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# THOMAS'S SPLINT DRILL

By E. M. COWELL,

D.S.O., T.D., D.L., F.R.C.S., Colonel A.M.S.T.

First Edition 1917. Amended R.A.M.C. Training Manual, 1935.

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**PRICE - TWOPENCE.**

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## **First-Aid Treatment of Fractures and Wounds by Thomas's Splint.**

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- (1) For all fractures of the thigh bone, except where the presence of a large wound in the upper part of the thigh or buttock interferes with the fitting of the ring.
- (2) For all fractures about the knee-joint (including the patella) and the leg-bones.
- (3) For cases of extensive wounds of the fleshy part of the thigh or leg.

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It can be carried conveniently by threading the closed stretcher through the ring, and tying the side bars to the stretcher. The bars should be kept lightly smeared with vaseline and the leather covering of the ring kept clean and soft by the occasional use of saddle-soap.

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- (ii) Stretcher suspension bar.
- (iii) Reversible stirrup (Sinclair's).
- (iv) A metal skewer about 12 inches long or, if this is not available, flannelette bandage 3 yards in length to form the clove hitch.
- (v) Five flannelette bandage slings and five safety pins.
- (vi) Five triangular bandages.
- (vii) Some loose woven bandages and wool.
- (viii) Two pieces of Gooch splinting (8 inches and 6 inches).

To form the slings mentioned above, five pieces of flannelette bandage approximately 30—36 inches in length are taken and folded into two. The loop ends are pinned over the inner bar of the splint, rolled up and secured in position by short ties of loose woven bandage.

*Note:* In practising the application, the patient may be splinted lying on a stretcher, which should rest on trestles, but, with an actual casualty, he should be splinted where he lies unless it is absolutely necessary to remove him to a place of shelter. Application of the Thomas's splint should be practised in the dark and wearing anti-gas respirators.

**I. Preparation of Stretcher.** The ordinary army blanket is about three times the width of a stretcher; advantage is taken of this to increase the covering of the patient by folding the blankets in the following way. The two blankets to be placed under the patient are folded lengthwise in three folds; two folds of each blanket are placed on the stretcher, thus making four layers of blanket under him; the third fold of each blanket is left hanging over the side of the stretcher. The third blanket is folded lengthwise in two and placed over the patient.

**II. Extension.** No. 2 bearer stands at the foot of the stretcher facing the patient and opposite the injured limb. Grasping the heel of the boot with his right hand, and the toe with his left, keeping the arms straight, he exerts a steady pull, thereby producing the necessary extension.

No. 3 supports the limb at the site of the fracture until the dressing and Gooch splinting have been applied.

**III. Maintaining Extension.** (i) To maintain extension, take a pointed metal pin or skewer about 12 inches long, pass it obliquely through the boot just in front of the heel and close to the sole, so that it lies between the sole of the foot and that of the boot.

The outside end will then be about 1½ inches nearer the toes than the inner end, so that, when the extension pin rests on the side bars of the splint, the limb and foot are in external rotation. A piece of bandage or tape is attached to each end of the pin and tied off to the splint as described under fixation of the leg, V. (i).

(ii) Another method of maintaining extension is by means of the

**Clove Hitch Halter.**

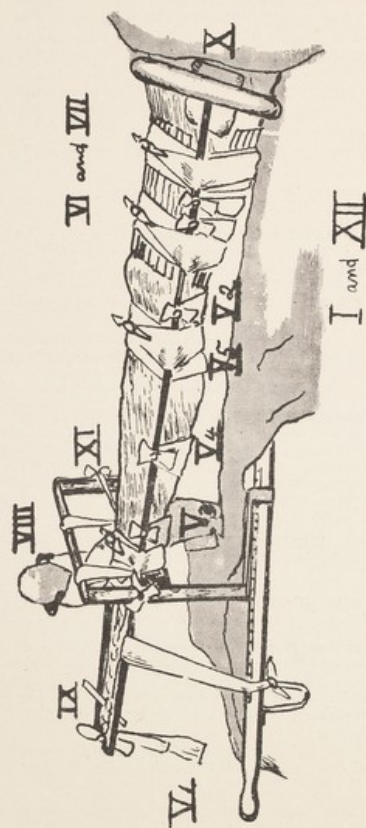
To form the clove hitch, No. 1 bearer takes a 9-ft. length of flannelette bandage, and holds it in the left hand, back uppermost, by its mid-point, thus forming a right and left half. With the right hand, back towards himself, thumb pointing down, he grasps the middle of the left half, raises the right hand to the level of the left hand to the right of it, thumb touching thumb, thus forming two loops, a right and left. He now carries the right hand, without any further turning, to the back of the left, thus forming a clove hitch with a diameter of 10 inches. This is applied over the foot without relaxing extension, both ends on the outer side; the long end is carried under the instep, up and through the loop round the ankle. This forms the halter, which should fit without being tight.

The two extension bands thus produced are ready to be attached to the splint later on.

**IV. Slipping on the Splint.** No. 1 bearer slips on the splint, No. 2 removing and re-applying the upper and lower bands alternatively to allow the ring to be passed over the foot. The splint should be pushed up under the buttock as far as possible, care being taken to keep the transverse bar horizontal. No. 3, as before, steadies the limb.

**V. Fixation of the Leg.** (i) The extension bands of the skewer or clove hitch are tied round the notched bar at the end of the splint as follows:—

The outer band is passed over and under the bar at the notch, drawn taut and held over to the opposite side. The inner band is passed in the reverse direction—that is, under and over the notched bar, crossing the first band at the notch and preventing its slipping. The two bands are finally tied off by a half bow. As soon as the extension bands are tied, No. 2 bearer ceases to hold the foot and supports the lower end of the splint.



(ii) The middle sling is tied off over the outer bar behind the knee, No. 3 keeping the knee slightly bent.

(iii) and (iv) The slings behind the ankle and calf are tied off so that the leg is now supported in a shallow trough, with the long bars of the splint level with the centre of the leg.

(v) To prevent the leg rising off the splint, a narrow fold bandage is placed across the leg just below the knee; the ends are carried down between the leg and the splint, crossed behind, brought up outside the bars and tied off on the front of the leg.

The lower limb is thus fixed in a position of extension, and it may be moved freely without causing pain to the patient or damage to the injured part.

**VI. Dressing the Wound.** The wound is exposed by cutting away the overlying portion of clothing, and the dressing applied.

*Note:* If severe hæmorrhage is occurring, steps will be taken to control it before splinting is begun.

**VII. Gooch Splinting and Bandages.** One piece of Gooch splinting is placed behind the limb and secured by tying off the remaining two slings. The other piece is placed in front of the limb, care being taken to prevent the lower edge pressing on the knee-cap. The dressing and splints are now kept firmly in position by two narrow fold bandages in the following manner:—

The centre of each bandage is placed on the front of and over the centre of the Gooch splinting. The ends are taken down between the limb and the side bars of the splint, crossed behind and then brought up on the outside of the bars and tied off in front of the limb.

**VIII. Stirrup and Figure-of-8.** The stirrup is sprung on to the splint so that the shaped part fits the sole of the boot, thus preventing lateral movement of the foot. A narrow fold bandage is applied in the following manner to form a figure-of-8. The centre of the bandage is placed under the sole of the boot. The ends are brought forward, crossed, taken down behind the ankle, crossed again, brought up outside the bars and tied off in front of the limb.

**IX. Spanish Windlass.** The extension bands are retied, if necessary, and a small piece of wood is inserted to twist up the bands as required.

**X. Pad in the Ring.** A pad is placed inside the ring on the outer side of the thigh to act as a wedge and prevent undue movement.

**XI. Suspension Bar.** The suspension bar is now fitted to the stretcher, grips away from the runners, with its horizontal part one hand's breadth in front of the foot. The splint is then slung by two long ties, a hand's breadth below the horizontal bar. To prevent lateral movement, the ends of these ties are secured round the uprights of the suspension bar.

To prevent vertical movements of the splint, a narrow fold bandage is passed round the outer bar of the splint below the foot and tied off to the runner of the stretcher.

**XII. Warmth.** The blankets are adjusted, so as to give four thicknesses over the patient, and he is then ready for removal.

For work in the dark, in pinning the blankets, it is advisable to include a small piece of bandage or other white material under each pin.

KETTLE OR IRON PLATE



RÉCHAUFFEMENT.



FIG. I.  
BLANKETS & STRETCHER  
HEATED READY FOR PATIENT.

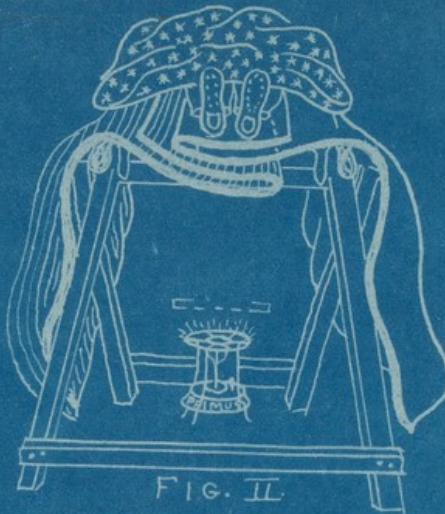


FIG. II.  
PATIENT HEATING UP.



FIG. III.  
PAT: READY FOR TRANSPORT.

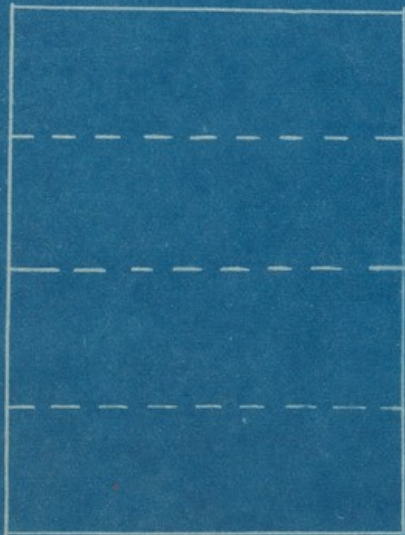


FIG. I.

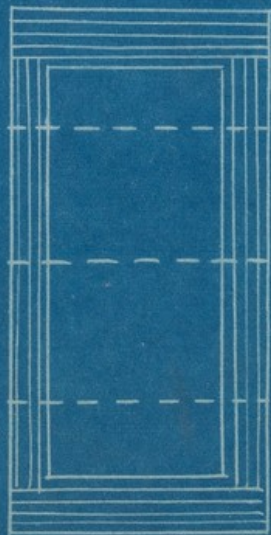


FIG. II

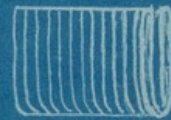


FIG. III

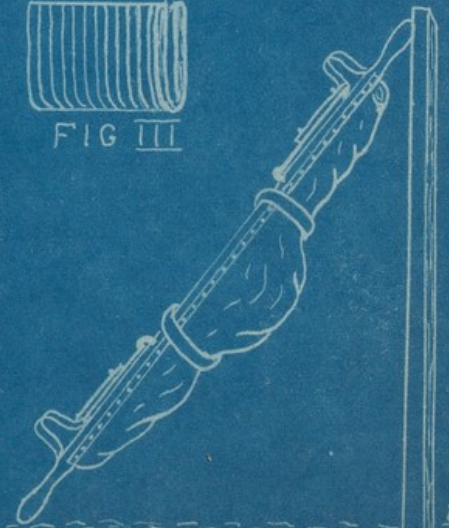
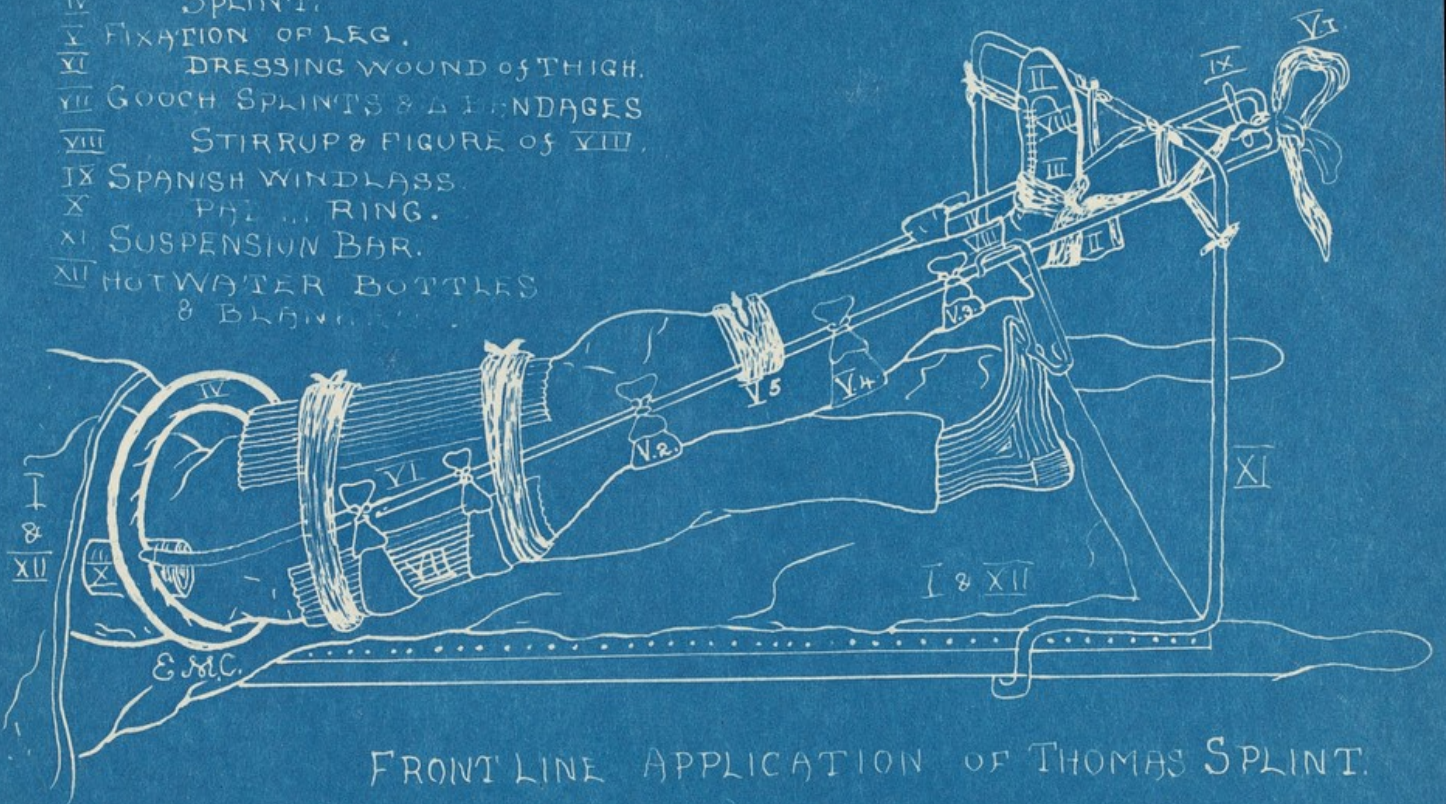


FIG. IV

U.S.

- I WARMING. (RECHAUFFEMENT.)
- II EXTENSION.
- III CLOVE-HITCH OVER BOOT.
- IV SPLINT.
- V FIXATION OF LEG.
- VI DRESSING WOUND OF THIGH.
- VII GOOCH SPLINTS & BANDAGES
- VIII STIRRUP & FIGURE OF VIII.
- IX SPANISH WINDLASS.
- X PAIL RING.
- XI SUSPENSION BAR.
- XII HOTWATER BOTTLES & BLANKETS.



FRONT LINE APPLICATION OF THOMAS SPLINT.

FIRST ARMY (R.A.M.C.) SCHOOL OF INSTRUCTION. 1917.

RAME 466/6

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Notes, or Letters written.

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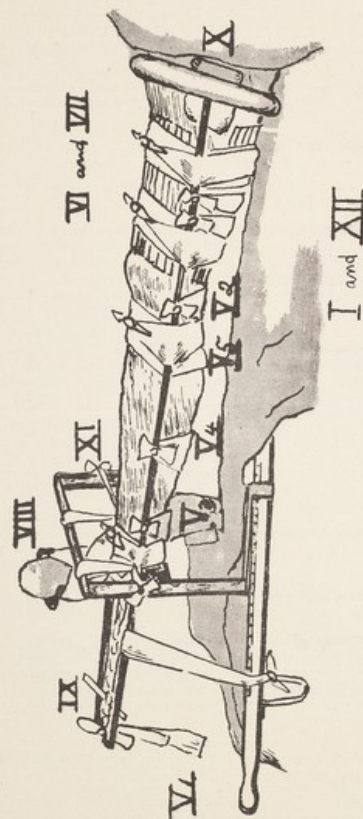
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To Lt. Col. E. M. Cowell. D.S.O. Instructed  
at the School herein dealt with.

Reprinted from the  
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August, 1918.

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Aug 1918

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### Clinical and other Notes.

#### RECENT DEVELOPMENTS IN ROYAL ARMY MEDICAL CORPS FRONT LINE EDUCATION.

BY LIEUTENANT-COLONEL GUY N. STEPHEN.  
*Royal Army Medical Corps.*

ONE of the interesting by-products of this War has been the development of a vast amount of educational force. Evidence of its existence could be adduced from various quarters, but to establish his statement the writer need do little more than point to the geographical area which throughout has been the scene of chief activity.

In France and Flanders new methods of defence have necessitated the invention of new methods of attack, and vice versa, while the aggregation of huge numbers of men in an unaccustomed environment has led to the principles of wound treatment and disease prevention being applied on a previously unexampled scale. In this work nearly every form of science and art has played its part, the net result being that no one who survives the War can well leave France with his mental outlook unwidened and unpossessed of at least elementary knowledge of some subject not previously within his ken.

Regarding it as a whole the education has been unconscious—the result of taking part in the application of new methods, of witnessing their operation, of camp fire discussing of passing events. But much of it has also been intentional, the authorities having seen in many instances the need of securing the right use of some new method or some new knowledge by the establishment of a definite school. In fact, a spot map of the British war zone in France prepared at any time during the last two years would have shown it to be freely peppered with schools devoted to the teaching of one war subject or another.

In such directions the Army Medical Service, it need scarcely be said, has shown itself no less active than other branches, and the degree of success it has attained is well worth attention.

As an example the work of an Army (R.A.M.C.) School of Instruction may best be taken since the school has been sufficiently long established, as war-time goes, to have attained a wide reputation.

It began its work in a real school—one of the many splendidly built French educational buildings that have figured so largely in the work of the R.A.M.C. in France—which was being used as a habitation for a casualty clearing station. At this time, the end of October, 1917, some of its wards had already been closed owing to the frequency with which the neighbourhood was shelled, and when shortly afterwards it was entirely closed owing to the same cause, the school was moved to another casualty clearing station, which owing to the inactivity of the military operations then in progress had plenty of room at its disposal.

#### GENERAL PRINCIPLES.

The general aims of the school may be described as including the following:—

(1) To provide instruction in improved methods of doing the work required of the Royal Army Medical Corps in front line areas.

(2) To put workers in these areas into touch with any knowledge that has been gained at bases or elsewhere and with which it is to their interest to become conversant, either because it has a bearing on their own work or on general grounds.

(3) To fill in the gaps which exist in the military education of so large a proportion of existing medical officers, and to furnish them with a wider view of the general aims of military medicine than they are likely to gain by work in any single medical or military formation.

(4) To break down the mental barriers which subconsciously arise between men, who, although all parts of the same machine, have very different duties assigned to them.

The means employed to fulfil these various aims and the subjects taught in connexion with them naturally vary with the classes to which the pupils belong. Of these there are several—officers, non-commissioned officers and men belonging to the Royal Army Medical Corps itself, or to the sister services of the various Dominion contingents; officers and other ranks belonging to the medical corps of the American and Portuguese Forces, and officers and "other ranks" drawn from combatant units of all the before mentioned forces.

The length of instruction also varies, but less widely. For officers and "other ranks" belonging to medical formation each course lasts ten days, while four days complete the course for combatants. In both cases the students arrive early in the afternoon of the day preceding the opening of the course, so as to have time to settle down comfortably, and they start off back to their units on the afternoon of the final day. The date of this final day is coincident in both courses, since the four-day course for combatants begins on the seventh day of the medical course.

The Army medical officers and "other ranks" told off to attend these courses are drawn mainly from among regimental medical officers, and from field ambulances and sanitary sections and squads, with a smaller proportion of officers belonging to casualty clearing stations or in charge of labour groups. The pupils from the combatant units are usually platoon officers, stretcher-bearers, and members of regimental sanitary squads, together with a few men employed or in training as regimental chiropodists.

For men belonging to sanitary sections and squads, as also for chiropodists, specialized instruction is provided, but the hours devoted to it are so arranged as to enable the men to share in the general instruction when this is of a kind likely to be useful to them. Much the same might be said indeed of the work of all the different classes of student, since for all are provided both specialized as well as general lectures and demonstrations.

In dealing with the combatant classes, the chief aim perhaps is to make them practically conversant with the best ways of rendering first-aid, and to impress on them the value of sanitation and show them how it can best be secured even in front line conditions; while the special lectures for medical officers deal with the new developments in the medicine and surgery of war. The general work covers pretty nearly the whole field of first line work, and invariably deals with methods of obviating shock.

Fitting in all the lectures and demonstrations is often a task of great difficulty, more especially since it is regarded as an essential principle that mental surfeit—

which inevitably leads to lack of attention—shall be avoided. Consequently, even though the particular form of instruction may happen nominally to be a lecture, it is made to assume as far as possible the character of a demonstration and is invariably limited in point of time to well within an hour.

The authorities moreover do not aim at achieving results solely by lectures and demonstrations. A part at least of the object of the latter is to create such active interest in the subjects to which they relate that the students shall subsequently discuss among themselves and with the staff the various points raised, and thus act as instructors to one another. The general aim, in short, is to promote "shop talk" from the beginning to end of each day.

#### *The Day's Work.*

The formal day's work begins at 8.30 a.m. and ends in the afternoon about 4.30 p.m. As will be at once noted it is not a long day, especially as allowance of time for breakfast and luncheon is generous. Nevertheless it admits of the delivery as a rule of two or three lectures and of a corresponding number of practical classes or demonstrations, and leaves the students quite fresh-minded enough to discuss things amongst themselves and take part perhaps in an organized debate on some subject, which though not forming part of the school course has a common interest for all. It is easy to theorize about front line work, but if one wants to learn in how many different ways the same piece of work can be performed, and to determine which is really the best of them, then attendance at one of these debates is highly to be commended.

The education provided by these debates and by the "shop talk" in general is entirely informal, but for disciplinary and other purposes the rest of the work is accompanied by a certain amount of ceremonial.

#### *Discipline.*

The passage of the day is marked by bugle calls and before the first morning lecture there is a roll call and parade, the students marching off in fours to their work. The actual beginning of each day's morning work is half-an-hour at "physical jerks" before breakfast, and the actual beginning of each afternoon's work is another parade and about half-an-hour's squad and company drill. The Commandant presides at all general lectures, and the lecturers or demonstrators do not enter the room until all the students are assembled. The latter stand at attention as the lecturer proceeds up the room, and when the lecture is over do not leave their places until formally dismissed. Otherwise than in respect of these details the whole course is conducted on informal lines, though in the mess but the usual practices of well-run messes on active service are observed and a notice of them is posted in the ante-room.

An additional point worth noting is that in the case of all officers each course ends with as close a reproduction as possible of the pomp and circumstance of a regimental guest night in time of peace. The proceedings include, of course, the formal toasting of His Majesty the King; a band lent by some near-by division plays throughout dinner in the ante-room, and when the formal proceedings are at an end the guest-night gambols commence and continue till the Mess President gives the word for departure. The aim of this evening is not merely festive. No doubt it forms a very pleasant feature of the course, but the object of the authori-

ties is to promote a general feeling of *esprit de corps* and to give young officers some idea of the mixture of ceremony and of good fellowship which characterizes garrison and cantonment life in times of peace. The final proceeding of all—just before the luncheon bugle blows on the day of separation—is a short address by the D.M.S., followed by a formal inspection and a march past.

#### ADMINISTRATIVE DETAILS.

Having thus set forth the general principles underlying the work of the school, it remains to supply a few details as to the administrative side of the enterprise and the choice of subjects for instruction.

#### Accommodation.

The school considers itself full when its "medical" students number 40 officers and 60 "other ranks," and its "combatant" students 10 and 130 respectively.

The requisite number for each course is secured by the D.M.S., who at the beginning of each course distributes the accommodation for the following course among the various units of the command. As the courses are very popular, it is only through accidental circumstances that vacancies are ever left unfilled.

Rations and fuel are drawn for all in attendance and officer students contribute to the mess fund a fee of 7.50 francs, and pay 2.50 francs per diem in addition. The fund thus formed has hitherto amply sufficed not only for the upkeep of the mess, but also for the provision of the various appliances required for demonstration purposes. The linen and crockery used in the officers' mess hut were lent by the British Red Cross Society.

The school buildings are formed by empty huts belonging to the casualty clearing station in which the school does its work. The principal lecture room is a French-pattern hut measuring ninety feet by thirty feet. The principal demonstration hut was formerly a recreation room. There is also a hut used by the officers as sleeping quarters, one for non-commissioned officers and two others for men. All ranks bring their ordinary camp kits, the officers placing these on bedsteads belonging to the casualty clearing station, while trestles and stretchers with palliasses are provided for non-commissioned officers, and stretchers, with palliasse mattresses beneath, for the men.

One cook-house serves all three messes and also such part of the casualty clearing station as is still used. The latter has been mainly utilized during the past winter for local sick and for cases of bomb injury among the civilian population in the neighbourhood.

The school office is the orderly room of the casualty clearing station. The arrangements for demonstrations were built by the Sanitary Section in whose area the school lies. The horses used are drawn from various field ambulances in the command, and are changed at the beginning of each course. For demonstrations in approved methods of field cookery, the students attend a cookery school a few miles distant.

#### Personnel.

From the foregoing details it will be seen that in the matter of housing, equipment and upkeep, the school costs nothing, since everything that it uses is either lent to it by some other formation or is provided by moneys resulting from its own existence.

An equivalent statement may be made in regard to the establishment of the school, since everybody who takes part in its tutorial or other work is either on temporary loan from another unit or is voluntarily performing school work in addition to other duties.

Subject to this consideration, the teaching staff may be said to consist of a commandant, an instructor, an adjutant, a quartermaster, 3 warrant officers, 5 sergeants, and a number of visiting lecturers. In addition there are 2 cooks, 1 corporal, 1 bugler and about 33 privates.

The commandant is also commanding officer of the casualty clearing station in which the school does its work. The adjutant is on loan from a field ambulance, and the instructor is a surgical specialist lent by one of the less active casualty clearing stations not far away.

Of the warrant officers, two are loaned from field ambulances to which they return for the four days which elapse between the courses. Both have had pre-war experience as instructors in physical exercises and bandaging respectively. The third warrant officer belongs to the A.S.C. attached to a field ambulance; he takes charge of the horse-lines and also acts as assistant riding-master.

Of the five sergeants one is in charge of the lecture rooms and is responsible for everything required at lectures and demonstrations. The other four are men who have distinguished themselves by their aptitude at a first course, and are retained at a second course to act as pupil teachers. All five are on loan from R.A.M.C. formations.

The corporal, the two cooks and the bugler are part of the ordinary establishment of the casualty clearing station. Of the privates about 12 are A.S.C. drivers lent by field ambulances and sent with the horses simultaneously loaned, in the proportion of 1 groom to every 2 horses. Of the rest, 4 act as assistants to the sergeant in charge of the lecture rooms, 2 as guards in the horse-lines, and the rest as mess servants and batmen. All these belong to the category of "B" men, that is to say they are men fit for ordinary fatigue work but not for duty with fighting troops. One batman is found to be sufficient for every six officers, and it is a rule of the school that they should not be "tipped."

As for the visiting lecturers, some take part in the work of every course, and others help only at one course or deliver merely a single lecture. Of the former the principal are the D.M.S. of the Army, its consulting physician and consulting surgeon, an officer in charge of one of the mobile laboratories, and the officer in sanitary charge of the area in which the school is situated.

The other visiting lecturers are drawn from any source in or out of the Army that is available. Men distinguished in some particular line and likely to be interesting are invited.

#### SUBJECTS TAUGHT.

The tuition afforded by the school is identical at each course only within certain limits; that is to say the field of work is always the same, but it has not hitherto been found practicable to give every yard of it the same amount of attention at each course. This is partly because the school has to depend a good deal on chance assistance, partly because, except in regard to a few subjects, it has not yet been decided exactly what knowledge should and can be secured in every pupil in the limited time at disposal.

The difficulties that exist in this connexion may perhaps best be suggested by giving a list of some of the titles of lectures and demonstrations that have been given since the school first opened its doors last November. The subjects invariably taught can be considered subsequently. Roughly classified, the list is as follows:—

*Professional.*

The Obscure Diseases of War.  
The Treatment of Wound Shock.  
The Surgery of War Wounds.  
The Pathology of Gas Gangrene.  
The Variety and Recognition of Shell and Drift Gas Cases.  
The Meaning and Importance of Pyrexia of Unknown Origin.  
The Early Treatment of Gunshot Wounds of Chest.  
War Neuroses.  
Wound Infections and their Complications.  
The Objects of Medical Research.  
Medical Clerking and Records.  
Incidents and how to prepare them.  
The Duties of Regimental Medical Officers.  
Relation of Royal Army Medical Corps Officers to other Officers.

*Horse Mastership.*

Horses, Sick and Well.  
Saddle-fitting.  
Horse Mastership.  
Stables, Horses and Saddlery.

*Law.*

Military Law.  
What is Evidence?

*Offence Reports.**Lectures for Other Ranks.*

The Duties of Other Ranks in Camp.  
Duties on the Line of March.  
The Duties of N.C.O.s  
Relations of N.C.O.s to Officers and other Ranks.

*Organization.*

The Prevention of Disease.  
The Prevention of Medical Diseases in War.  
Organization of the Medical Services.  
Organization of the Lines of Communication.  
The Role of the Rest Camp.  
The Return of Convalescents to Duty.  
The Prevention of Sick Wastage.  
The Working of Casualty Clearing Stations.  
Motor Transport.  
Billets and how to get them.

*Miscellaneous.*

Marching and the Care of Feet.  
The Prevention of Trench Foot.  
The Hygiene of Foodstuffs.  
The Carriage of Casualties from the Fighting Line  
Stretcher Carrying in Duck-board areas.  
Stretcher Carrying in and out of Trenches.

The Field Pannier and its Contents.  
Water-carts and their Upkeep.  
Vapour Baths and their Use.  
The Meaning of Conservancy.  
Methods of Rechauffement.  
The Prevention of Shock.  
The Customs of the Service.  
The Chaplains Department and its Relations.  
Map Reading.

Many of these lectures and demonstrations, though differently entitled at different courses, really cover much the same ground; and judging from the timetables of a number of courses, the authorities would generally seem to aim at securing in each course 3 or 4 lectures on surgical and medical subjects, half-a-dozen on questions of administration and organization, 2 on horse-mastership, and 1 or 2 on military law.

The subjects invariably taught are the application of the Thomas splint with special reference to the prevention of shock; the application of the rifle splint; the arrest of hæmorrhage; the use of the triangular bandage; and the construction and use of field sanitary appliances. In addition, all ranks take part in physical exercises and ordinary drill, and all medical officers are given riding lessons, and attend demonstrations of useful ways of varying the use of the food-stuffs issued as rations.

These subjects are mainly dealt with by practical classes. For none of these is it claimed that any particular method taught is necessarily the best that might be conceived; merely that it is a good one. When large bodies of workers are in question a good method with which all are familiar is better than an "improved" method known only to a few.

In regard to the Thomas splint course, the surgical view instigating this teaching is the one now universally accepted in France. Immobilization of parts before evacuation from an advanced dressing station, or even a regimental aid-post, should be secured in all cases of fracture of the femur, in extensive flesh wounds of the thigh, in injuries to the knee-joint, and in severe fractures in the upper part of the tibia; and the Thomas splint is the best to use, except when a fracture of the femur is complicated by an unusually extensive wound in the buttock or upper part of the thigh of such a kind as to interfere with the fitting of the ring. The method of application taught secures attention to the value of warmth and of absence of pain in the prevention of shock, and does not involve the removal of either clothes or boots or exposure of the wound until complete immobilization is achieved. It also assumes that the operator will have not more than two assistants, possibly only one.

The principle on which it is taught is that in applying the Thomas splint in the circumstances of an advanced dressing station or regimental aid-post no thought should be necessary but every movement automatic. To secure this result the whole process has been worked out in the form of a definite drill in which the various groups of movement are indicated by numbers. Presumably it will be described in detail separately in the Journal, so it suffices here to say that it covers everything from the initial warming of the patient by blankets and a primus stove (this being movement No. 1), to fixing the splint to a suspension

bar on the stretcher, and the placing in position for the journey of hot bottles and blankets (these being movements Nos. 11 and 12).

As to the value of this drill it seems to be sufficiently indicated by two facts: a man who knows it well can carry it out with entire efficiency in the dark; and in the competition with which the teaching of this subject always ends, teams of "other ranks" often beat teams of officers in perfection of detail and speed of completion. The former do exactly what they have been told to do and the latter use their "judgment" which may or may not be good. A first-class team can put up a limb perfectly in two minutes forty-five seconds, and an average team in about four minutes.

The teaching of the use of the rifle splint and the triangular bandage is of an equally practical kind and all classes of student take part in it. The arrest of hemorrhage is taught by the D.M.S., who uses a mechanical appliance consisting of a set of tubes with forceps hung on a naked man to demonstrate the course of the principal vessels, the difference between arterial and venous bleeding, and how and where arteries can be controlled by finger pressure.

All classes receive instruction in sanitation, the number of sessions and the character of the teaching varying with their assumed initial knowledge. The appliances used for teaching purposes are models of those which have best stood the test of long experience. For the most part they have been evolved during the present campaign. They include methods of protecting food from contamination; disposing of excreta in different circumstances; and the destruction of parasites in clothing and equipment.

The drill and physical exercises absorb about one and a half hours each day. Besides securing due exercise in all ranks, they smarten up everybody all round. During the last three years many field ambulances have been paraded to receive the thanks of a Divisional or Army Commander for work done by them, and on such an occasion a proper sense of *esprit de corps* demands that nothing in the turn-out or movements of the men shall remind the visiting officer that ordinary drill enters little into their lives. At the drills the medical officer students are encouraged but not obliged to take command of sections or the whole parade. This is very useful because some of them have had no previous experience and many are rusty. A medical officer in charge of a party of stretcher-bearers or other group of men ought not to be dependent on his sergeant when he wishes to halt them, alter their direction, or move them out of the way of a passing lorry or a gun when marching along a road.

The riding classes take place every afternoon, every medical officer receiving four or five lessons. The work includes mounting and dismounting at word of command; maintaining pace and position, and negotiating a few small fences. All medical officers are supposed to be able to ride, but many of the pupils are entirely beginners; the fact that many of the horses used are a bit rough does not make the work any less useful.

#### CONCLUDING OBSERVATIONS.

Opinion in France as to the value of the school is perhaps best represented by saying that at the time of writing several other armies are taking steps to duplicate it in their own areas. Should the War continue for another winter there is no doubt they will succeed, but in view of the apparent imminence of a

German offensive this is at present impossible. They can secure a sufficiency neither of pupils nor teachers except when military operations are so inactive as to allow men of both classes to be diverted from their ordinary operations.

Nevertheless, even should the Army (R.A.M.C.) School of Instruction shortly close its doors and never be duplicated, its existence will have been thoroughly justified: about 400 officers and 1,500 N.C.O.s and men have passed through the curriculum, and it has been shown how much can be done without either an elaborate establishment or an expensive equipment. It has provided many dozens of men with knowledge entirely new to them, and in others has crystallized knowledge which previously was vague; in all it has stimulated attention to a subject of the highest importance in front line work, namely, the preventive treatment of shock.

In conclusion, it may be said that a school of this order depends for its success little on its situation and not very much on the character of its visiting lecturers, but to an infinite extent on that of the resident staff. They must be men quite free from the schoolmaster spirit, but who are thoroughly conversant with their subjects, and capable of expounding them readily.

In particular, the commandant should be a man of wide sympathies, a gregarious person, a man whose knowledge of front line work is so complete that he can understand the point of view of all the different classes of pupils; a man naturally disposed to take his many small troubles cheerily, and to whom the various ropes of Army life are so familiar that he knows exactly which at any given moment he can leave slack and which tighten in order to maintain exactly the right admixture of discipline and ease. For one factor in a school of this order is that a course thereof should be regarded as a privilege and a pleasant break in front line life.

#### TWO VIBRIO SPECIES OF THE "PARACHOLERA" GROUP ASSOCIATED WITH A CHOLERA-LIKE OUTBREAK.

By CAPTAIN T. J. MACKIE.

Royal Army Medical Corps (Territorial Force).

AND

CAPTAIN E. J. STORER.

Royal Army Medical Corps.

From the Military Bacteriological Laboratory, Alexandria, Egyptian Expeditionary Force.

It must be recognized that, besides the typical epidemic cholera of Asia, due to a vibrio with the biological characters of the classical *Vibrio cholera* (Koch), cholera-like conditions may be produced by other vibrio species. As suggested by Castellani,<sup>1</sup> a choleraic disease causally associated with a vibrio which cannot be identified with the *V. cholera*, might be designated paracholera. Of course, the cholera vibrio is capable of undergoing variations in its characters, and such variants are to be carefully distinguished from entirely different species. Thus the El Tor vibrio of Gotschlich (1905),<sup>2</sup> which differed from the classical type in

<sup>1</sup> *Brit. Med. Journ.*, March, 1916, No. 2,882, p. 448.

<sup>2</sup> *Scientific Reports, Sanitary, Maritime, and Quarantine Council of Egypt, Alex.*, (1905, 1906).



producing a powerful haemolysin, nevertheless reacted to a specific anti-cholera serum, and in virtue of its serological correspondence to the classical *V. cholera*, has been regarded as a variety of the cholera species. It has also been asserted by various observers that strains of *V. cholera* under certain conditions may lose their specific serological characters, e.g., agglutinability by an anti-cholera serum, so as to simulate non-cholera species; but it is generally accepted that the failure of a vibrio to correspond to the *V. cholera* in this serological character is evidence that it belongs to an entirely different group.

The object of this communication is to describe the vibrio strains which were isolated from certain choleraic cases occurring in the form of a small localized outbreak in one of the convalescent hospitals in Egypt. In many of their characters these strains bore a distinct resemblance to the classical *V. cholera*, but were easily differentiated by their serum reactions, and we have, therefore, classified them as paracholera vibrios.

#### CLINICAL SUMMARY OF THE CASES.

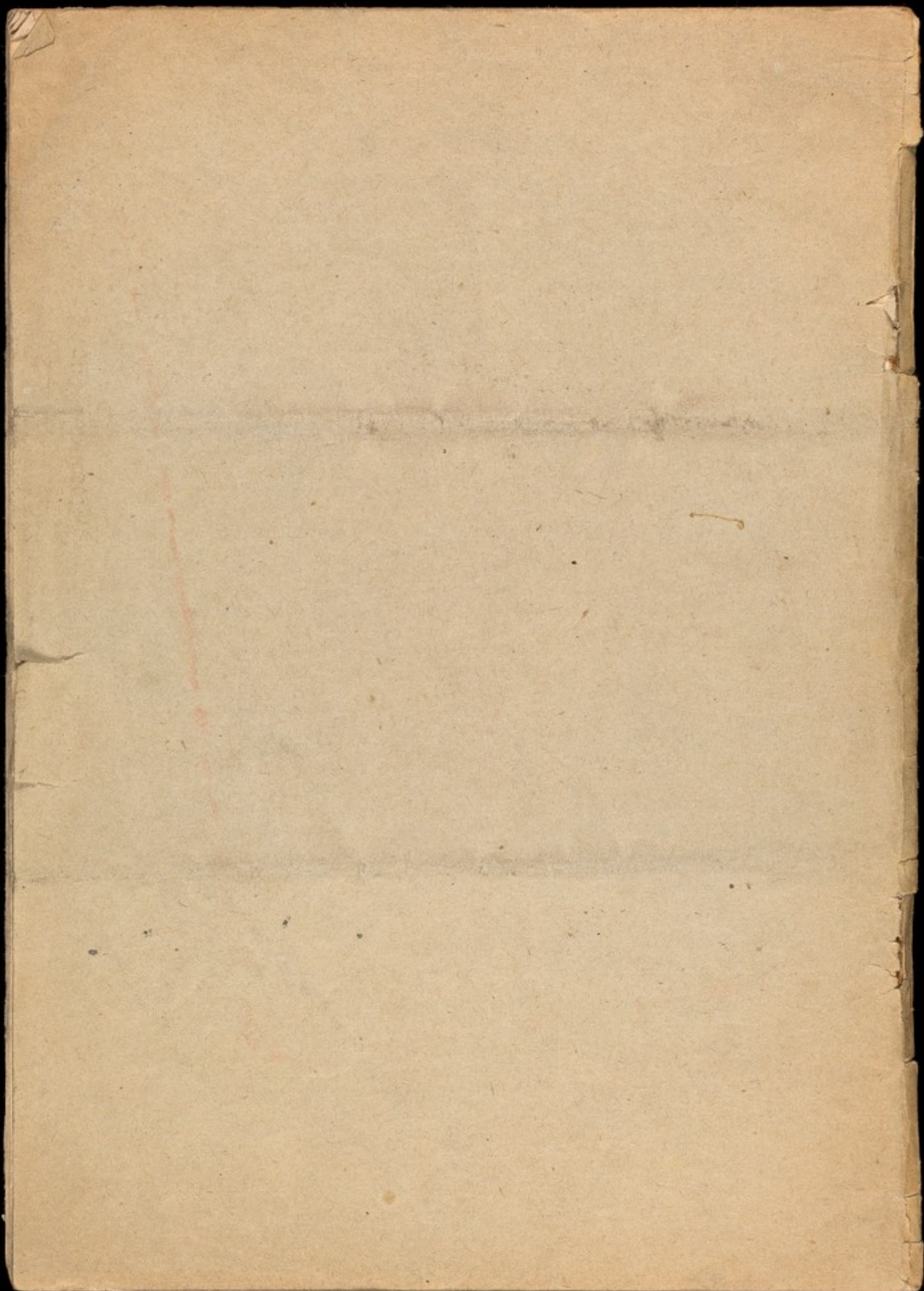
On October 26 Pte. G., a patient convalescing from "pleurodynia," developed a sudden acute illness which presented the characteristic clinical signs and symptoms of Asiatic cholera. The condition started with severe colic, followed by intense diarrhoea and vomiting, and severe cramping pains in the thighs and legs. The intestinal evacuations were typically "rice-water" in character. The acute stage was followed by a state of extreme collapse with subnormal temperature, low blood-pressure, sunken eyes, cold livid skin, and a weak, husky voice. He was treated in the collapsed state by intravenous injection of hypertonic saline solution, and subsequently made an uninterrupted recovery. It is of interest to note that this patient had been suffering from digestive disorder for six days previous to the onset of the choleraic illness.

The same day, October 26, another patient, Pte. B., in the same hospital, suddenly developed acute diarrhoea with abdominal pain and cramps in the legs, but the illness was not so severe as in the first case, and was not associated with any degree of collapse, though the blood-pressure was relatively low. This man had been suffering for some months past from recurrent diarrhoeal attacks.

On the following day, October 27, three other patients in the hospital, Pte. C., Trpr. W., and Pte. P., developed acute choleraic diarrhoea. In the case of Pte. C., the condition was associated with abdominal pain and vomiting, but without marked collapse. The intestinal discharges were of the "rice-water" type. Unlike the other cases, the diarrhoea persisted after the acute phase. On October 31 typical dysenteric (blood and mucus) stools were passed, and the temperature rose to 100° F. *B. dysenteriae* (Flexner-Y type) was isolated; anti-dysenteric serum was administered with rapid subsequent recovery. This man had been invalided from Mesopotamia with "anæmia," and, previous to the acute illness, had a slight diarrhoeal attack in the convalescent hospital.

Trpr. W.'s illness did not amount to more than an acute but transient diarrhoea, with little general disturbance. This patient had an "enteric" illness in August. The day before the acute attack he had slight diarrhoea.

Pte. P. suffered from a more acute diarrhoea, with vomiting, cramps in the legs, and some degree of collapse. He had "dysentery" in May, and several attacks of diarrhoea since that date.





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Suspension Bar

Points to be remembered in teaching soldiers to render  
First Aid.

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1. Use the simplest language and no technical terms, viz.,  
Thigh Bone, Arm Bone, Bleeding (not haemorrhage).

2. Describe the heart as constantly pumping the blood through  
a system of elastic bloodvessels like a fire engine through a  
hose in which you can also feel a throb, just as you can feel the  
pulse.

3. Do not attempt to describe Pulmonary or Hepatic or venous  
Circulation.

4. Teach that it is necessary to have a bone against which to  
close a vessel by pressure.

Only three points to be shown where useful pressure with  
the fingers is possible.

- Viz.,
1. The Arm.
  2. The Groin.
  3. The side of the neck.

Demonstrate the spot and method in each Case.

1. Along the inner border of the biceps, with the flat  
of the fingers; first pressing the muscle forward, so as to get  
the vessel against the solid bone.

2. From a point  $\frac{1}{2}$  way between bone over root of Penis  
and tip of the hip bone, two inches straight down.

Press deeply with points of fingers.

Frequent relief necessary (two attendants required).

3. Light pressure backwards against spine with points  
of two fingers at root of neck between the windpipe and large  
muscle crossing neck.

4. Danger of tourniquet, especially if concealed by  
a bandage or armsling, to be explained. Finger pressure, when  
possible to spare the men to carry it out, far better and safer.

H.Q., VI Corps.  
13th July, 1916.

Sd. H.N. Thompson,  
Colonel,  
D.D.M.S., VI Corps.

WEEKLY MENU  
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Day.	Unit.	Breakfast.	Dinner.	Tea.	Supper.
Sunday.	No.1.C.C.S.	Rissoles.	Roast Meat,Veg.Sago Pudg.	Bread	Cocoa
	RAMC.School.	Rissoles.	Boiled Meat," " "	Butter	Bread
Monday.	No.1.C.C.S.	Boiled Bacon Porridge.	Meat Pie,Veg.Rice Pudg.	Bread	Soup or Cocoa.
	RAMC.School.	Fried Bacon Porridge.	Meat Pie,Veg.Rice Pudg.	Dripping	Brawn
Tuesday.	No.1.C.C.S.	Fried Bacon.	Boiled Beef,Veg.	Bread	Cocoa
	RAMC.School.	Boiled Bacon.	Roast Beef, Veg.	Sago Pudding	Butter
Wednesday	No.1.C.C.S.	Rissoles.	Brown Stew,Veg,	Jam	Mock Crab.
	RAMC.School.	Boiled & Fried Bacon.	Curry Stew,Veg,	Rice Pudg.	Butter
Thursday	No.1.C.C.S.	Boiled & Fried Bacon.	Roast Meat,Veg.	Bread	Cocoa
	RAMC.School.	Rissoles.	Boiled Beef.	Pudg,	Butter
Friday.	No.1.C.C.S.	Fried Bacon Porridge	Boiled Beef;Beans	Dripping & Potted Meat	Cheese
	RAMC.School.	Boiled Bacon Porridge	Roast Meat,& Potatoes.	Bread	Soup & Bread
Saturday.	No.1.C.C.S.	Rissoles	Meat Pies &	Bread	Cocoa
	RAMC.School.	Fried Bacon.	Potatoes.	Rice Pudg.	Butter

*D. McNeill*

No.1.C.C.S.

Lieut.Col.R.A.M.C.  
 O.C.No.1.C.C.Stn.

A. = Officers.  
B. = N.C.O.'s & Men.

First Army R.A.M.C. School of Instruction.  
FIRST COURSE.

First Army R.A.M.C. School of Instruction.  
First Course - 1918.

S Y L L A B U S.

T. H. E.	Monday. 12-8-18.	Tuesday. 13-8-18.	Wednesday. 14-8-18.	Thursday. 15-8-18.
8 - 00 a.m.	A & B. Physical Training.	A & B. Physical Training.	A & B. Physical Training.	A & B. Physical Training.
9 - 15 a.m.	-	Lecture. B. Discipline. Lieut. Newton.	-	Lecture. B. Relation of N.C.O.'s to Other Ranks. Lt. Newton.
10 - 00 a.m.	Opening Address. A & B. D.M.C. First Army. Lectures. A. G.S. Col. Hume. B. G.S. Capt. Parlor	Lecture. A & B. War Surgery Maj. Genl. Wallace.	Lecture. A & B. Dentistry & Care of Mouth. Capt. Colyer.	Lecture. A & B. "P.U.O." Col. Hume. <i>Genl W. Hume</i>
11 - 00 a.m.	Practical Demonstration. A & B. Thomas's Solint. Instructor.	Practical Work. A & B. Thomas's Solint. Instructor. <i>22 23 C. B. Bay</i>	Practical Work. <i>Thomas</i> A & B. Triangular Bandag- ing. Lieut. Newton.	A & B. Practical Sanitation. <i>W. Hume</i>
12 - 00 noon.	Lecture. A & B. Camp Sanitation. O.C. 41 San. Section.	Lecture. A & B. Role of Rest St'n. Col. Young.	Lectures A. Pathology of W'nd Shock. <del>Lt-Col. Correll.</del> B. Drugs - Their use and their abuse. Instructor.	Lecture. A & B. Official Correspondence. Lt-Col. Goodwin. <i>John Henry Phil.</i>
2 - 00 p.m.	A. Riding - 1/2 Class. A & B. Sq'd Drill - 1/2 Cl. B. Pract'l Sanit'n - 1/2 Cl.	A. Riding - 1/2 Class. A & B. Sq'd Drill - 1/2 Cl. B. Pract'l Sanit'n - 1/2 Cl.	A. Riding - 1/2 Class. A & B. Sq'd Drill - 1/2 Cl. B. Pract'l Sanit'n - 1/2 Cl.	A. Riding - 1/2 Class. A & B. Sq'd Drill - 1/2 Cl. B. Pract'l Sanit'n - 1/2 Cl.
3 - 00 p.m.	Demonstration. A & B. Nursing. Sister i/Charge.	Demonstration. A & B. Water Carriage. Capt. Bossant.	Lecture. A & B. Points of the Horse. Lt-Col. Fawcett.	Demonstration. A & B. Nursing. Sister i/Charge.
4 - 00 p.m.	A. Riding - 1/2 Class. A & B. Sq'd Drill - 1/2 Cl. B. Pract'l Sanit'n - 1/2 Cl.	A. Riding - 1/2 Class. A & B. Sq'd Drill - 1/2 Cl. B. Pract'l Sanit'n - 1/2 Cl.	A. Riding - 1/2 Class. A & B. Sq'd Drill - 1/2 Cl. B. Pract'l Sanit'n - 1/2 Cl.	A. Riding - 1/2 Class. A & B. Sq'd Drill - 1/2 Cl. B. Pract'l Sanit'n - 1/2 Cl.

S Y L L A B U S (Contd.)

TIME.	Friday 13-8-18.	Saturday 17-8-18.	Sunday 19-8-18	Monday 19-8-18	Tuesday 20-8-18.
9 - 00 a.m.	A & B. Physical Training.	A & B. Physical Training.	-	A & B. Physical Training.	A & B. Physical Training.
9 - 15 a.m.	-	Lecture. B. Clerking. Lieut. Newton.	-	[TUPES]	Lecture. B. Offence Reports. Lieut. Newton.
10 - 00 a.m.	Lectures. A. Resuscitation. Major McFee. B. Prevention of Pound Shock. Capt. Carter.	Lecture. A & B. March Discipline. Adjutant.	-	Address. DMS. First Army. Demonstration. B & C. Arrest of Haemorrhage. Instructor. Lecture. A. Gas Gangrene Major McFee.	Lecture. A & B. (For Surgery). Maj. Genl. Wallace. Gd. H. M. C.
11 - 00 a.m.	Practical work. A & B. Thomas's Splint. Instructor. 7. Amb. Equipment.	Practical Demonstration. A & B. Rifle Splint. Lieut. Newton.	CHURCH PARADE	Lectures. A. End Results of War Surgery. B. Personal Hygiene. C. Adjutant.	Demonstration. A & B. Work in the R.A.P. MATRON. ↗
12 - 00 noon.	Lecture. A & B. Interior Economy of Fd. Amb. Maj. Col. Goodwin.	Lecture. A & B. Duties of R.A.P. Major Bourdillon.	-	Lecture. A & B. Sanitation. C. Can. Hygiene & Disinfection.	Lecture. A & B. Infectious Diseases. Capt. Carey. Wing Field.
2 - 00 p.m.	A. Riding & Class. A & B. Sqd. Drill & Cl. B. Pract'l San'n & Cl.	A. Riding & Class. A & B. Sqd. Drill & Cl. B. Pract'l San'n & Cl.	SPORTS Col. Bray	A. Riding & Class. A & B. Sqd. Drill & Cl. B. Pract'l San'n & Cl.	A. Riding & Class. A & B. Sqd. Drill & Cl. B. Pract'l San'n & Cl.
3 - 00 p.m.	Lecture. A & B. Reading.	Lecture. A & B. Defensive Work. An R.A.P. Officer.	-	Lecture. A & B. Stable Management Veterinary Officer.	Practical Demonstration. A & B. Nursing. Sister. 1/Charge.
4 - 00 p.m.	A. Riding & Class. A & B. Sqd. Drill & Cl. B. Pract'l San'n & Cl.	A. Riding & Class. A & B. Sqd. Drill & Cl. B. Pract'l San'n & Cl.	-	A. Riding & Class. A & B. Sqd. Drill & Cl. B. Pract'l San'n & Cl.	A. Riding & Class. A & B. Sqd. Drill & Cl. B. Pract'l San'n & Cl.

Col. Bray

Contd.



... (Conts.)

	Wednesday. 21-8-18.	Thursday. 22-8-18.	Friday. 23-8-18.	Saturday. 24-8-18.
8 - 00 a.m.	A & B. Physical Training.	A & B. Physical Training.	A & B. Physical Training.	-
9 - 15 a.m.	-	P. Lecture. Evidence. Lieut. Norton.	-	-
10 - 00 a.m.	Lecture. A & B. Evacuation from the Front Line. Lt-Col. Torcatt	Lecture. A & B. War Medicine. Col. Dure.	Lecture. A & B. War Surgery. Maj.-Genl. Wallace.	Practical Demonstration. A & B. Thomas's S. Lint.
11 - 00 a.m.	Demonstration. A & B. Stretcher Bearing.	Demonstration. A. Surgical Instruments. B. Resuscitation.	Practical Work. A & B. Thomas's S. Lint. Instructor.	Inspection Parade. D.M. First Army.
12 - 00 noon.	Lectures. A. War Pathology. Capt. Sladden. B. Lice & Scabies.	Lectures A. Military Law B. Care of the Feet. Major Price.	Lecture. <i>Amalson</i> A & B. C. Staff Officer.	-
2 - 00 p.m.	A. Riding & Class. A & B. Squad Drill & Cl. B. Practical San'n & Cl.	A. Riding & Class. A & B. Squad Drill & Cl. B. Practical San'n & Cl.	A. Riding & Class. A & B. Squad Drill & Cl. B. Practical San'n & Cl.	RETURN TO UNITS.
3 - 00 p.m.	Lecture & Demonstrations. A & B. Cooking. Capt. Fowler.	Lecture. A & B. Organisation of American Army. Div'l Surgeon.	Practical Demonstration. A & B. Nursing. Sister 1/4 Class. <i>DAG-I</i>	-
4 - 00 p.m.	A. Riding & Class. A & B. Squad Drill & Cl. B. Practical San'n & Cl.	A. Riding & Class. A & B. Squad Drill & Cl. B. Practical San'n & Cl.	A. Riding & Class. A & B. Squad Drill & Cl. B. Practical San'n & Cl.	-

First Army R.A.M.C. School.  
Fifth Course.  
Syllabus.

D.M.S. First Army  
No 4114/64 d/ 1-2-17.

<u>Time</u>	<u>Thursday</u> <u>Feb 7<sup>th</sup></u>	<u>Friday</u> <u>Feb 8<sup>th</sup></u>	<u>Saturday</u> <u>Feb. 9<sup>th</sup></u>	<u>Sunday</u> <u>Feb 10<sup>th</sup></u>	<u>Monday</u> <u>Feb 11<sup>th</sup></u>
8.30 - 9.30 am.	<u>Physical Drill</u>	<u>Physical Drill</u>	<u>Physical Drill</u>	<u>Physical Drill</u>	<u>Physical Drill</u>
9.45 - 9.45 am. (M.C.O's & Men)	<u>Lecture</u> Duties in Camp. Supt. Major.	<u>Lecture</u> Relation of M.C.O's to Other Ranks. Commandant.	<u>Lecture</u> Relation of M.C.O's to Other Ranks. Supt. Major.	-	<u>Lecture</u> Duties of M.C.O's Supt. Major.
10.0. am.	<u>Opening Address</u> D.M.S., First Army. <u>General Lecture</u> on Emergents. Sur. Gen. Wallace.	<u>Lecture</u> Prevention of Sick Wastage. Capt. Parkinson.	<u>Lecture</u> Commissary in the Field. Capt. Jacobs.	9.45 am. C. Ruck Parade. A.C.G. First Army	<u>Lecture</u> Surgery of the War. Sur. Gen. Wallace.
11.0. am.	<u>Practical</u> <u>Demonstration</u> Thomas Splint. Capt. McDonald.	<u>Practical</u> <u>Demonstration</u> Thomas Splint. Capt. McDonald.	<u>Practical</u> <u>Demonstration</u> Thomas Splint. Capt. McDonald.	<u>Lecture</u> Medical Organisation Col. Young.	<u>Practical</u> <u>Demonstration</u> Traction Bandage. Capt. McDonald.
12.00 noon.	<u>General Lecture</u> War Medicine. Sur. General. Sir W. Hemphill.	<u>Lecture</u> Observe Diseases of the War. Col. Soltan.	<u>Lecture</u> Gas Gangrene. Major McEe.	<u>Lecture</u> War Surgery. Sur. General. Sir A. Bowlby.	<u>Lecture</u> War Neurology. Lt. Col. Gordon Hobbs.
2.00 pm.	<u>Squad Boy Drill</u>	do	do	-	do.
3.00 - 4.30 pm.	<u>Riding's Officers</u> <u>Practical Sanitation</u> <u>Remainder.</u>	do.	do.	-	do.

Syllabus (continued).

Time	Tuesday Feb 12 <sup>th</sup>	Wednesday Feb 13 <sup>th</sup>	Thursday Feb 14 <sup>th</sup>	Friday Feb 15 <sup>th</sup>	Saturday Feb 16 <sup>th</sup>
8:30 - 9:00 am	Physical Drill	do.	do.	do.	-
9:15 - 9:45 am (N60 <sup>th</sup> Men)	Lecture. Duties of N60 <sup>th</sup> Adjutant.	Lecture Office Reports. Sgt. Major.	Lecture Evidence. Sgt. Major.	Lecture. Duties on the Line of March. Sgt. Major.	
10:00 am.	Lecture. Pathology of M.C. Diseases in War. Major McFee.	10:00 - 10:30 am. Addresses & Practical Demonstration Arrival of Haemorrhage Cambesant. 10:30 - 11:00 am. Practical Demonstration Rechargement. Major O'Hagan.	Lecture Gas Poisoning. Capt. Douglas.	Lecture. Indenting, etc. Lt. Col. Goodwin.	Lecture. Military Law Capt. Sharpe.
11:00 am.	Practical Demonstration Triangular Bandage & use of Rifle Splint. Capt. Cowell.	Lecture Surgery of the W. at. Surg. Gen. Wallau	Demonstration Saddle-fitting. etc. Major Saunders.	Practical Demonstration. Thomas Splint. Captain Cowell.	Competition. Thomas Splint. Address Bns. First Army. Inspection Parade. March Past.
12: Noon.	Lecture. P.W.O. Col. Soltan.	Practical Demonstration Thomas Splint. Capt. Cowell.	Lecture Wound Shock Capt. Cowell.	Lecture G. S. W. of the Chest Col. Soltan <sup>COWELL</sup>	-
2:00 pm.	Squad & Coy Drill.	Lecture. Narrowmanship. Major Saunders.	Squad & Coy Drill	Squad & Coy Drill.	Return to Units.
3:00 - 4:30 pm	Reading. 3 Officers. Practical Sanitation Remainder.	3-4 pm Reading. 3 Officers. San. Rem. 4-4:20 pm Map Reading	School of Cooking	School of Cooking	
	Med. & L. Discussion.		Front Line Discussion	Shock Discussion.	

The A. B. of 9 Men  
of No. 1. C. B. S. requests the  
pleasure of their company  
New Year's at their  
be held at the Hotel  
at 2000 hrs on  
Tuesday Dec 31st 1918



La Direction de l'Hôpital  
Anglais vous prie de lui faire l'hon-  
neur d'assister au Bal qu'elle donne-  
ra le Mardi 31 Décembre à 8  
heures en la Grande Salle de  
l'Hotel de Ville.

Mons, le 30 Décembre 1918.

### Cover for Documents.

\_\_\_\_\_

Ell

(47)

**Nature of Enclosures.**

Thomas's Drill

Fulling

School

Blair's Papers

\_\_\_\_\_  
**Notes, or Letters written.**

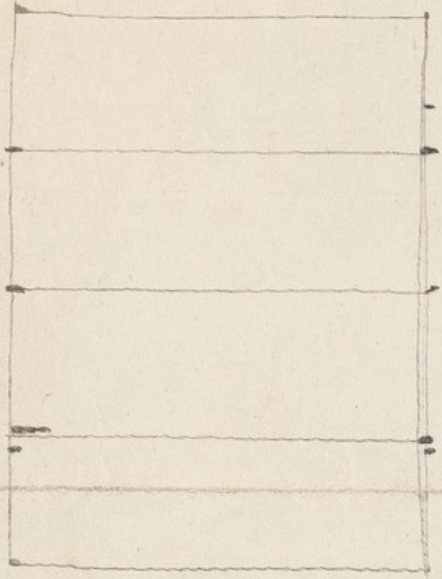


FIG. I

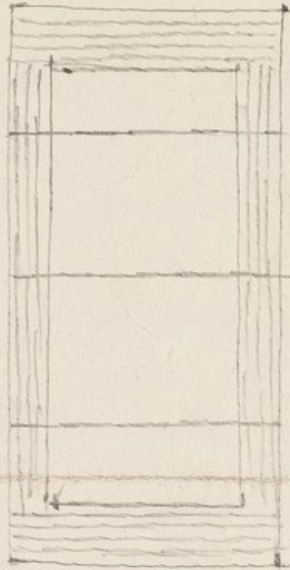


FIG. II.

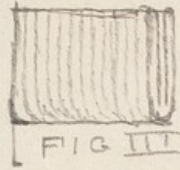


FIG III

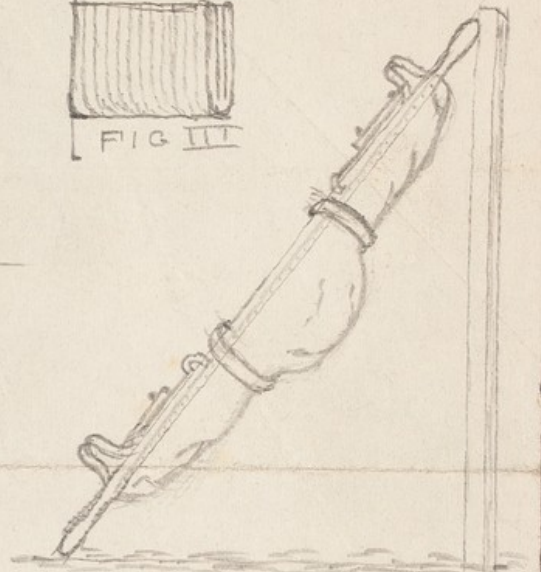


FIG. IV.

*Emmell  
Gordon*

*Personal*  
*SCHOOL*

From: Chief Surgeon, A.E.F.

France, 12th June, 1918.

To: The Director General Medical Services, B.E.F.

*7th Arm*  
*SCHOOL*

Subject: Visits of American Medical Officers to B.E.F.

1. The Commandant of the Army Sanitary School, American Expeditionary Force, has informed me that during the visit he made to your Command with the members of his School they accumulated very valuable data in connection with the Medical Service of your Army in the field which has been of the utmost importance to them.

2. He states that the student officers were conducted personally by very experienced officers, often by the Chief Surgeon of the Army himself to visualize the Medical Services of both the Advance and Lines of Communication, that these American Officers were most comfortably housed, and cared for, and hospitably entertained; and that they were given the opportunity of hearing the opinion and seeing the practice of noted men in every branch of Medico-Military Administration and Military Medicine, Surgery and Hygiene.

3. I wish to express the warm appreciation of the Medical Department for the opportunity given our officers to receive this special instruction in field work, also for the hospitality accorded to them.

I/D.

Sd/ M.W. Ireland, Brig-Genl. N.A.  
Chief Surgeon.

2.

D.G./Y/2263/413.

D.M.S.,  
First Army.

Forwarded for your information with reference to previous correspondence on this subject, your No. 1498/2 of 6-2-18.

17-6-18.

Sd/ J.P. Martin, Lt-Colonel,  
for Director General Medical Services,  
British Armies in France.

3.

Lt-Col. E.M. Cowell, D.S.O.  
No. 1 Clearing Station.

For information.

H.Q., First Army.  
12th June, 1918.  
S

*P. Davidson Lt. Col.*  
Major-General,  
Director of Medical Services.

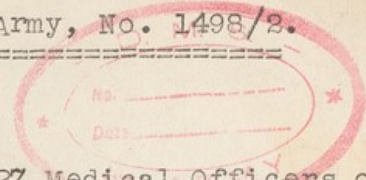
TO :- D.D.S.M.S., Corps.  
Lt-Col. Goodwin,  
Lt-Col. Winder,  
Lt-Col. Fawcett,  
Lt-Col. Cowell,

O.C. No. 22 C.C.S.  
O.C. No. 33 C.C.S.  
O.C. No. 23 C.C.S.  
O.C. No. 1 C.C.S.



D.M.S., First Army, No. 1498/2.

Commandant,  
First Army R.A.M.C. School of Instruction.



With reference to the programme for the 27 Medical Officers of the American Expeditionary Force now undergoing a course at the School :

Parties will report as detailed below at 10 a.m. on Saturday, the 9th instant.

Arrangements have been made to show them Main Dressing Stations, Advanced Dressing Stations and Regimental Aid Posts, Anti-Gas protection of dug-outs, trench sanitation, etc. Each Officer must be provided with a steel helmet and anti-gas appliance.

You will arrange transport direct with No. 8 Motor Ambulance Convoy.

6	"	"	"	"	"	①	11th	"	"	Labourse. Verquin
5+1	"	"	"	"	"	②	56th	"	"	Victory Camp. (Sheet 51.B.-G.3.G.)
5	"	"	"	"	"	③	1st Cdn. Divn.	"	"	at Braquemont.
5+1	"	"	"	"	"	④	3rd	"	"	Chateau d'Acq.

Handwritten notes: 9.15, 9.30, 6.30, 6.45

*P. Davidson L.C.M.*  
Major-General,  
Director of Medical Services.

H.Q., First Army,  
7-3-18.  
A.

Copies to :- D.D.M.S., I Corps. )  
D.D.M.S., XIII Corps. ) In confirmation of  
D.D.M.S., XV Corps. ) telephone message.  
D.D.M.S., Candn. Corps. )

KETTLE OR IRON PLATE



RÉCHAUFFEMENT.



FIG. I.  
BLANKETS & STRETCHER  
HEATED READY FOR PATIENT.



FIG. II.  
PATIENT HEATING UP.



FIG. III.  
PAT: READY FOR TRANSPORT.

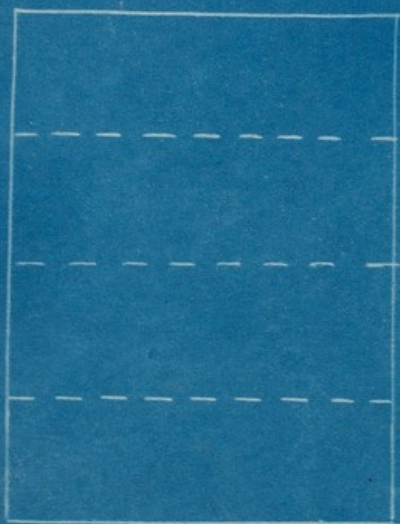


FIG. I.

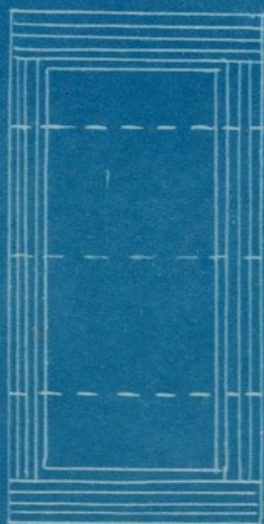


FIG. II.



FIG. III.

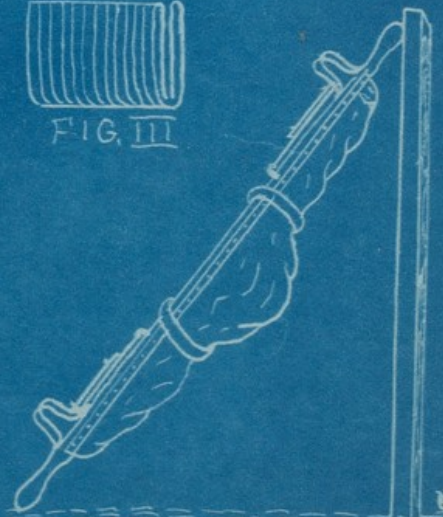


FIG. IV.

W.S.

KETTLE OR IRON PLATE



RÉCHAUFFEMENT

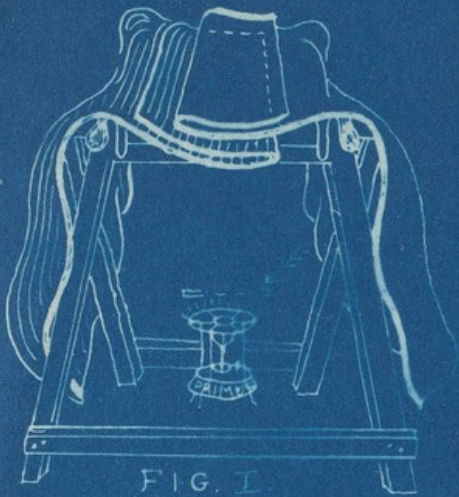


FIG. I.  
BLANKETS & STRETCHER  
HEATED READY FOR PATIENT.

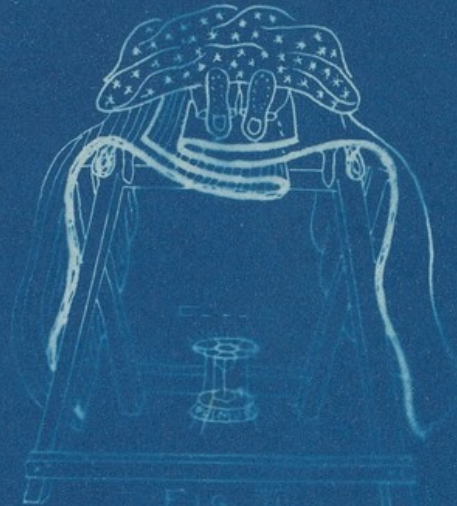


FIG. II.  
PATIENT HEATING UP.

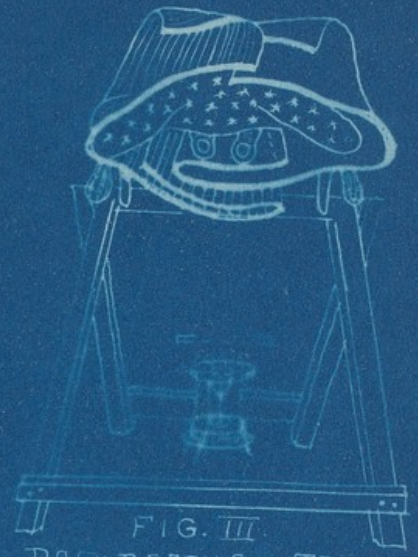


FIG. III.  
PAT. READY FOR TRANSPORT.

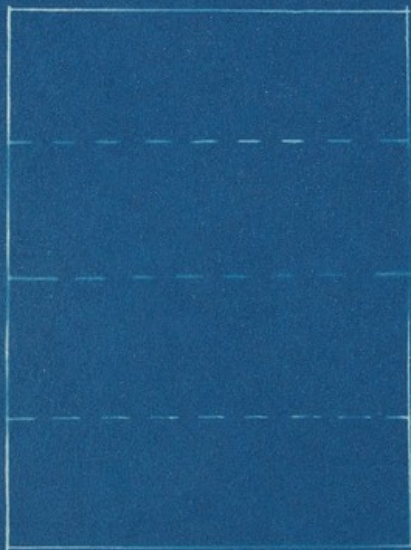


FIG. I.

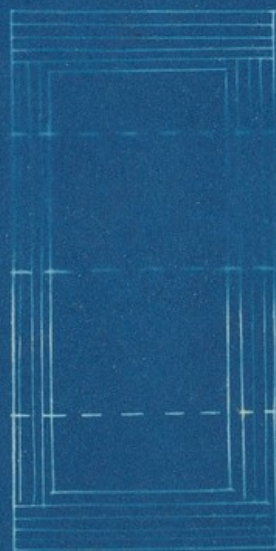


FIG. II.



FIG. III.

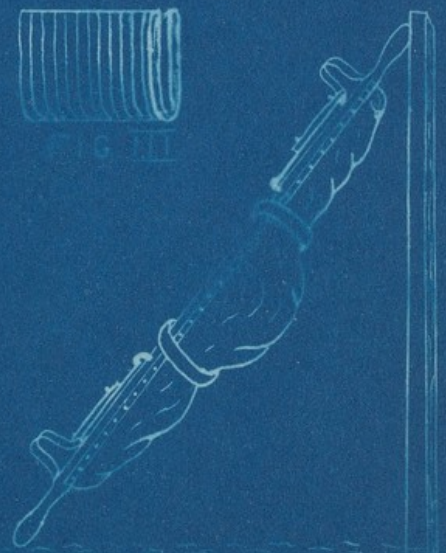
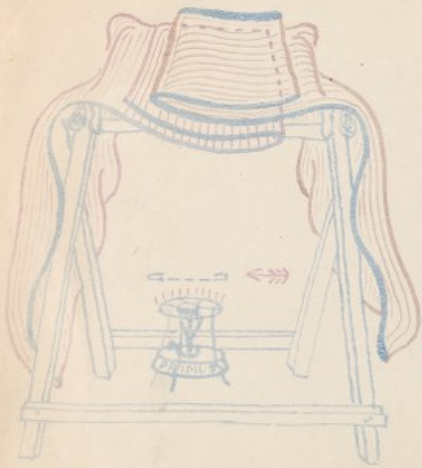


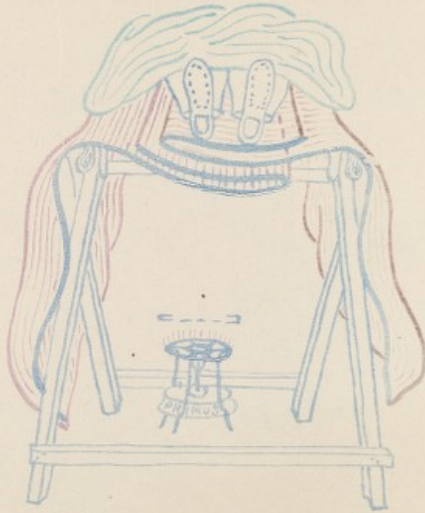
FIG. IV.

FIG. I  
BLANKETS & STRETCHER  
HEATED  
READY FOR PATIENT



⇒ KETTLE OR  
IRON PLATE

FIG. II  
PATIENT HEATING  
UP



RÉCHAUFFEMENT

FIG. III  
PATIENT READY  
FOR TRANSPORT.

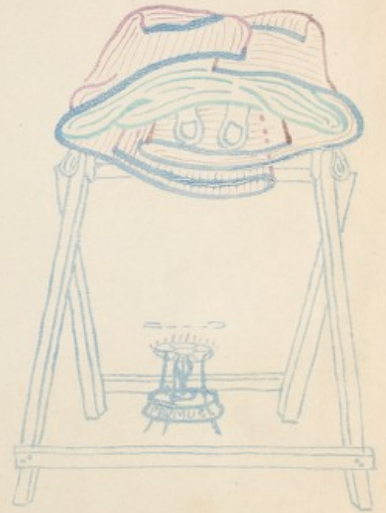


FIG. I  
BLANKETS & STRETCHER  
HEATED  
READY FOR PATIENT

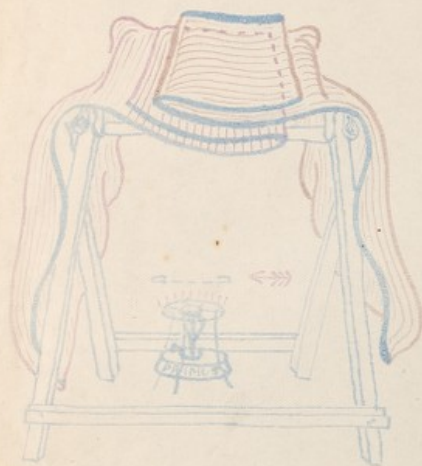


FIG. II  
PATIENT HEATING  
UP

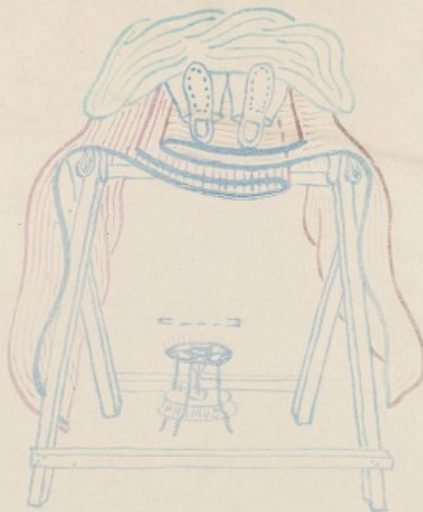
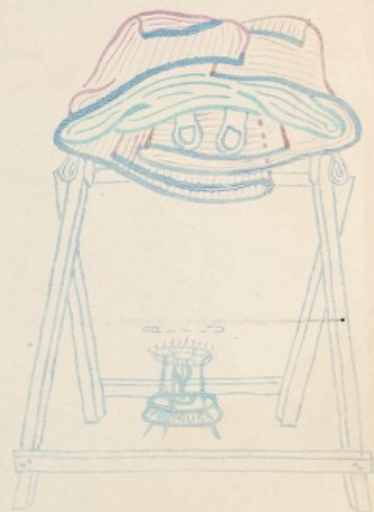


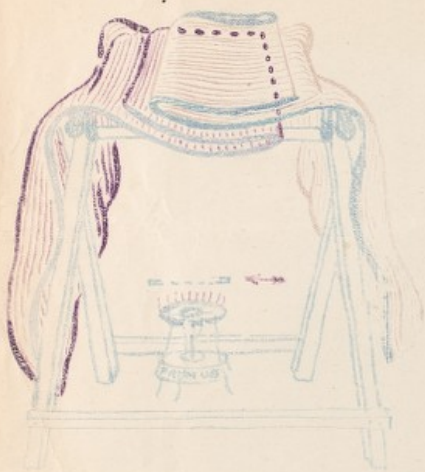
FIG. III  
PATIENT READY  
FOR TRANSPORT.



→ KETTLE OR  
IRON PLATE

RÉCHAUFFEMENT

FIG. I  
BLANKETS & STRETCHER  
HEATED  
READY FOR PATIENT



→ KETTLE OR  
IRON PLATE.

FIG. II  
PATIENT HEATING  
UP.

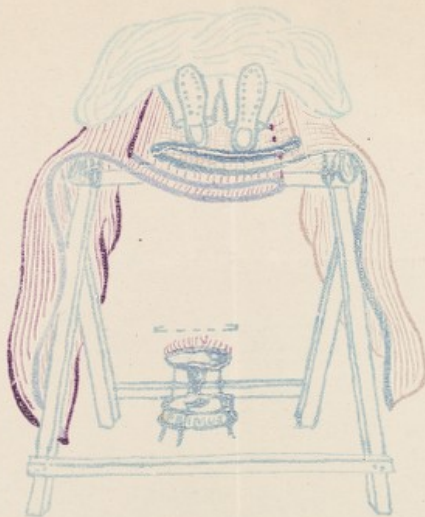
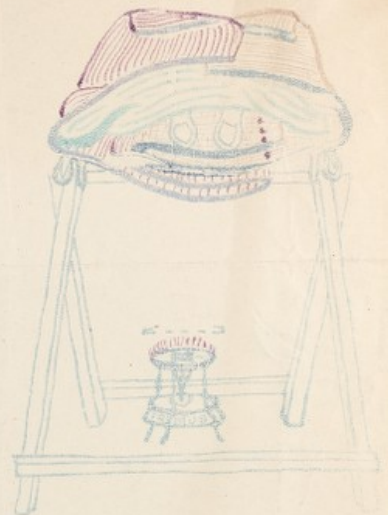
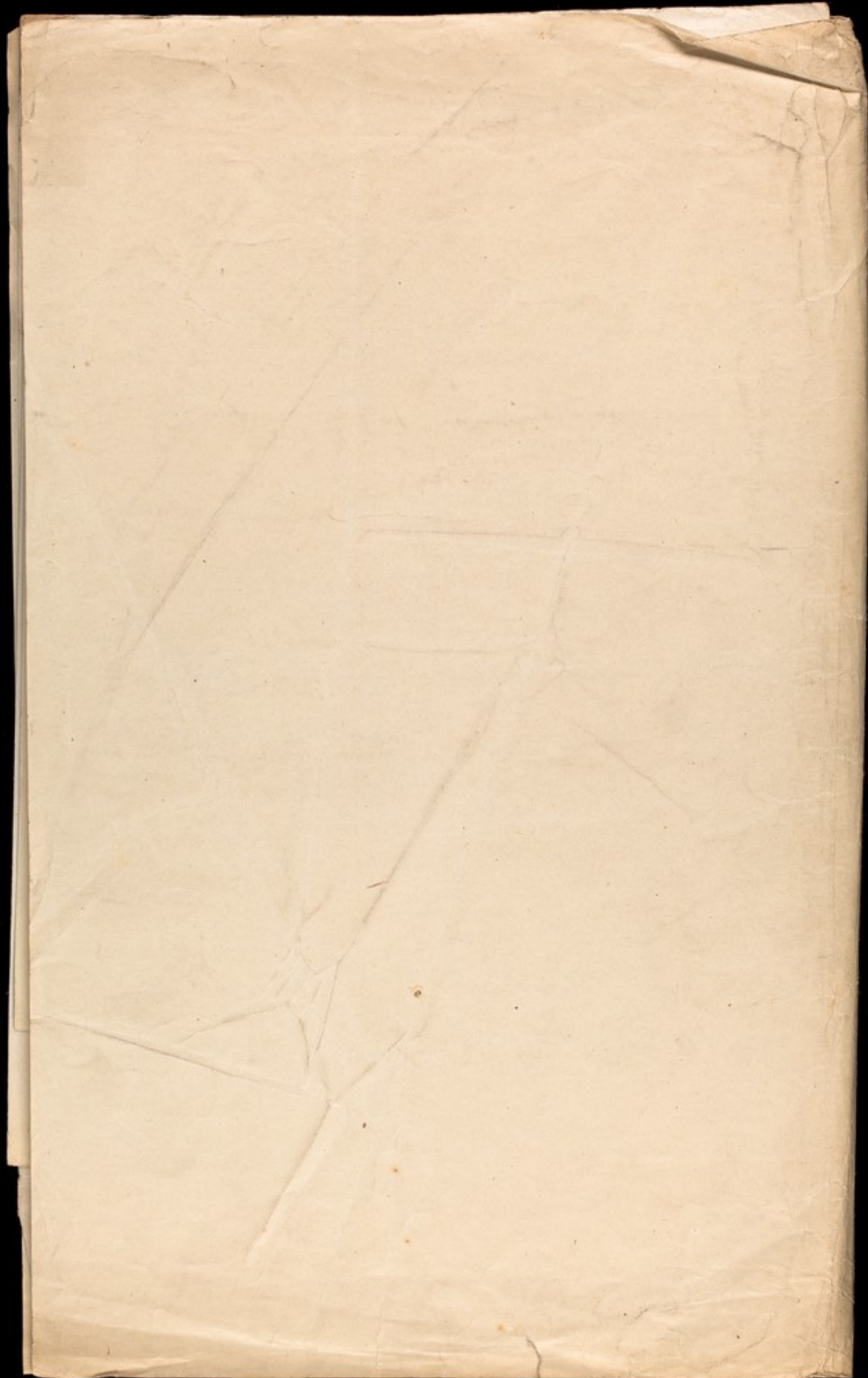
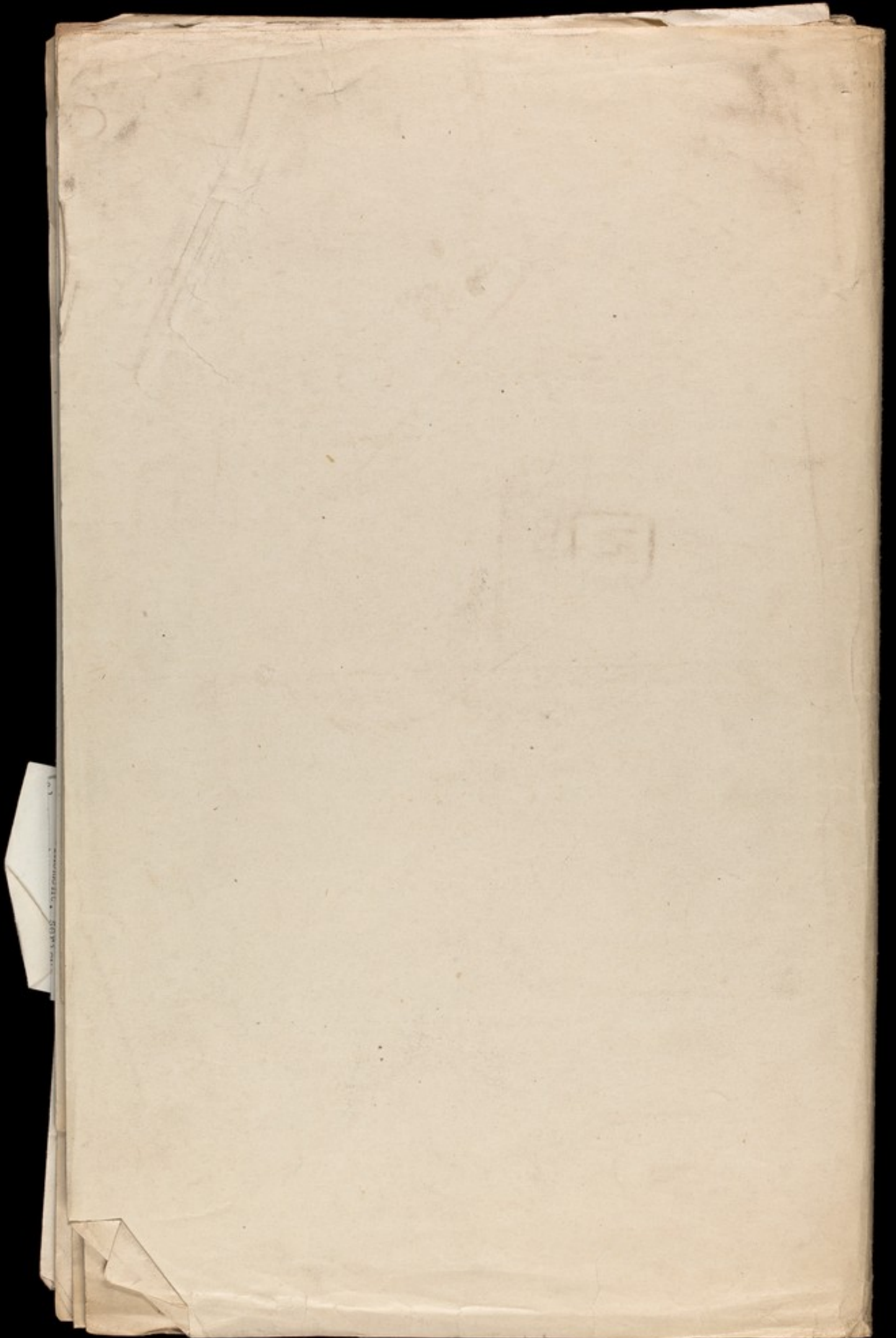


FIG. III  
PATIENT READY  
FOR TRANSPORT.



RÉCHAUFFEMENT.



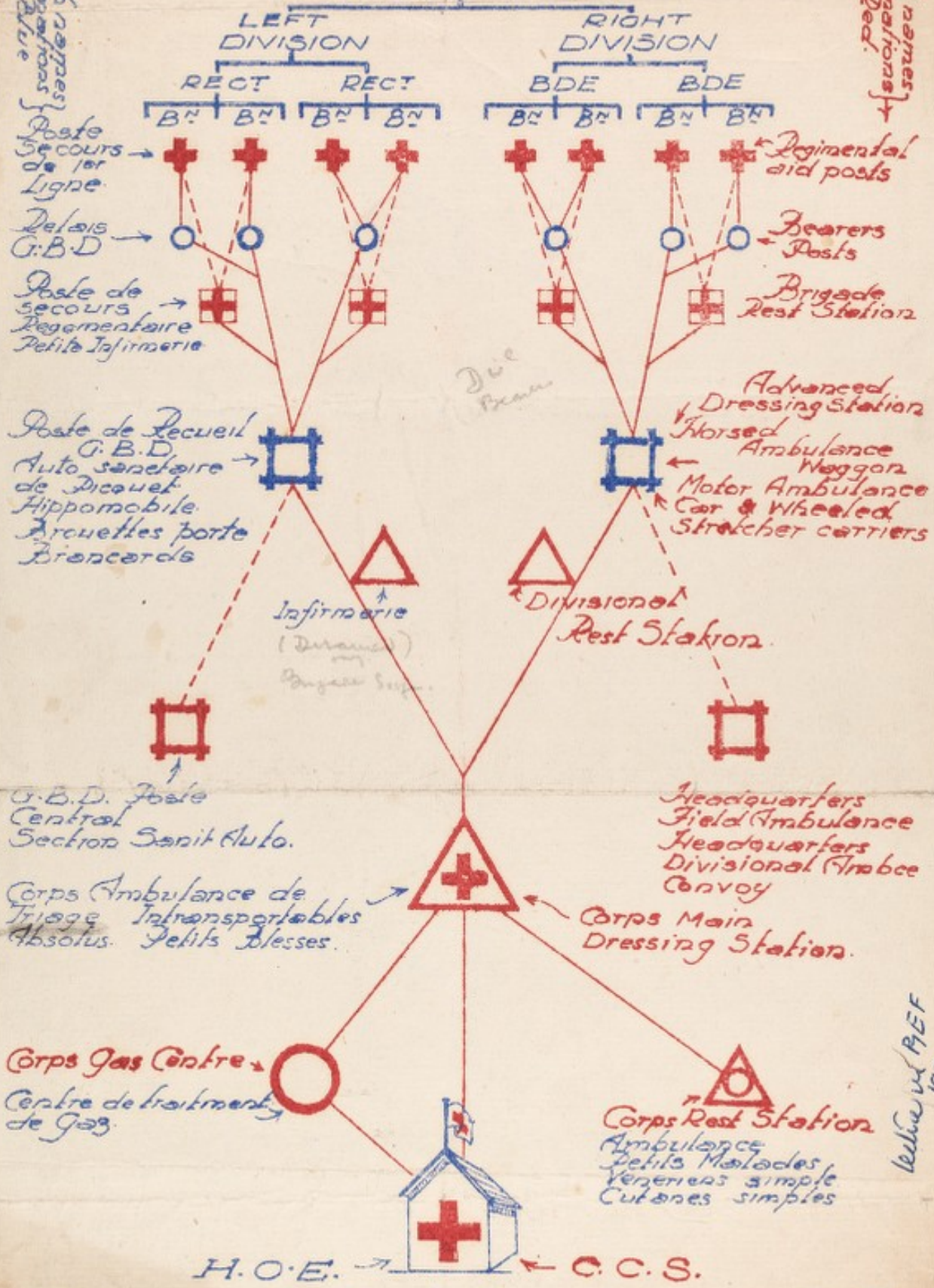




# EVACUATION OF WOUNDED & SICK from CORPS FRONT

French names for formations

English names for formations



Poste secours de 1er Ligne

Delais G.B.D.

Poste de secours Regementaire Petite Infirmerie

Poste de Recueil G.B.D. Auto sanitaire de Picquet Hippomobile Arcouettes porte Brancards

G.B.D. Poste Central Section Sanit Auto.

Corps Ambulance de Triage Intransportables Absolus. Petits Blesses.

Corps Gas Centre Centre de traitement de Gas

H.O.E. ← C.C.S.

Regimental aid posts

Bearer Posts

Brigade Rest Station

Advanced Dressing Station  
Horsed Ambulance Wagon  
Motor Ambulance Car & Wheeled Stretcher carriers

Divisional Rest Station

Headquarters Field Ambulance  
Headquarters Divisional Ambulance Convoy

Corps Main Dressing Station

Corps Rest Station  
Ambulance  
Petits Malades  
Vergeries simple  
Cutanes simple

Letterhead R.E.F. 1917

Appendix I. The French Medical Service in the Field by Colonel R. J. Blackham CMG. CIE. DSO. MD.

