartment at the corresponding end of the train, the end of the stretcher introduced through the doorway, and the front pair of wheels rested on the floor. No. 1 or. No. 2, according to whichever bearer is at the side opposite the door, now gets inside the compartment, and proceeds to arrange the cross supports. He then takes hold of the handles of the stretcher, and with the assistance of Nos. 3 or 4 carries the stretcher to the opposite side of the compartment, and places it on the cross supports close up to the partition of the carriage, and with the inner pole resting in the gaps in the cross supports.

The stretcher next to the flank stretcher is next introduced into the same compartment in a similar manner, then the one next to it into the adjoining compartment,



and so on with each stretcher in succession, two stretchers to every compartment, to the left of the line, each detachment on the completion of the duty returning to its proper place in the company.

*"In succession from the left (or right), unload."* The detachments now unload in succession, that on the flank named being the first. On the arrival of the detachment at the doorway, Nos. 1 and 3 (or Nos. 2 and 4) jump inside, and lift one of the stretchers out of its place towards the centre of the compartment. No. 3 (or No. 4, as the case may be) descends first to the platform, and with the aid of No. 4 (or No. 3) draws the end of the stretcher through the doorway, No. 1 (or No. 2) carrying the other end. When the latter reaches the doorway, No. 2 (or No. 1) comes to his assistance, and then the stretcher is lifted clear of the carriage, and placed in proper position on the platform for a repetition of the exercise.

The remaining stretchers are then removed in succession one after the other by the remaining detachments, and in a similar manner.

The exercise may then be repeated, or the wounded and stretchers removed, and the company dismissed or marched off in the usual way.



## LOADING AND UNLOADING A TRAIN COMPOSED OF GOODS WAGONS.

"Stand to stretchers." "Quick march."

"Lift stretchers." "Two." "Three."

"In succession from the right (or left), load."

"In succession from the left (or right), unload."

These wagons, owing to their want of elasticity, are unsuitable as they stand, for sick-transport purposes.

There are two principal methods of rendering goods wagons available for the transport of wounded men:—

a. Grund's method. (Fig. 4.)

b. Zavodovski's method. (Fig. 5.)

For each wagon the following stores are required:—

For *Grund's method*.—Four springs, two poles, and three stretchers, new pattern. The springs are set in the floor of the wagon, and the poles intended for the reception of the stretchers are to be placed resting on the springs.

For *Zavodovski's method*.—Four cables, sixteen ropes, eight hooks and rings, four poles, and eight stretchers, new pattern. The rings and hooks are inserted in the sides of the wagons near the roof; from these the cables are suspended across the wagon; sixteen looped ropes are attached to the cables, and by means of these two tiers of stretchers can be supported, four stretchers in each tier.

The company and new pattern stretchers will be drawn up on the platform for this exercise as for the last.



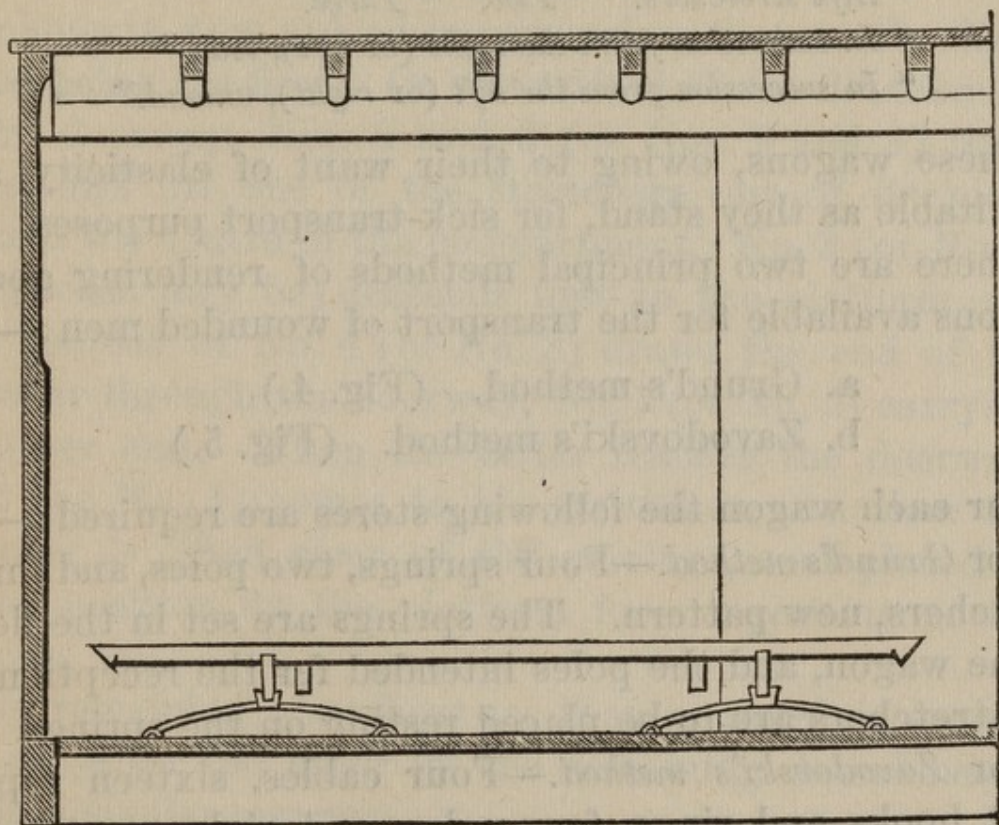


FIG. 4. Longitudinal section of part of a Goods Wagon fitted on Grund's plan.



The staves having been arranged in the wagon, the beams will be directed to stand so stretched and to lift them in the same manner as wagon stretchers.

The mechanism of the door-stretcher is the most goods wagon; there is the most into the wagon. The ropes is fitted on a system, or in the ropes the it on a system. In the upper part of the stretcher, the lower; the stretcher in other cases than those nearest the door.

The stretcher next to the door is carried to the same position, and so on in each of the stretchers have been of the door. The stretchers are removed and remove the stretchers on the other, the lower tier, in place and place them on the position for a repetition.

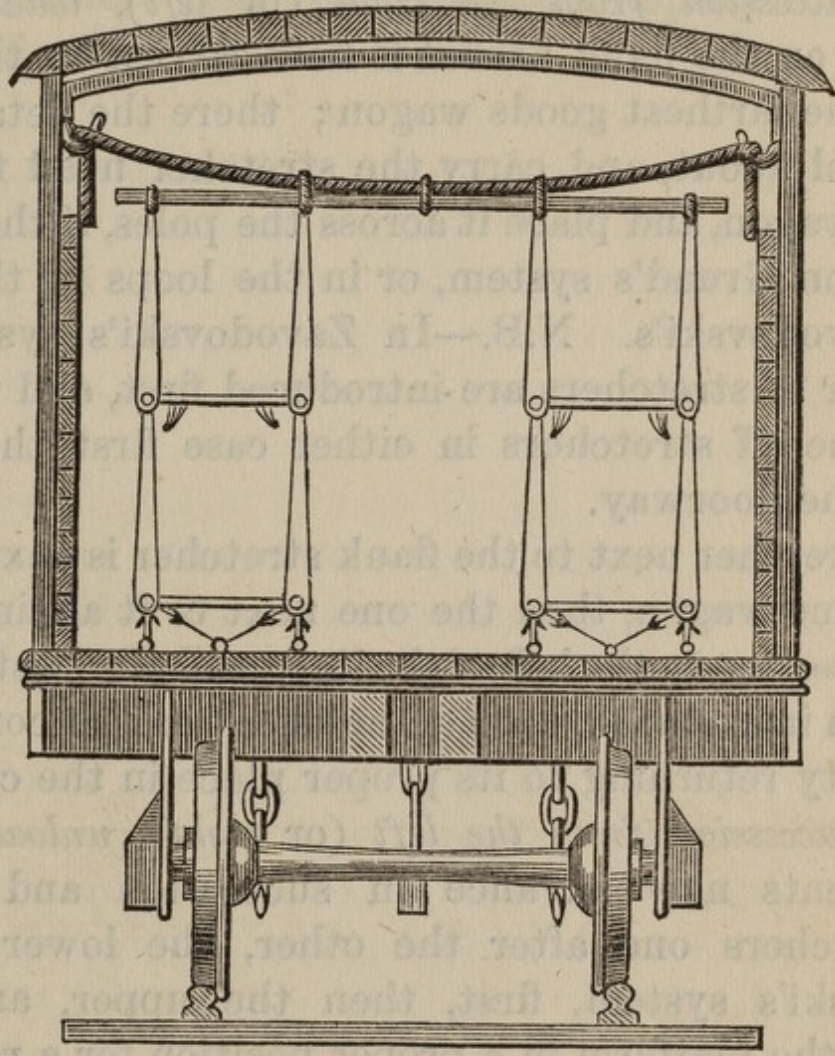


FIG. 5. Transverse section of a Goods Wagon fitted on Zavodovski's plan. In the lower tier of stretchers, the stretchers are made fast to the floor to prevent the way-wardness that would otherwise take place. Before the wagon fitted on this system can be unloaded, therefore, these beams must be cast aside, and after it is loaded



The stores having been arranged in the wagons, the bearers will be directed to stand to stretchers, and to lift them in the same manner as wagon stretchers.

*"In succession from the right (or left), load."* The stretcher on the flank named is now carried to the doorway of the farthest goods wagon; there the detachment will wheel about, and carry the stretcher head foremost into the wagon, and place it across the poles, if the wagon is fitted on Grund's system, or in the loops of the ropes if on Zavodovski's. N.B.—In Zavodovski's system the upper tier of stretchers are introduced first, and then the lower; the off stretchers in either case first, then those nearest the doorway.

The stretcher next to the flank stretcher is next carried to the same wagon, then the one next to it again, and so on in succession to the left of the line, until all the stretchers have been introduced, each detachment on the completion of the duty returning to its proper place in the company.

*"In succession from the left (or right), unload."* The detachments now advance in succession and remove the stretchers one after the other, the lower tier, in Zavodovski's system, first, then the upper, and place them on the platform in a proper position for a repetition of the exercise.

N.B.—In Zavodovski's system the lower tier of stretchers require to be made fast to the floor, to prevent the swaying about that would otherwise take place. Before the wagon fitted on this system can be unloaded, therefore, these lashings must be cast adrift, and after it is loaded



the lashings must be made fast to the rings on the floor provided for the purpose.

The exercise may now be repeated, or the "wounded" and stretchers removed, and the company dismissed, or marched off in the usual manner.



## PART II.—THE TRAINING OF BEARER-COMPANIES.

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THE medical officer in command of a "bearer-company" is responsible for everything connected with it. He should ascertain that every individual under his command not only understands the several duties he has to perform, but also all the ambulance material at his disposal for carrying out these duties.

To the officers of orderlies will chiefly belong the duties usually assigned to the paymaster and quartermaster, and while the transport officer will have the feeding, grooming, and shoeing of the transport animals under his immediate superintendence, he will be held responsible that the wheeled transport is at all times maintained in an efficient state for travelling.

In action, the officer in command, acting under the orders of the principal medical officer, will be called upon to select ground for the formation of "dressing stations" and "wagon stations." This he will have to do with great care. Not only must these places be sheltered as far as possible from fire, but there must be good roads leading from them to the field hospitals in rear.

A "wagon station," as a rule, will not be established nearer the front than at a point just beyond rifle range, here the ambulance wagons will be drawn up for the



reception of wounded, and a "dressing station," not any nearer than a point just beyond artillery range.

In establishing "dressing stations," farmhouses, or other appropriate buildings, may be made use of, should such exist, otherwise a tent must be pitched where all injuries arriving from the front will be examined, needful dressings applied or readjusted, such capital operations as are urgently required performed, and an "identification label" attached to each man's tunic previous to his removal farther to the rear. By day a "dressing station" is to be distinguished by a red cross flag, and at night by a red lantern.

On the advance of the troops during fighting, both these stations will be proportionately pushed forward. On a retrograde movement, the divisional principal medical officer will arrange who of the medical officers and bearers, as well as the amount of stores, shall be left behind with the wounded, the commanding officer taking the whole of the remaining staff and stores away with the retreating army.

The officer in command will be held responsible that the battle-field is systematically and thoroughly searched in all directions for wounded; that all the wounded, and the stray arms and accoutrements belonging to them, are removed; and that the bearers while so doing are not on any pretence permitted to interfere with the private property of the dead or wounded.



## SECTION I.—Parade, Inspection, and Manœuvres.

### PARADE.

WHENEVER a "bearer-company" is mobilised, the bugle sounds for parade should be arranged as follows: one hour and a half before the hour appointed for parade the "preparatory," or "dressing bugle," will be sounded. At this call the horses will be saddled and the wagons got ready, and every man and horse will be prepared to turn out five minutes before the "fall in" sounds. Thirty minutes before the hour ordered for parade, the "non-commissioned officers' call" will sound, upon which all the non-commissioned officers and mounted men, on foot, will fall in for inspection, the non-commissioned officers and mounted men of the Army Service Corps by the senior serjeant of that corps, and the non-commissioned officers of the Army Hospital Corps by the serjeant-major. On their dismissal, the detachment of the Army Service Corps will be turned in to stables, and the "fall in" will sound, when every man will turn out, the mounted men with their horses, to march to the wagon park,\* where the drivers at once proceed to hook in and are inspected by

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\* When circumstances allow, the wagons should invariably be drawn up in two ranks, the ambulance wagons in front, and the general service and other wagons in rear.



the transport officer; the Army Hospital Corps\* to fall in for inspection by the company commanders.

The drivers having hooked in will receive the order to "mount" from the senior serjeant of the Army Service Corps, who will then report to the transport officer and give the order "sit at ease." The transport officer, accompanied by the senior non-commissioned officer, should now inspect the men and wagons as follows:—  
"*Attention.*" "*Eyes right.*" "*Draw swords.*" He should then pass down the off and near side of each wagon to see that every man and horse is fully equipped, and that the appointment, clothing, and harness are clean and in good order, also that the carriages are clean and the proper articles of equipment on them. Any spare horses for transport purposes should also be inspected at the same time. He will then number his company and tell it off. "*As far as No. 5, the right half-company,—the remainder the left half-company.*"—"Return swords." "*Sit at ease.*" [On the other hand, if the "bearer-company" is provided with mountain equipment, the transport officer will now have to inspect the muleteers and pack animals.]

While the drivers are hooking in, and are being inspected, the Army Hospital Corps will have fallen in. It will be found convenient to work the Army Hospital Corps as two companies; the right half-company being No. 1, and the left No. 2, and to tell off a surgeon-major

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\* By Army Hospital Corps is meant the reserve bearers, as well as the cadre of the "bearer company."



and two surgeons to each as company officers. The roll having been called by the senior non-commissioned officer, who reports to the company officer, the inspection should now be proceeded with as follows:—

*Open order. March.*

*Draw swords. Carry swords.*

The inspecting officer will pass down the ranks to see that the clothing, appointments, &c. are clean and in good order.

*Return swords. Close order. March. Stand at ease.*

After the inspection the company will be numbered and told off without delay. On the “advance” being sounded the companies will be marched by their commanders into quarter-column, in front of the wagon park; bātmén, artificers, and dismounted men falling-in in rear as a third company under a non-commissioned officer specially detailed for the purpose.

The commanding officer should now call the parade to “attention,” when the reports of the company commanders, of the transport officer, and the officer of orderlies (as to his stores) should be collected by the medical officer acting as adjutant, and be delivered to the commanding officer.

#### INSPECTION AND REVIEW.

A parade of a “bearer-company” for inspection should be formed in column at open order. The Army Hospital



Corps in line at open order, thirty-one yards in front of the Army Service Corps. The Army Service Corps wagons also at "order." Ambulance wagons in front: general service and other wagons in rear; the flank wagons correctly covering the flanks of the Army Hospital Corps, and the remaining wagons distributed at equal intervals between the flank wagons.

When the reviewing officer arrives in front of the centre, at a distance of about fifty paces, he will be received with a salute,—GENERAL SALUTE; DRAW SWORDS,—the officers coming down to the position of the salute with the commanding officer: after which the officers recover and carry swords, again taking the time from the commanding officer.

The commanding officer then accompanies the inspecting officer, the whole remaining steady while he makes his inspection. The transport officer will give the command, "*Eyes right (or left)*," as he comes to the Army Service Corps, and "*Eyes front*" when he has passed. As soon as the inspection has been made, the "bearer-company" will take close order. RETURN SWORDS. CLOSE ORDER. MARCH. Upon this being repeated by the transport officer, the rear wagons will also move up to their places.

[If the "bearer-company" is provided with mountain-equipment, the mules will be drawn up for inspection in rear of the Army Hospital Corps.]



## MANŒUVRES.

[A party of men of some other corps should be sent on in advance, for the purpose of representing "wounded," and directed to take up a position in front of the ground on which the "bearer-company" is about to exercise. On reaching this ground a label indicating the nature of a supposed injury will be attached to each man's tunic, and he will then be allowed to lie down and wait for the advance of the bearers.]

The "bearer-company" being formed up on parade preparatory to marching off will receive the following words of command: THE BEARER-COMPANY WILL ADVANCE IN COLUMN OF ROUTE.—ARMY HOSPITAL CORPS: FOURS RIGHT. BY COMPANIES IN SUCCESSION FROM THE FRONT. QUICK MARCH. Upon which the Army Hospital Corps will advance in sections of fours (dressing-station party in rear), closely followed by the wagons, ambulance wagons, each to be accompanied by an Army Hospital Corps corporal, leading, also in column of route.

On the line of march the posts of officers, if mounted, will be as follows: the medical officers at the head of the column in half sections; the officers of orderlies in rear of the Army Hospital Corps, and the transport officer in rear of his wagons and spare horses. The officer in command will move from one part to another as occasion requires his presence for the preservation of order.

On reaching suitable ground for exercise the HALT will be sounded, and the dressing-station party be directed to



fall out and FORM DRESSING STATION, on which order the commander of the party—a non-commissioned officer, previously detailed for the purpose—will march his men clear of the main body and the line of wagons. “*Front.*” “*Quick march.*” “*Right (or left) wheel.*” “*Halt.*”

N.B. When only one “dressing station” is to be formed, two serjeants and at least ten privates of the Army Hospital Corps should be told off as a dressing-station party.

The wagons, which are intended to be left at the “dressing station,” (all, except the ambulance wagons) will, at the same time, be made to wheel to the left (or right); then take ground to the left (or right), and form line at close interval. This will bring the wagons into such a position as to have the horses’ heads facing the rear. “*Rear wagons left (or right) wheel.*” “*Left (or right) take ground.*” “*Close interval on No. 1.*”

Officers selected for duty at the “dressing station” by the officer in command, will now also be directed to fall out, and the formation of the “dressing station” will be at once proceeded with (for directions for which *vide* Appendix).

On the ADVANCE being sounded, the march of the column will be resumed and continued for at least half a mile further to the front, when ground will be selected for the formation of a “wagon station.” The HALT will now be sounded, the Army Hospital Corps deployed, and the ambulance wagons reversed about ten paces in rear of the company, “*Wagons,*” “*Left (or right) wheel.*” “*Left (or right) take ground.*” “*Half interval on No. 1.*”



On this being done, the wagon corporals will proceed to prepare the wagons for the reception of wounded: they will lower the ladder and tail-board, and place the back-board on the ground, and the stretchers, dressing pouches, and water bottles, required by the companies for immediate use, on or resting against the hind seat; the spare stretchers will be laid on one side.

The companies should now be directed to search for wounded, "with," or "without stretchers." No. 1 or No. 2 WILL SEARCH FOR WOUNDED. If "without stretchers," the dressing pouches only will be served out, one to each file of the company named; an advance will then be made in the direction of the "wounded," urgent dressings applied, and those who, from the nature of their injuries, are unable to walk to the "wagon station," will then be brought in by one or other of the improvised methods.

If "with stretchers," the commander of the named company, on receiving the order, will form his company for stretcher exercise, in the manner described in Section I., Part I. The guides will then march the Nos. 3 and Nos. 4 to the wagons for the stretchers, dressing pouches, and water bottles, on receiving which the men will be marched back to the company, when the stretchers will be prepared and lifted, and an advance ordered to be made in the direction of the wounded. As soon as a stretcher detachment reaches a man who, from the nature of his injury, is unable to walk to the "wagon station," the detachment will halt and place the stretcher by his side. All tight clothing will then be loosened, his



accoutrements and valise taken off, and such dressings as are urgently required applied. He will next be lifted and laid on the stretcher, and the stretcher itself lifted and removed to the rear; Nos. 2 and 4 at the same time removing his equipment. As the detachment is approaching an ambulance wagon, Nos. 2 and 4 will hurry forward and lay down the man's equipment on the ground outside the near hind wheel, subsequently rejoining the detachment and assisting in loading the wagon in the manner described in Section II., Part I. Throughout this entire operation, each step of which will be conducted as described in a former part of this Manual, the prescribed words of command will be given in every instance to the detachment by the No. 4 of the detachment.

As soon as an ambulance wagon is loaded with its full complement of wounded it is to leave immediately for the "dressing station." Previous to its departure the wagon corporal will be held responsible that the ladder is properly lashed up in its place, and that the men's arms and equipment are properly put away in the positions assigned to them. It will also be part of his duty to accompany the wagon back to the "dressing station," to assist in unloading it there, and to return with it again to the front. Each wagon in succession, as fast as it can be loaded, will follow the first one, and the empty wagons be sent back for more wounded, this process being continued till all the wounded are collected and removed.

When the last wounded man has been put away in the wagon, the Army Hospital Corps will fall in, fold up



stretchers, and be marched back to the "dressing station," in front of which they will be halted. The Nos. 4 will then be directed to remove the dressings, the dressing-station party to strike the operating tents, whereupon the tents, dressing pouches, water bottles, and stretchers, etc., will be put away in the wagons, and the parade formed up, previous to a march home.

N.B.—The above instructions more particularly have reference to the manœuvres of a "bearer-company" with wheeled transport.

The following apply to a bearer-company with mountain equipment:—

On the line of march the pack animals in half-sections will be made to follow the Army Hospital Corps, and since mountain equipment is not to be employed nearer the field of action than the first line of surgical assistance, the mules will be halted at the "dressing station," wherever this is directed to be formed, and the bearers will be sent forward to bring in the wounded in the best way they can, by one or other of the improvised methods. The wounded arrived at the "dressing station," loading the cacolets and litters will be proceeded with in the appointed manner, as described in Section IV.; subsequently they will be unloaded, and the parade formed up preparatory to marching off.



## SECTION II.—Posts of Officers, &c., &c.

### COMMANDING OFFICER.

In column—On the directing flank of the leading company.

In line at close order—In rear, about twenty paces from the supernumerary rank.

In line at open order—In front, nine paces from the front rank.

### OFFICER SECOND IN COMMAND.

In column—On the reverse flank.

In line at close order—In rear of the centre of No. 1, six paces from the supernumerary rank.

In line at open order—On the right of the line of officers.

### COMMANDERS OF COMPANIES.

In column—In rear of the centre of the company three paces.

In line at close order—Do. do.

In line at open order—In front of the second file from the right of the company three paces.

### ACTING ADJUTANT.

In column—On the reverse flank two paces from the rear company.

In line at close order—In rear of the centre of No. 2, six paces from the supernumerary rank.

In line at open order—On the left of the front rank.



## OFFICERS OF ORDERLIES.

In column—On the reverse flank of the rear company,  
on the right of the adjutant.

In line at close order—Fifteen paces in rear of the centre  
of the line.

In line at open order—Do. do.

## TRANSPORT OFFICER.

In column of route—In rear.

When the "bearer-company" is formed up for inspection—  
Half a horse's length in front of the centre of the  
line of wagons.

At order—One and a-half horse's length in front of the  
centre.

## SERJEANT-MAJOR.

In column—One pace in rear of the left marker of No. 2.

In line at close order—In the supernumerary rank centre.

In line at open order—Do. do.

## A. S. C. SERJEANTS AND CORPORALS.

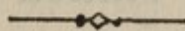
In column of route—The senior in front of the wagons,  
the remainder on reverse flank.

In line—One horse's length in rear.

At order—On the flank of the wagons.



## APPENDIX.

**The Formation and Management of Dressing Stations during Peace Manœuvres.**

*a.* The order having been given to "Form dressing station," the "rear" wagons will at once wheel into position; the operating tents will now be taken out of the general service wagons by the dressing-station party, and pitched opposite the centre of the line of wagons, fifteen paces in front of the line, and ten paces from each other, doors facing the front.

*b.* A pair of field panniers will be placed in each.

*c.* A "directing" flag will be placed in the ground, ten paces in front of each doorway; and two others in line with these, at points marking the flanks of the line of wagons.

*d.* As each ambulance wagon arrives from the front, it will be made to halt and reverse opposite the space between the two flags in front of the tents. The dressing-station party, assisted by the wagon corporal, will then unload it. The slightly "wounded" will be made to fall in between the two flags on the left. The severely "wounded" will be conveyed on their stretchers to the space between the two flags on the right, where the



"wounded" will be lifted and laid on the ground. In both instances the rifle and equipment of each man will be laid on the ground at his feet. The stretchers will now be placed in the wagon, which will immediately return to the "wagon station" for a fresh load of "wounded."

e. The "wounded" having been all brought in, and roughly distributed in this way into two groups, the ambulance wagons will be retired in rear of the "dressing station," the dressing-station party will fall in two deep in front of the tents, and the companies on their return from the front will be halted ten paces in front of the "directing flags," and be directed to ground stretchers and stand at ease. The surgeon in charge of the "dressing station" will now examine all the "wounded," explaining any mistakes that may have been made to the men, and directing certain of them to apply plaster of Paris and other splints in certain selected cases. This accomplished, the Nos. 4 will be ordered to take off the dressings; the dressing-station party to strike the tents: whereupon the stretchers, tents, dressing pouches, water-bottles, &c. will be put away in the wagons, and the parade then formed up previous to marching off.



TABLE showing the WEIGHTS of the AMBULANCE MATERIAL  
used by a BEARER-COMPANY.

	cwt.	qr.	lbs.
Old pattern stretcher .. .. .	0	0	16
New pattern stretcher .. .. .	0	1	3
Ambulance "wagon stretcher" .. .. .	0	1	3
Old pattern ambulance wagon .. .. .	12	1	0
New pattern ambulance wagon .. .. .	17	3	6
Pack saddle .. .. .	0	1	16½
Pair of cacolets .. .. .	0	2	0
Pair of litters .. .. .	0	3	22

STORES required for the APPLICATION of a PLASTER OF PARIS  
FIELD SPLINT.

Plaster of Paris, 2 lbs.; water, 32 oz.; and a flannel pattern (double); a basin; spoon; and six strong pins.

TABLE showing the CONTENTS of a BEARER'S DRESSING POUCH.

Triangular bandages .. .. .	6
Tourniquets .. .. .	2
Scissors .. .. .	pair 1
Pins .. .. .	doz. 1
Lint .. .. .	oz. 4
Field splints (one pair for the upper extremity and one pair for the lower extremity) .. .. .	pairs 2



~~MB~~  
GENERAL RULES FOR THE PROPER CARRIAGE OF  
STRETCHERS.\*

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1. When braces or shoulder straps are used to assist the bearers in carrying stretchers care should be taken at starting that they are buckled so that the parts supporting the poles are all at equal distances from the *surface of the ground*.

2. As most ground over which wounded have to be carried is likely to present irregularities of surface, it becomes an important matter for bearers to practise the carriage of stretchers, so as to acquire a facility of keeping the stretcher level, notwithstanding the ground is uneven. Bearers trained and habituated to this duty perform it with ease and dexterity, irrespective of differences in their own respective heights; while those who have not practised it are not unlikely to cause considerable distress to the person carried, when they have to carry him up and down hill, in consequence of their deficient training. A concerted action of the front and rear bearers is necessary, and each must be aware what part he is to perform according as the end of the stretcher at which he is placed is rendered higher or lower by the unevenness of the surface over which they are passing. The act can readily be acquired by practising the carriage of the stretcher up and down steps. In this practice the front and rear bearers should occasionally change their respective posi-

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\* These rules are copied almost verbatim from Professor Longmore's interesting and valuable 'Treatise on Ambulances,' page 173, *et seq.*



tions. A bearer should also be carried on the stretcher in turn, so as to be made practically aware of the effects of even and uneven carriage.

3. If the ground over which the conveyance has to pass presents a general ascent, and the bearers are of different heights, then the rear or No. 3 bearer should be the taller and stronger man, for his greater height and the greater strength of his arm will be useful in supporting and raising the stretcher up to the level of the end carried by the foremost man. The weight of the stretcher will naturally be thrown in the direction of the man on the lower level.

4. If the ground presents a general descent the front or No. 1 bearer should be the taller and stronger, for the same reasons as those just given as regards the No. 3 bearer under the opposite circumstances mentioned in Rule 3.

5. A sick or wounded person on a stretcher should be carried, if the ground be tolerably level, with his face looking toward the direction in which the bearers walk. The front or No. 1 bearer then supports the end of the stretcher at which the patient's feet are placed; the bearer near the patient's head is the rear bearer.

6. If the bearers have to carry the stretcher up hill, the front bearer should support the end of the stretcher on which the patient's head is placed, excepting in the case mentioned under Rule 7.

7. If the bearers have to carry the stretcher down hill, the rear or No. 3 bearer should support the end on which the patient's head is placed. The reverse position should be assumed by the bearers both as regards going up hill and going down hill, in case the patient being carried is suffering from a recent fracture of the thigh or leg.



The patient's comfort and welfare will be best consulted as a general principle by the arrangements named in Rules 6 and 7. Although under all circumstances the level position should be sought for as much as possible, still, if the slope of the ground be such that it cannot be attained, it appears desirable that the inclination downwards should be towards the feet rather than towards the head of the patient. But with regard to the exception named, the reverse position of the patient is directed in order to prevent the weight of his body pushing the upper end of the broken bone down upon the helpless and motionless portion of the limb below the seat of fracture.

8. No attempt must be made to carry a helpless patient over a high fence or wall, if it can possibly be avoided: it is always a dangerous proceeding. The danger is of course increased in proportion to the height of the wall or fence. But even if the wall be not much higher than one over which the bearers can step, the stretcher must be made to rest upon it, to the inconvenience, and probable pain, of the patient while each bearer in succession gets over the obstruction; and it is better to avoid even this inconvenience, provided the avoidance does not entail great delay. If the fence or wall be high, either a portion of the wall should be thrown down, or a breach in the fence made, so that the patient may be carried through on the stretcher: or, if this be not readily practicable, the patient should be carried to a place where a gate or opening does already exist, notwithstanding the distance to be traversed may be increased by the proceeding. It is better that the transportation should be somewhat delayed than the safety of the patient's limbs or life risked.

9. In crossing a ditch, dyke, or hollow, the stretcher should be first laid on the ground near its edge. Nos. 1 and 2 then descend. The stretcher, with the patient upon it, is afterwards



advanced. Nos. 1 and 2 in the ditch supporting the front end of the stretcher, while its other end rests on the edge of the ground above. While thus supported, Nos. 3 and 4 descend. All the Nos. now carry the stretcher to the opposite side, and the fore part now being made to rest on the edge of the ground while the rear part is supported by Nos. 3 and 4 in the ditch, the Nos. 1 and 2 are left free to climb up. The stretcher is now pushed or lifted forward on the ground above, and rests there while Nos. 3 and 4 climb up. The bearers then carry the stretcher on.

10. On no account should a stretcher be permitted to be carried on the shoulders of two or four bearers. The evil of such a proceeding is not only that it is difficult to find several bearers of precisely the same height, so that a level position may be secured, but also that the wounded or sick person, if he should happen to fall from such a height owing to the helpless condition in which such a patient usually is, is not unlikely to sustain a serious aggravation of the injuries he may already be suffering from. Moreover, one of the bearers of a stretcher ought always to have his patient in view, so as to be aware of hæmorrhage, fainting, or other change requiring attention, taking place, and this cannot be done when the patient is carried on the shoulders. The height, too, is calculated to cause the patient uneasiness and fear of falling off, which it is also desirable to avoid. For all these reasons, notwithstanding that bearers will often attempt to carry a patient on a stretcher upon their shoulders, from the weight being borne more easily in that position, or with a view of relieving a fatigued condition of the arms, the practice should be strictly forbidden.



10. On no account should a stretcher be permitted to be carried on the shoulders of two or four bearers. The evil of such a proceeding is not only that it is difficult to find suitable bearers of precisely the same height as a level position may be required.

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