



Arnold E. Kahnert Papers

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1927
Office of ^{the} Director of Medical Training
R. O. T. C. Camp
Fort Snelling, Minnesota

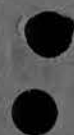
Col Arnold E. Kahner
Co B. 3rd Infantry, Fort Snelling.

July 26, 1927. 7:00 P.M.

June 24, 1927 to July 27, 1927.

Major Backover, Office, Mgr

Sgt Sgt. M. C. Cam. Asst. Fargo N.D.



D I S T R I B U T I O N
(Through Headquarters Seventh Corps Area)

1. The Adjutant General.
2. The Chief of Infantry.
3. The Surgeon General.
4. The Chief Signal Officer.
5. The Chief of Engineers.
6. The Commanding General, Seventh Corps Area, (3 copies).
7. Camp Records.
8. The Commanding General, First Corps Area.
9. The Commanding General, Second Corps Area.
10. The Commanding General, Third Corps Area.
11. The Commanding General, Fourth Corps Area.
12. The Commanding General, Fifth Corps Area.
13. The Commanding General, Sixth Corps Area.
14. The Commanding General, Eighth Corps Area.
15. The Commanding General, Ninth Corps Area.

Office of the Director of Medical Training
R. O. T. C.

Camp Sulling Minnesota.
Major Boelchen Officer in Charge.
S/Sgt McCann Assit, Fargo N D.

Clerk: Pvt Arnold E Kahmet
Co "B" 3rd U S Infantry.

Fort Sulling, Minnesota.

Attached Clerk: 20 June 1927 to
27 July 1927. Age 22. Born:

January 7, 1906, Kaukauna Wisconsin.
Home Address. Parents, Henry & Cora Kahmet
37 East Morton St, St Paul, Minnesota
Phone 0211.

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Headquarters Camp Snelling
Reserve Officer's Training Corps, Training Division
Office of the Director of Medical Training
Fort Snelling, Minnesota.

July 28, 1927.

Subject: Report of Director of Medical Training.

To: The Commanding Officer.

1. Objective. The work of the Medical Department in this Camp assumed two objectives:

a. The training of a personal and practical nature, of the individual student, in the use of Medical Department personnel and material under field conditions.

b. Further training of the student in the duties of an infantry soldier together with care and use of infantry equipment. These two objectives being used to supplement the military and technical training received by the members of the Reserve Officers Training Corps, at institutions. This practical instruction being necessary for their final qualification for Commission as Officers of the Army. This work is conducted in this camp has given the student a symphetic understanding of the basic work of the infantry soldier and has made clear the necessity for the highly specialized and coordinated work of the Medical Department which serves him.

2. General Provisions-

The Medical Department students, who numbered 297, were formed into two companies, B and C and each company was divided into Platoons numbered B 1 and B 2; C 1 and C 2 to give the four groups necessary for the work of the camp.

Each company was officered by Infantry Officers who took charge of the companies for general administration and the Infantry training.

Company "B" Captain Jerome Pickett, Infantry. (DOL)

Company "C" and "C-1. 1st Lieut. Edmund R. Shutgard Inf. (DOL)

"C" 2. 2nd Lt. Millard S. Cartic, Inf. (DOL)

3. The instruction periods are outlined on the master schedule with the Training Guides giving the work in detail. The combination of Infantry with Medical Training worked satisfactorily and gave excellent results.

In the practice march the entire command, less detachments, marched as Infantry with the field equipment. The Medical service was furnished by the students under the supervision of their instruction. Full Medical Field Equipment was carried and used. March collecting posts were established and operated. The Battalion Aid Station was set up, operated - taken down packed and moved and the full Medical service of a moving command was maintained. The following Medical Department personnel was assigned to duties as follows:

Kent Nelson, Colonel MC-(DOL)

F.H. Bockoven, Major DC, (DOL)

Plans and Training Officer and in charge of transportation, records and office: John R. Hall, Captain MC. (DOL)

Director Hygiene and Sanitation.

H.H. Sharpe, Major MC, (DOL)

Director of Training, Hospital Company:

Percy J. Carroll, Major MC, (DOL)

Director of Training, Regimental Medical Detachment.

H.B. Roberts, Major DC, (DOL)

G. R. Tressel, Major D.C. DOL. Director of Training, Ambulance company.

O. H. Dixon - Captain V.C. DOL. Director of Veterinary Training and assistant to Director of Regimental Medical Detachment.

Eugene Milburn, Major D.C. DOL, assistant to Director of Hospital company.

Chester Denham, Major D.C. DOL, assistant to Director of Collecting company.

G. W. Fitzgerald-Captain V.C. DOL, assistant to Director of Ambulance company and assistant to Director of Veterinary Training.

Methods of Training:

1. Didactic
2. Precept of example.
3. Written and oral examinations with records kept of proficiency obtained by the individual student and by the unit.
4. Competition for unit and individual awards which were made and at the close of the camp.
5. The training was made applicatory by actual performance of the duties under the constant supervision of the instructors. The days work began at 7:20 AM and with the exception of parades and ceremonies ended at 3:30 PM. Parades and ceremonies being scheduled for 4:55 PM twice weekly. Friday of each week was devoted to a field exercise. The situation was based upon the evacuation of casualties from the firing line of an Infantry Battalion in action through the units of the Medical Regiment. Actual battle conditions were simulated in detail with the complete and detailed function of the Medical Department. All of the work being done by the students, the instructors becoming umpires and judges. The four platoons of the Medical Companies functioning successively for one week each as the Regimental Medical Detachment. The Collecting company. The Ambulance company and the Hospital company thus giving the individual student an actual working experience in each assignment together with a well rounded experience in field work as a whole.

6. Results:

The instruction work has been well done and was a distinct improvement over the camp of each year. There has been a unity of purpose and absence of friction - and an attention to duty on the part of all concerned of a very high order. The unit instruction is approaching a standard of uniformity and in this camp has obtained real excellence, a fact made clear beyond dispute by the average workings made by the units in their rotation under the various instructions which gave group ratings of an average of less than 1% difference in eight large groups of students at the end of the Camp. The student body has been generally of a high order and their reaction to the instruction work has been excellent.

Recommendations:

- a. Personnel. The allotment of personnel is not sufficient. The following is an estimate of the personnel needed and is a minimum.

7. Commissioned:

Medical Director -1-
Assistant Medical Director -1-
Unit Directors -4-
Assistant Unit Directors -4-
Director of Hygiene -1-
Assistant Director of Hygiene -1- Total (12)

Enlisted.

Noncommissioned officer -1-

(In charge of office)

Must be a skilled typist and capable of stencil cutting and operating a mimeograph machine.

Private -1-

Assistant to the noncommissioned officer.

Must be a good clerk and able to operate a mimeograph machine.

Private -4-

To be placed in charge of motor transportation and to be used as instructors in driving, care and up keep of motor equipment, and for orderlies and messenger service.

Non-commissioned officer Medical Department -1-

To be in charge of medical supplies and field equipment to represent the Medical Supply officer, Fort Snelling, Minnesota. Total -7-

Total commissioned -12-

" enlisted -7-

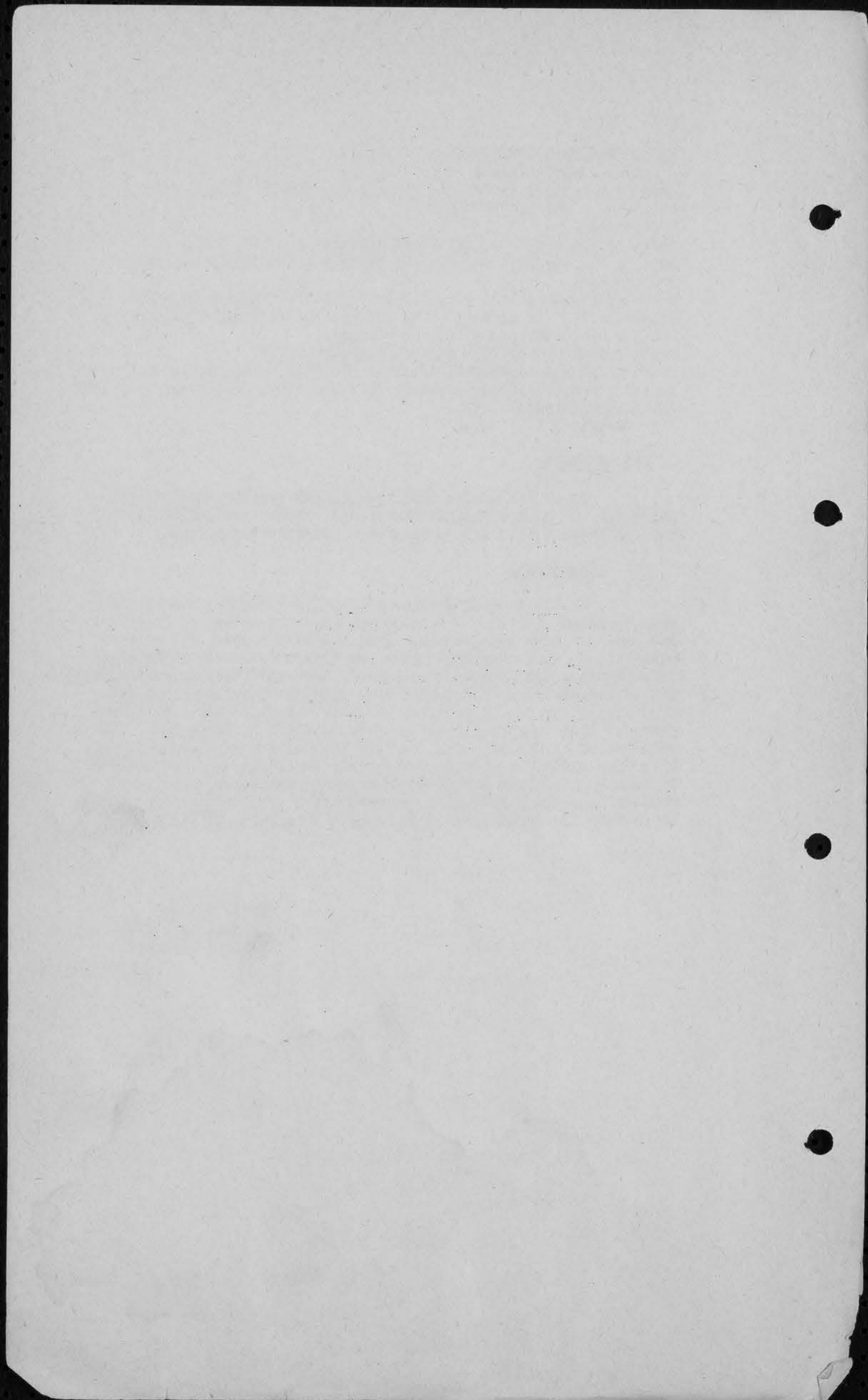
(b) Terrain:

It is recommended that the present training area is set aside for use of the Medical Department. From a careful study of the reservation this is the only area adapted to the work.

(c) Equipment:

That the motor equipment be given a careful over hauling and repainting during the storage period, that it may be ready for use when the camp work begins. That the motor cycle with side car belonging to this equipment which has been worn out be replaced as this camp has had no use of it and the same condition existed during the 1926 Camp. It is recommended that this motor equipment be not used except for the purpose for which it was sent here. It is recommended that the present place of instruction be continued. The combination of Medical with Infantry instruction as carried out at this camp has given excellent results. In closing special mention is made of the close attention to duty and general efficiency of the Medical Department personnel together with the really high average of instruction maintained through out the duration of the camp.

Kent Nelson,
Colonel M.C. DOL.
Medical Director.



MEDICAL RESERVE TRAINING DIVISION,
Camp Snelling, Minnesota.

Fort Snelling, Minn.,
July 16, 1927.

Subject: Expression of Appreciation.

To: Colonel Kent Nelson, M.C, U.S. Army,
Fort Snelling, Minnesota.

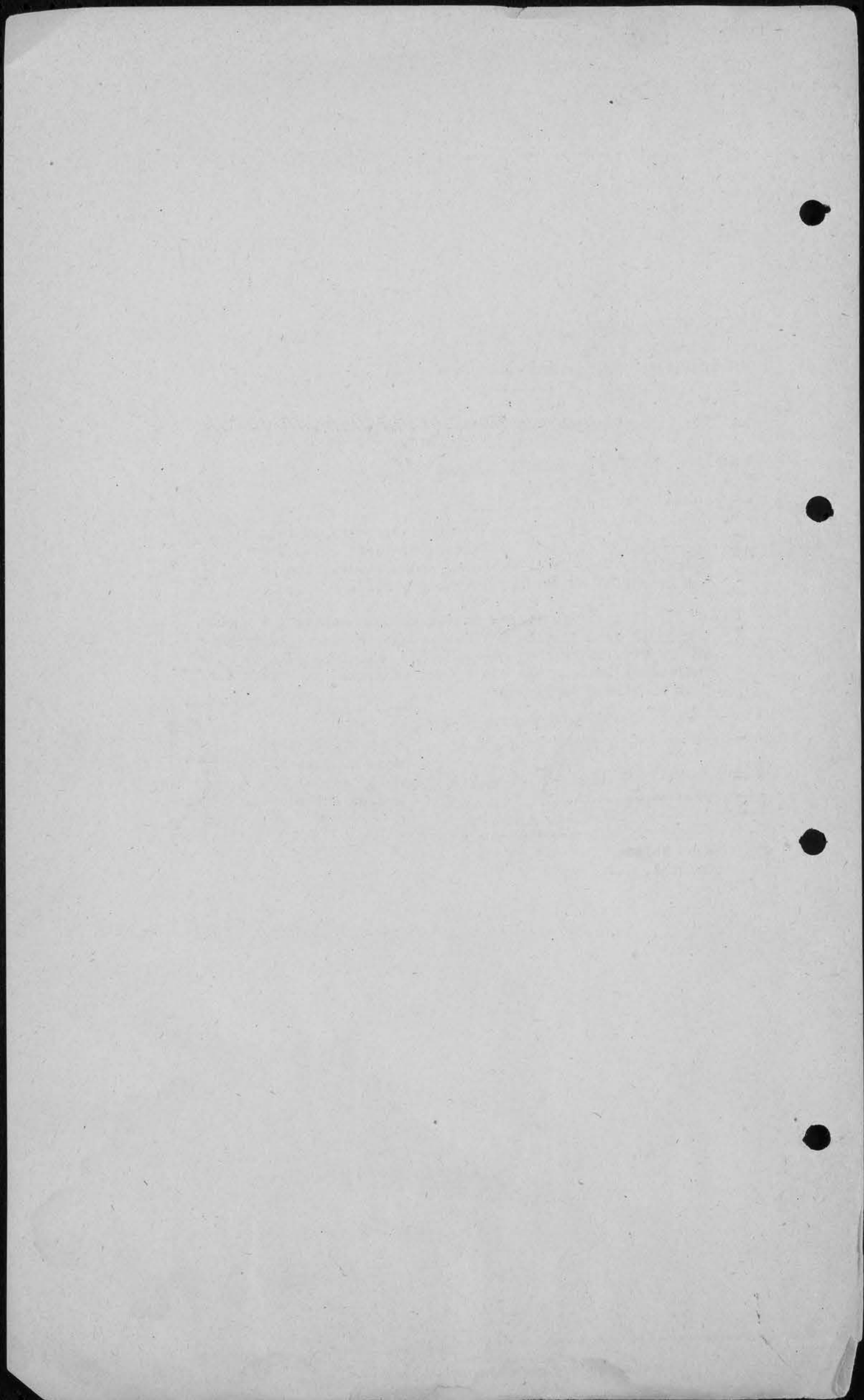
1. It gives me great pleasure to express the appreciation of myself and staff of instructors for the splendid co-operation given by your organization in the demonstration of Friday, July 15th, 1927.

2. This year's result in demonstrating a working field organization has been of a very high order and of great value to the student body. Kindly extend to your individual instructors the thanks of myself and staff for this excellent work.

Geo. A. Skinner,
Colonel, Medical Corps,
Senior Instructor.

True copy.

Kent Nelson
Colonel, M.C.



SEVENTH COMB AREA

MEDICAL UNIT TRAINING

By order of Colonel WELSH:

UCR

July 1927
Training Office
Clark: O. A. Arnold E. Kahnest
RA 6767799. Company "B"
Fort Snelling, Minnesota
Ag. 21. Born 1-7-06.
Kaukauna, Wisconsin

PLATOON ROSTER FOR UNIT TRAINING

UNIT	WEEK OF JUNE 26th	WEEK OF JULY 3	WEEK OF JULY 10th	WEEK OF JULY 17th
Regimental Medical Detach.	B-1	C-2	C-1	B-2
Collecting Company	B-2	B-1	C-2	C-1
Ambulance Company	C-1	B-2	B-1	C-2
Hospital Company	C-2	C-1	B-2	B-1

REGIMENTAL MEDICAL DETACHMENT
(SUB - SCHEDULE)

-MONDAY-

Time : 8:50 to 9:50 A.M.
Subject : Organization of Infantry Regiment.
Place : Detachment Training Area.
Required : (a) Personnel: Entire student Platoon.
(b) Utilities: Blackboard and chalk.
Method : (a) Didactic talk on the Infantry Regiment under
the following heads:
Personnel
Equipment
Duties

Time : 10:00 to 11:50 A.M.
Subject : Regimental Medical Detachment.
Place : As above.
Required : As above.
Method : Lecture on Regimental Medical Detachment under the
following heads:
1. Personnel
Medical Detachment Headquarters.
1st Medical Section
Aid Station, litter bearer and company
aid squads.
2nd Medical Section
As above
3rd Medical Section
As above
2. Equipment.
3. Duties.
In camp, on march and in combat.

Time : 1:30 to 3:00 P. M.
Subject : Demonstration of equipment of Regimental Medical Detachment.
Place : As above.
Required : Personnel: Entire Student Platoon.
Utilities: Equipment of battalion aid station.
Method : Actual demonstration of Battalion equipment according
to the following scheme.
(a) method of loading.
(b) method of packing.
(c) contents of chest.
(d) demonstration of technical equipment.
(e) exposition of personal medical equipment of
officers and men.

-TUESDAY-

Time : 8:50 to 9:50 A. M.
Subject : Demonstration of venereal prophylaxis station.
Place : Detachment Training Area.
Required : (A) Entire Student Platoon.
(b) Utilities: Venereal prophylaxis unit.
Method : (a) Lecture on Sex Hygiene, prophylaxis methods and
A.R. on venereal disease.
(b) Demonstration of unit.

Time : 10:00 to 10:50 A. M.
Subject : Field Desk and forms.
Place : As above.
Required : Personnel: Entire student body.
Utilities: one field desk complete.
Method : Demonstration of field desk under the following heads:
Packing
Contents
Explanation of blanks
Completion of blanks

Time : 11:00 to 11:50 A. M.
Subject : Sick Call.
Place : As above.
Required : As above.
Method : (a) Actual demonstration of sick call using selected student personnel to fill places of Surgeon, Sgt., patients, etc.
(b) Short talk on malingering.

Time : 1:30 to 3:00 P. M.
Place : Sanitary veterinary hospital.
Subject : Demonstration, care of animals, picket line, etc.
Required : Entire Student personnel, of platoon.
Method : Platoon is turned over to veterinary officer at the station veterinary hospital for lecture and demonstration under the following heads:
(a) Duties of the station veterinary.
1. Administrative
2. Advisory
3. As C. O., station veterinary hospital
(b) Exposition of stables, picket lines, etc.
(c) Demonstration of riding and draft animals and horse equipment in general.

-WEDNESDAY-

Time : 8:50 to 9:50 A. M.
Subject : Demonstration (Physical examination of Recruit).
Place : Detachment Training Area.
Required : Entire Student Platoon.
Method : (a) Demonstration of physical examination of recruit by officer in charge.
(b) Division and assignment of various members of student platoon to simulate examining teams in mass recruitment and draft levies.

Time : 10:00 to 11:50 A. M.
Subject : Demonstration of combat wagon.
Place : As above.
Required : Personnel: Entire student platoon.
Utilities: One combat or escort wagon complete.
Method : (a) Demonstration of wagon, contents, & spare parts.
(b) Time not taken up in demonstration of the above can be utilized by the instructor in informal talks and quizzes.

- HALF HOLIDAY -

-THURSDAY-

Time : 8:50 to 11:50 A. M.
Subject : Establishment of Battalion Aid Station and use of field medical tags.
Place : Detachment Training Area.
Required : Personnel: Entire Student Platoon.
Utilities: Medical combat wagon & Bn. Aid equipment.
Method : (a) Lecture by instructor.
(b) Organization of entire student platoon as a Battalion medical section with an infantry regiment. Individuals will be assigned rank and grade for purposes of instruction.
(c) Actual establishment of a battalion aid station.
(d) Actual discharge of duty under simulated field, combat conditions of all elements of the battalion aid personnel including:
Establishment of local aid posts.
Application of 1st Aid.
Tagging and collecting of wounded.
Litterage.
Application of splints, tourniquets, dressings, A. T. S., etc.
Treatment of gas cases.
Recording.
Messing of patients.
Exchange of equipment
Transfer of patients to covering medical regiment.

Time : 1:30 to 3:00 P. M.

Continuation of above exercises.

-FRIDAY-

Time : 8:50 A. M. to 3:00 P. M.
Place : Detachment Training Area.
Subject : Field Problem.
Required : Personnel: Entire Student Platoon.
Utilities: Medical combat wagon and Bn. Aid Equipment.
Method : A field exercise involving all Medical Dept. formations in camp.
At the conclusion of the field exercise all the technical medical department property will be returned to the storehouse.

-SATURDAY-

Time : 8:50 to 9:50 A. M.
Subject : Test.
Place : Detachment Area.
Required : Personnel: Entire Student Platoon.
Utilities: Pencils and prepared examination sheet.
Method : Each student will complete an examination paper on the work done during the week.

COLLECTING COMPANY WORK SHEET
R.D.T.C. CAMP, FT. SNELLING, MINN.

MONDAY

Time : 7:20 to 8:35 A. M.
Subject : Explanation of plan and preparation of Student Instructors.
Place : Medical Supply Warehouse.
Required : Selected squad of 8 students.
Procedure: Draw tent and other equipment and transport to drill area to be used for Collecting Station. Demonstrate tent and tent pitching.

Time : 8:50 to 9:50 A. M.
Subject : Organization of a Collecting Company.
Place : Medical Drill Area for Collecting Station.
Required : Entire student platoon.
Procedure: General discussion on the Collecting Company with special reference to organization, technical equipment and duties.
General orientation.

Time : 10:00 to 11:50 A. M.
Subject : Equipment of a Collecting Company.
Place : As above.
Required : As above with technical equipment.
Procedure: Actual erection of tentage, selection of sight for station. Demonstration of equipment, property accountability, etc.
(Note. Tent will be left standing until the conclusion of the field exercises on Friday).

Time : 1:30 to 3:00 P. M.
Subject : Field Sanitation.
Place : Model Camp and Sanitary Area.
Required : Entire student platoon. Training Guide on Hygiene & Sanitation.
Procedure: Lectures and appropriate demonstrations.

TUESDAY

Time : 8:50 to 9:50 A. M.
Subject : Organization of Provisional Collecting Company.
Place : Collecting Station Training Area.
Required : Entire student platoon with Training Guides (D.M.T. 300-2) and blackboard.
Method : Each individual in the student platoon under instruction will be assigned a theoretical rank and grade, thus forming an organized actual Collecting Company, with the duties expected from each man.

6 -----
Time : 10:00 to 11:50 A. M.
Subject : Tactical employment of organization.
PLACE : As above.
Required : As above. Litters to equip class.
Method : Demonstration of litter. Improvised litters. Litter drill.

Time : 1:30 to 3:00 P. M.
Subject : Camp Sanitation (Permanent and Semi-permanent)
Place : Model Camp and Sanitary Area.
Required : Entire student platoon with Training Guide (D.M.T. 600-2).
Method : Talk on Sanitation - minute inspection of Sanitary devices in area.

WEDNESDAY

Time : 8:50 to 9:50 A. M.
Subject : Service Company, Medical Regiment.
Place : Collecting Station Training Area.
Required : Entire Student platoon with Training Guide (D.M.T. 100-2).
Procedure: Brief exposition on Service Company of a Medical Regiment with special reference to personnel, organization, equipment and function. Divisional Medical Supply Officer, - Medical Supply dump, - Supplies in time of peace and war, - The Supply Table.

Time : 10:00 to 11:50 A. M.
Subject : Conference - Review of all subjects matter discussed.
Place : As above.
Required : As above.
Procedure: Open quiz for students on work covered.

HALF HOLIDAY

THURSDAY

Time : 8:50 to 9:50 A. M.
Subject : Collecting Company in a combat situation.
Place : Collecting Station Drill Area.
Required : Entire student platoon. Entire Collecting Co. Equip & Material.
Method : Resume and instruction regarding a Collecting Company in combat.

Time : 10:00 to 11:50 A. M.
Subject : Actual employment of a Collecting Company.
Place : As above.
Required : As above.
Procedure: Establish station, having each man familiarize himself with specific duties, tag patient and send thru station, evacuation methods, etc.

Time : 1:30 to 3:00 P. M.
Subject : Field Sanitation.
Place : Model Camp and Sanitary Area.
Required : Entire student platoon - Training Guide (D.M.T. 600-2).
Method : Review and quiz on material covered in previous periods.
Students to construct demonstrate appliances and devices.

FRIDAY

Time : 7:20 to 11:50 A. M.
 1:30 to 3:00 P. M.
Subject : Field exercises to include the combined function of all medical department formations in the field.
Place : Collecting Company Training Area.
Required : Entire Student Platoon. All Collecting Company Equipment.
Procedure: Establish and operate station simulating a division problem - Collect wounded - receive and transmit messages - evacuate casualties - make records, etc.
(Note. If time permits the station may be struck, equipment packed and turned in to the Medical Supply Depot).

SATURDAY

Time : 8:50 to 9:50 A. M.
Subject : Written test on weeks work.
Place : Collecting Company Training Area.
Required : Entire student platoon. Pencils - Mimeographed question sheet.
Procedure: Each student will take a written examination on the Collecting Company Training.

Time : 10:00 to 12:00 A. M.
Subject : Cleaning up and returning property.
Place : As above.
Required : As above.
Procedure: Strike tent, complete sanitation of entire area occupied by Collecting Company - Critique and final conference.

HALF HOLIDAY

AMBULANCE COMPANY
(Sub-schedule)

-MONDAY-

Time : 8:50 to 9:50 A. M.
Subject : (1) Outline of Medical Regiment.
(2) Organization of Ambulance Battalion and Companies.
(3) Organization of Provisional Ambulance Company (Motor)
including duties of officers, NCO's and each member
with assignment.

Required : Entire Student Platoon -Blackboard with chalk.

Time : 10:00 to 11:50 A. M.
Subject : Demonstration of equipment issued to Ambulance Company.
Required : Student Platoon. All available transportation of motorized
Ambulance Company.
Procedure: Assignment of available motors to platoon with instruction
in driving. Check property back into M.S.W.

Time : 1:30 to 3:00 P. M.
Subject : Harnessing and care of animals for A.D. Ambulance Company.
Required : Student Platoon. 1 A.D. Ambulance with two line team.
1 Cavalry Mount with saddle and bridle.
Instructor: Captain Gerald W. Fitzgerald.
Procedure: Talk on draft mules and cavalry mount with instructions
for their care in the field. Demonstration of harnessing,
fitting of collars, adjustment of harness, care of leather
equipment and of animal drawn vehicles.

-TUESDAY-

Time : 8:50 to 9:50 A. M.
Subject : Demonstration Motor Equipment.
Instructor: Service Manager, G.M. Truck Co., Minneapolis.

Required : (1) Student Platoon
(2) One motor ambulance, GMC
(3) One two ton truck, GMC
(4) One trailer

Procedure: Talk on care and upkeep of motor transportation with
demonstration.

Time : 10:20 to 11:50 A. M.
Subject : Use of Ambulance Company in camp and on the march.

Required : (1) Student Platoon
(2) Blackboard with chalk
(3) One motor ambulance

Procedure: Talk on duty of ambulance company in camp and on the march
in conjunction with blackboard diagrams.

Time : 1:30 to 3:00 P. M.
Subject : Demonstration of ambulance loading, litter and blanket
exchange.
Required : Student Platoon.
Available ambulances, with litters, blankets and splints.
Procedure: Litter loading and ambulance loading by students super-
vised by unit director.

-WEDNESDAY-

Time : 8:50 to 9:50 A. M.
Subject : Tactical employment of Ambulance Company in combat.
Required : (1) Student Platoon. (2) Blackboard.
Procedure: Chalk talk outlining evacuation of division wounded, showing shuttle system with various parts of ambulance company in the operation. Transporting personnel of collecting company and emergency supplies.

Time : 10:00 to 10:50 A.M.
Subject : Mounted inspection of Ambulance Company.
Required : (1) Student Platoon. (2) All available Ambulances.
Procedure: Inspection followed by quizzing over all previous instruction.

-THURSDAY-

Time : 8:50 to 11:50 A. M.
Subject : Demonstration of Ambulance Station, Relay Post, Ambulance Loading Post, transmission of messages, etc. : :
Required : (1) Student Platoon. (2) All available ambulances.
Procedure: Establishing of all Ambulance Company Station and Posts and operation of Ambulances under control of traffic and relay posts by shuttle method.

Time : 1:30 to 3:00 P. M.
Subject : Demonstration of Veterinary evacuation. Veterinary ward tent and Veterinar ambulance.
Required : (1) Student Plat. (2) Vet. Amb. with ward tent. (3) Blackboard.
Procedure: Talk on organization of Veterinary service in theater of operation, evacuation methods and convoys.

-FRIDAY-

Time : 8:50 to 11:50 A. M.
1:30 to 3:00 P. M.
Subject : Field exercises, employing evacuation units of Infantry Divisions in combat.

-SATURDAY-

Time : 8:50 to 9:50 A. M.
Subject : Written test covering instruction of past week.
Required : (1) Student Platoon
(2) Mimeographed test questions.
Procedure: Answers will be filled in as indicated.

Time : 10:00 to 10:50 A. M.
Subject : Critique on test.
Procedure: Written test discussed. Correction of com on mistakes. Questions answered.

Time : 11:00 to 11:50 A. M.

Turning in property

HOSPITAL COMPANY INSTRUCTION

-WORK SHEET-

-MONDAY-

Time : 8:50 to 9:50 A. M.
Subject : Organization of Hospital Company.
Place : Medical Drill Area.
Required: (a) Personnel: Entire Student Company.
(b) Utilities: Prepared chart.
Method : Short exposition of the Hospital Company under the following heads:
(a) Organization { Personnel
 { Interior Economy
(b) Technical Equipment
(c) Duties { In Camp
 { On the march
 { In combat

During this talk the men of the platoon under instruction will be assigned theoretical rank and grade in order that they may be organized as an actual hospital company.

Time : 10:00 to 11:50 A.M.
Subject : Actual erection of tentage of basic unit of a hospital company.
Place : As above.
Required: Same as above with the necessary tentage.
Method : (a) Plotting of the ground for the erection of basic unit.
(b) Demonstration of pitching heavy tentage.
(NOTE:- Tents will be left standing unequipped until the conclusion of the field exercises on Friday).

Time : 1:30 to 3:00 P. M.
Subject : Equipment of basic unit.
Place : As above.
Required: As above with technical equipment.
Method : (a) Didactic talk on assignment and use of the several tents and their equipment.
(b) Various squads to segregate and install equipment.
(c) Inspection of installed equipment by entire platoon.
(d) Return of technical equipment to Medical Storehouse.

-TUESDAY-

Time : 8:50 to 9:50 A. M.
Subject : Hospital Records.
Place : Administration tent of Hospital Station.
Required: (a) Personnel: Entire Student Platoon.
(b) Utilities: Field Desk, blanks, etc.
Method : (a) Explanation of medical forms and records pertaining to the sick and wounded in a hospital station.
(b) Remarks on receipt and disposition of said records.
(c) Dental records in a station hospital.

Time : 10:00 to 10:50 A. M.
Subject : Medical and Surgical treatment in a hospital station.
Place : As above.
Required: Equipped station.
Method : (a) Exposition of medical and surgical treatment in shock, bathing and gas tents.
(b) Demonstration of control of hemorrhage by medical field equipment.

Time : 11:00 to 11:50 A. M.
Subject : Mess management.
Place : Kitchen site of Hospital Station.
Required: Entire student company with mess and food chests.
Method : (a) Hospital and Company Funds.
(b) Organization of a Hospital Mess.
(c) Demonstration of contents of mess and food chests.
(d) Cooking and mess management.

Time : 1:30 to 3:00 P. M.
Subject : Tent pitching (Pyramidal tent and Wall tent).
Place : Hospital Area.
Required: Entire student platoon with necessary tentage.
Methods : (a) Didactic talk on tent pitching.
(b) Actual erection of tents.
(c) Demonstration of tent ditching.

- WEDNESDAY -

Time : 8:50 to 9:50 A. M.
Subject : Field Dental Equipment.
Place : Appropriate Hospital Ward Tent.
Required: (a) Personnel: Entire student platoon.
(b) Utilities: Field Dental equipment.
Method : (a) Talk by regular Dental Officer under following heads:
Dental service in camp; on the march; in combat; and at a permanent military station.
(b) Installing hospital company equipment.
(c) Demonstration of Dental appliances.
(d) Dental records in the field and at permanent station.

Time : 10:00 to 11:50 A. M.
Subject : Hospital management.
Place : Station Hospital, Fort Snelling, Minnesota.
Required: Entire student platoon.
Method : Platoons will be conducted to the station hospital, Fort Snelling, and there taken through the hospital by the instructor. All departments of the hospital will be explained and demonstrated. Dental students in the platoon will receive special instruction by the Dental Surgeon.

- HALF HOLIDAY -

-THURSDAY-

Time : 8:00 to 9:50 A. M.
Subject : Disinfection and disinfestation.
Place : Hospital Area.
Required: (a) Personnel: Entire student platoon company.
(b) Utilities: All sanitary demonstration equipment in sanitary area.
Method : (a) Short talk on necessity and application of sanitary appliances.
(b) Appropriate practical demonstration.

Time : 10:00 to 11:50 A. M.
Subject : Demonstration of establishment of hospital station.
Place : Hospital Area.
Required: Entire student platoon and hospital company property.
Method : (a) A short talk on contemplated medical problem to be staged Friday.
(b) Handling of theoretical patients through the established hospital station. (All students at their respective places of duty).

Time : 1:30 to 3:00 P. M.
Subject : The relation of the medical department to the line.
Place : As above
Required: As above.
Method : (a) Lecture on the organization of the army with particular reference to the medical department.
(b) The status of the commanding Officer of the medical Regt.

-FRIDAY-

Time : 8:50 to 3:00 P. M.
Place : Hospital Area.
Subject : Field Problem.
Required: Personnel: Entire student platoon.
Utilities: Completely equipped hospital station.
A field exercise involving all medical dept. formations in camp.
At the conclusion of the field exercise all the technical medical department property will be returned to the storehouse.

-SATURDAY-

Time : 8:50 to 9:50 A. M.
Subject : Test.
Place : Hospital Area.
Required: Personnel: Entire student platoon.
Utilities: Pencils and prepared examination sheet.
Method : Each student will complete an examination paper on the work done during the work.

At the conclusion of the test all heavy tentage will be struck and returned to the storehouse.

VETERINARY TRAINING

(Work- Sheet)

Date : Tuesday, June 28, 1927.
Time : 7:30 A.M. to 3:30 P.M.
Place : Armour's and Swift's Packing Houses, St. Paul, Minnesota.
Subject : Meat Inspection Hygiene.
Text : AR 40-2150 - 40-55 - 40-60 - 40-65 - 40-70 - 40-75 - 40-80
40-90 - 40-95 - 40-2200 - 40-2225.
Procedure : Conference, Inspection, General and Practical Demonstration
on Meat and Meat Foods, Product Inspection and Inspection
of Establishments, as shown by the above mentioned Army Reg-
ulations.

Date : Wednesday, June 29, 1927.
Time : 8:50 A.M. to 11:50 A.M.
Place : Station Veterinary Hospital, Fort Snelling, Minnesota.
Subject : Station Veterinary Hospitals, and Stables, and Animal
Management.
Procedure : Lecture, Practical Demonstrations, Veterinary Evacuation,
Inspection of Hospitals, Stables, Corrals, Horseshoeing,
Duties and Reports of a Station Veterinarian.

Date : Tuesday July 5, 1927.
Time : 8:50 A.M. to 3:30 P.M.
Place : University Farm, University of Minnesota.
Subject : Dairy Inspection.
Text : AR 40-2215 - 40-2230.
Procedure : Inspection of Establishments, Product Inspection, Physical
Examination of Animals and Conference.

Date : Thursday, July 14, 1927.
Time : 8:50 A.M. to 3:30 P.M.
Place : Outside.
Subject : Veterinary Sanitation.
Text : AR 40-2080 - 40-2255 - 40-2270.
Procedure : Lecture and Demonstration on the Preparation of Health
Certificates, and Sanitary Reports.

OFFICE OF THE DIRECTOR OF MEDICAL TRAINING
R. O. T. C. CAMP
FORT SNELLING, MINNESOTA.

July 13, 1927.

TROPHY REGULATION.

1. The following regulations governing competitions for Trophies in the Medical Section, Seventh Corps Area R.O.T.C. Camp, to be awarded units and individuals making highest total average in "Military Discipline", "Military Hygiene and Sanitation", "Medical Tactics" and "General Proficiency in Medico-Military Training" are announced.

2. Four "Life time Scheaffer fountain pens" are offered similarly for award to the individuals making the highest rating in the same subjects.

3. One "Life time Scheaffer fountain pen" to be awarded to the Veterinary student attaining the highest average grade in Medical tactics.

4. Awards will be made from final ratings as obtained by systems of rating prescribed by "Training Memorandum No. 1, Headquarters, R.O.T.C. Camp, June 15, 1927.

General Conditions - Unit Competition:- The unit making the highest total score in any of the competitions will thereby become the possessor of the cup for that competition and will retain same until the end of the period of the R.O.T.C. Camp, Seventh Corps Area, for the following year, when it will become the property of the unit winning it by its performance during that camp.

Any unit winning a cup trophy will be responsible for its care and preservation during the year of possession, and for its delivery to the Director of Medical Training of the Camp at Fort Snelling, on the first day of the following camp. In the event that a unit in possession of a trophy does not send a representative to the Seventh Corps Area Camp, it will be responsible for its delivery to the Director of Medical Training, Seventh Corps Area R.O.T.C. Camp, on the first day of the next camp.

Each trophy will be suitably inscribed with the name of the unit winning it in any competition and any unit which the trophy or trophies may have been awarded on three occasions becomes the permanent owner thereof - a new cup will then be secured for future competitions.

Special Conditions - Unit Competition.

5. Competitions in Military Discipline cup trophy to be awarded to the unit eligible under the rules of the competition which is determined the winner by the decision of the judges as outlined by Training Memorandum No. 1, Headquarters R.O.T.C. Camp, June 15, 1927, taking the highest of the total scores of individual in each unit.

6. Competitions in Military Hygiene and Sanitation cup trophy be awarded to the unit eligible under these rules, which makes the highest total score of its individuals in a written examination as outlined by Paragraph 7, Training Memorandum No. 1, Headquarters R.O.T.C. Camp, June 15, 1927.

7. Competitions in Medical Tactics cup trophy to be awarded to the unit making highest average score in weekly tests; viz, Regimental Medical Detachment; Collecting Company; Ambulance Company and Hospital Company as outlined by Paragraph 7, Training Memorandum No. 1, Headquarters R.O.T.C. Camp, June 15, 1927.

Trophy Regulations Continued.

8. Competition in General Proficiency in Medico-Military Training: Cup trophy to be awarded to unit making highest average score in all subjects as outlined in Training Memorandum No. 1, Headquarters R.O.T.C. Camp, June 15, 1927.

General Conditions - Individual Competitions:

9. The Competitions announced in Paragraph 2, reference Life time Scheaffer fountain pen are open to any student member of the Medical Section.

The individual making the highest score in any of the four competitions becomes the permanent possessor of the Fountain pen awarded for that competition.

Special Conditions - Individual Competitions.

10. Competition in Military Discipline: A Fountain pen to be awarded to the individual who is determined the winner by the board of officers, after examination of the Disciplinary and Efficiency Records of all students; should there be two or more students tied for high place, the winner shall be determined by competitive disciplinary drill.

11. Competition in Military Hygiene and Sanitation: Fountain pen to be awarded to the individual who makes the highest mark in a written test.

12. Competition in Medical Tactics: Fountain pen to be awarded to the individual making the highest active average in the four weekly tests viz. Regimental Medical Detachment, Collecting Company, Ambulance Company. Hospital Company.

13. Competition in General Proficiency in Medico-Military Training: Fountain pen to be awarded to the individual making highest total score in all subjects mentioned in Training Memorandum No. 1, Headquarters R.O.T.C. Camp, June 15, 1927.

14. All units to compete for cup trophies, must consist of, not less than twelve (12) students.

15. The following officers are hereby appointed a Board to determine units and individuals attaining highest standing in the above competitions:

Major H. H. Sharpe, M.C.
Major H. B. Roberts, D.C.
Major P. J. Carroll, M.C.
Captain G. W. Fitz Gerald, V. C.

Kent Nelson
Colonel. M. C.
Director.

Office of the Director of Medical Training.
R. O. T. C. Camp.

July 28, 1927.

Memorandum:

The Medical Department Reserve Officers in training at Fort Snelling, summer of 1927, have donated the sum of \$142.21 to be used for the purpose of awards to Medical Department R.O.T.C. students.

No instructions were given by the donors of this fund. Disposition being left to the R.O.T.C. Trophy Board.

At a Meeting of the trophy Board the decision was reached to use the fund for individual awards in the following subjects;

three individual awards in Medical tactics,			
one	"	"	" General proficiency,
one	"	"	" Sanitation and Hygiene,
one	"	"	" Military Discipline,
one	"	"	" Honor Veterinary student.

The individual awards chosen were given "Life time Scheffer Fountain Pen", suitable engraved at a total cost of \$54.25 which leaves a balance of \$87.96 on deposit at the East Hennepin State Bank, Minneapolis, Minnesota, to be used as the R.O.T.C. trophy Board advises in future Camps.

The Honor men were selected in accordance with Medical Department trophy Regulations, see else where in this report.

Kent Nelson,
Colonel, M.C.
Director.

RATINGS OF MEDICAL DEPARTMENT - R. O. T. C.

College	UNIT	Regt. Med	Coll. Co.	Amb. Co.	Hosp. Co.	San. & Hyg.	Discipline	Total Rating	Relative Standing
St. Louis	Medical	96.81	96.59	90.52	83.00	86.98	75.00	84.57	1
Iowa, Univ.	Medical	95.48	94.29	88.11	84.79	81.54	79.67	83.95	2
Minnesota	Medical	96.40	87.45	88.27	93.09	69.21	89.67	83.39	3
Washington	Medical	98.70	92.59	87.82	90.46	81.16	75.00	82.85	4
Iowa, Univ.	Dental	93.15	86.47	82.15	91.88	71.94	84.67	81.67	5
Rush	Medical	92.66	98.83	92.33	83.50	75.81	75.00	80.88	6
Kansas, Agr.	Veterinary	96.25	89.16	85.66	95.18	71.15	75.00	79.23	7
St. Louis	Dental	93.25	89.58	88.56	93.95	69.38	75.00	78.63	8
Iowa State	Veterinary	98.17	90.00	79.52	96.25	68.59	75.00	78.19	9
Northwestern	Dental	89.30	93.70	86.57	90.50	67.65	75.00	77.55	10
Minnesota	Dental	91.42	81.16	71.89	74.73	58.47	75.00	71.09	11
Creighton	Dental	87.38	84.46	83.38	76.11	51.57	76.00	70.13	12

Trophy Awards

1. Unit Cup trophies.

Military Discipline, Minnesota, Medical.

Sanitation and Hygiene, St. Louis Medical.

Medical tactics, Washington, Medical

General Proficiency, St. Louis, Medical.

2. Individual awards, "Life time Schaeffer Fountain Pens," suitably engraved.

Military Discipline, Honor student.

Ralph W. Mohri, K.S.A.C., Veterinary.

Sanitation and Hygiene, Honor student

N.W. Schlueter, St. Louis, Medical.

Medical tactics, Honor students

Charles A. Laszczynski, St. Louis Dental.

Lawrence L. Howard, Washington, Medical.

E.L. Burgquist, Minnesota, Medical

General Proficiency.

William E. Crystal, St. Louis, Dental.

Honor Veterinary student

Daniel De Camp, K.S.A.C., Veterinary.

* MEDICAL DEPARTMENT *

TRAINING GUIDE

ON

REGIMENTAL MEDICAL DETACHMENT

COLLECTING COMPANY

AMBULANCE COMPANY

HOSPITAL COMPANY

HYGIENE AND SANITATION

VETERINARY SERVICE

DENTAL SERVICE

SERVICE COMPANY

R. O. T. C. CAMP

FORT SNELLING

MINNESOTA

1927.

(D. M. T. 100-1)

OFFICE OF THE DIRECTOR OF MEDICAL TRAINING,
R.O.T.C. Camp, 1926, Fort Snelling, Minn.,

June 16¹⁶, 1927.

Subject: Data for Field Training, Medical Department, R.O.T.C.

To : The Medical Department, R.O.T.C. Students.

1. These notes are furnished you for a double purpose; first, to assist you in the better understanding of your camp training here; second, to afford a reference on organization and administration for your future use in the R.O.T.C. Unit and after being commissioned. You may be called upon to produce them during camp. You are advised to keep them for use later. They will be supplemented from week to week by the Directors of Unit Training while in camp with a view to completing your note book.

2. The mission of this camp is to supplement the military and technical training received at the institution with such practical training as is necessary to your qualification for commission in the Officers' Reserve Corps.

3. All military effort is directed toward a definite objective. It is positive and requires positive action. No one arm or branch wins a battle. It is only by cooperation of arms and branches that military decisions are attained. Thorough understanding in normal combat conditions by all arms and branches are necessary before a commander is justified in meeting an enemy. Once combat is begun there must be the fullest cooperation on the part of every member of the command.

4. The practical training you receive is the fundamental plan of the care and evacuation of wounded in combat. Officers and men are given a degree of independence in the details of their duties and must exercise initiative in handling situations confronting them. Officers and men must understand that inaction is more censurable than error in choosing the means to an objective. Your own solution of a problem may possibly be short of the best under the circumstances but intelligently and forcefully applied will accomplish more than the best solution carried out ineffectively and weakly.

KENT NELSON
Lt. Colonel, Medical Corps
DIRECTOR OF MEDICAL TRAINING

(D. M. T. 100-2)

OUTLINE OF MEDICAL DEPARTMENT UNITS IN THE ZONE OF
THE ADVANCE

Army-----
(325,000)

Army Corps
(84,000)

Army Corps

Army Corps

Army Troops:

MEDICAL

15 EVACUATION HOSP.

122 SURGICAL HOSP.

1 CONVALESCENT HOSP.

1 ARMY MEDICAL

LABORATORY

1 MEDICAL SUPPLY

DEPOT

4 VETERINARY

EVAC. HOSP.

1 VET. CONV. HOSP.

4 MEDICAL REGIMENTS

Army Corps

Troops

MEDICAL

1 MEDICAL REGIMENT

Infantry
Brigade
(6,400)

Infantry
Brigade

Artillery
Brigade

Engineers
Air Service
etc.

MEDICAL
REGIMENT

Infantry
Regiment
(3,200)

Infantry
Regiment

1st Battalion

2nd Battalion

3rd Battalion

Headquarters
Service Co.

Regiment
MEDICAL
DETACHMENT

Rifle Co.
(205)

Rifle Co.

Rifle Co.

Machine Gun Company.

The Regimental Medical Detachment of an Infantry Regiment consists of 11 officers and 84 men. In combat this personnel is assigned to the three battalions and to headquarters.

That part of the Detachment assigned to Regimental Headquarters provides assistants to the Regimental Surgeon, renders attendance for Headquarters, provides replacement for the personnel of the Battalion Medical Detachments, and if necessary, establishes an aid station known as Regimental Aid Station.

Those parts of the Detachment assigned to the battalions are again divided so as to furnish two enlisted men, Medical Department, to each company who accompany the company into combat. These two men render first aid to, and collect wounded to some sheltered spot known as the Local Aid Post.

(D. M. T. 100-3)

SCHEDULE OF EVACUATION OF WOUNDED FROM A DIVISION
FRONT TO HOSPITAL CENTER AND HOMETOWN.

Division Front about 3500 yds.
Battalion Front about 500 yds.
Division consists of four Infantry Regiments, etc.
Infantry Regiment consists of three battalions.

Transportation and Unit Supplying it.	Average Distance	A Regimental Front Showing Three Battalion Fronts and Evacuation Units.
Litters by Regimental Medical Det. and Regimental Band	500 yds. 300 yds.	XXXXXX XXXXXXXX XXXXXXXX Battalion Aid Stations Regimental Aid Stations
Litters by Collecting Company	2500 yds.	Collecting Station
Ambulance by Ambulance Company of Div. to Hospital Station	5 miles	Advanced Ambulance Control Post (Optional)
Ambulance by Army Medical Regt. Hospital Train by G.H.Q.	Immediate	Hospital Station Surgical Hospital Evacuation Hospital Hospital Center consisting of General Hospitals; Convalescent Camp
Hospital Ship or Hospital Train by War Dept.	Indefinite	General Hospitals in Homeland

ORGANIZATION OF A MEDICAL REGIMENTREGIMENTAL HEADQUARTERS:

1 Colonel (Commanding) 1 Lieut. Colonel
 1 Major (Plans & Training Officer)
 1 Captain or Lieutenant (Adjutant)
 1 Chaplain. Enlisted men from Service Co..... 5 0 0

SERVICE COMPANY.

REGIMENTAL HEADQUARTERS SECTION.....	0	0	8
SERVICE COMPANY HEADQUARTERS SECTION.....	1	0	8
BATTALION HEADQUARTERS SECTIONS (Each Bn, 4 Enl Men)	0	0	12
BAND SECTION.....	0	1	28
GENERAL SUPPLY SECTION.....	1	0	
MEDICAL SUPPLY SECTION.....	1		8
MEDICAL LABORATORY SECTION.....	1	0	8

COLLECTING BATTALION—Bn Hq. & 3 Collecting Co's.

BATTALION HEADQUARTERS:

1 Major (Commanding) 1 Capt. or Lieut. (Bn Adj.)...	2	0	0
Enlisted men from Service Company.....	2	0	0

COLLECTING COMPANY (Each of 3 companies)

4 Captains or Lieuts., 92 enlisted men.....	12	0	283
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AMBULANCE BATTALION (Bn Hq and 3 ambulance co's)

BATTALION HEADQUARTERS:

1 Major (Commanding) 1 Capt. or Lt. (Bn Adj.)			
Enlisted men from Service Company.....	2	0	0

AMBULANCE COMPANY: Each of 3 companies each.

2 Cpts. or Lts., 56 enlisted men.....	6	0	168
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HOSPITAL BATTALION: Bn Hq and 3 hosp cos.

BATTALION HEADQUARTERS:

1 Major (Commanding) 1 Capt. or Lt. (Bn Adj.)			
Enlisted men from the Service Company.....	2	0	0

HOSPITAL COMPANY:

8 officers, 92 enlisted men.....	24	0	276
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VETERINARY COMPANY:

3 officers, 70 enlisted men.....	3	0	70
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<u>Totals</u>	60	1	882
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Plans and Train-
ing OfficerCommanding
OfficerExecutive
Officer

Chaplain

Regimental
Adjutant

Service Company	Collecting Battalion	Ambulance Battalion	Hospital Battalion	Veterinary Company
Regimental Hq. Section	Collecting Company	Ambulance Company	Hospital Company	
Service Co. Hq Section	Collecting Company	Ambulance Company	Hospital Company	
Regimental Band Sect.	Collecting Company	Ambulance Company	Hospital Company	
Collecting Bn Hq Sect.				

STUDENT NOTES * REGIMENTAL MEDICAL DETACHMENT.GENERAL.

1. The Regimental Medical Detachment is entirely separate and distinct from the Medical Regiment. It is a Medical Department Unit attached to a regiment of the line to render medical, sanitary, and evacuation service.

2. It is composed of commissioned and enlisted personnel of the Medical Department in such numbers and grades as are available and provided for, in the tables of organizations. It exists solely for the service of the troops to which it is attached; its mission being to conserve the fighting strength of those troops.

3. For purpose of administration and control a Medical Detachment is a unit of the regiment or other organization it serves.

4. It is provided with basic, rolling and technical equipment (see below).

5. Its personnel consists of:-

1-Major, Med. Corps	1-Technical Sgt. M.D.
7-Capts. or Lieuts., M.C.	3-Staff Sgts. M.D.
2-Capts. or Lieuts., D.C.	5-Sergeants M.D.
1-Capt. or Lieut., V.C.	1-Sergeant M.D. (Veterinary)
	4-Corporals M.D.
	67-Pvts. or Pvt. 1st cl., M.D.
	3-Pvts. or Pvt. 1st cl.
	(Veterinary)
Total	84

The Medical Detachment with an Infantry Regiment is divided into a Medical Detachment Headquarters and three medical sections. These lesser units are further subdivided to insure allotment of duties and convenience in handling as follows:-

1. Medical Detachment Headquarters.
 - a. Administration group.
 - b. Supply and mess group.
 - c. Communications service group.
 - d. Regimental aid.
2. Each Medical Section (three in number)
 - a. Aid station squad.
 - b. Litter bearer squad.
 - c. Company aid squad.

The personnel, equipment and duties of the component parts of the Regimental Detachment may be summarized:-

1. Medical Detachment Headquarters.

a. Personnel and individual assignment to duty.

Commissioned

- 1-Major, Medical Corps, Regimental Surgeon, Mounted.
 1-Captain " " Assistant to Surgeon
 2-Capts. or Lieuts., D.C. " " " "
 1-Captain, V.C. " " " "

Enlisted

- 1-Technical Sgt. M.D. (Mounted)
 2-Sergeants M.D.
 1-Sergeant, M.D. (Veterinary)
 1-Corporal, M.D.
 10-Pvts. or Pvts. 1st cl., M.D. (1 mounted)
 3-Pvts. or Pvts. 1st cl., M.D. (Veterinary)

The se enlisted men are assigned as follows:
Administration - The Technical Sergeant.
Supply and Mess - The Sergeant, M. D.
Communications - 1-Private, M. D.
Regimental aid - 1 Sergeant & 1 Corporal, M. D.
The rest of the enlisted men perform duties as:
Wagoners, Cooks, Litter bearers, dressers,
Messengers, Motorcyclists and orderly, doubling
up where necessary.

b. Equipment.

Animals and transportation.

- 1 Medical wagon to transport Regimental Aid.
- 1 Escort wagon to transport baggage.
- 1 Motorcycle with side car.
- 1 Bicycle
- 5 Hounds

Technical.

- 1 Regimental aid Station complete.
- The individual equipment of officers and men.

c. General duties.

1. Under the supervision of the Regimental Commander
Commander the headquarters Medical detachment
supervises the medical service of the Regiment
in garrison, Camp, on the march and in battle.
2. It is organized to provide an administrative,
supply and communication service for the three
separate medical sections operating with the
battalion.
3. Establishes and maintains, when necessary
the regimental aid station and dispenses.
4. Provides medical care and treatment of troops
located in the vicinity of regimental head-
quarters.
5. Directs and supervises the dental service
for the regiment.
6. Directs and supervises the veterinary service
for the regiment.

2. The Medical Section (Three in number)

a. Personnel and individual assignment to duty.

Commissioned

- 1 Captain, M. C. (Bn. Surgeon, Mounted)
- 1 Capt or Lt. M. C. (asst to Bn Surgeon, Mounted)

Enlisted

- 1 Staff Sgt., M. D. (Mounted)
- 1 Sergeant, M. D.
- 1 Corporal, M. D.
- 19 Pvts, or Pvts, 1st Cl., M. D.
(2 Pvts, mounted as orderlies)

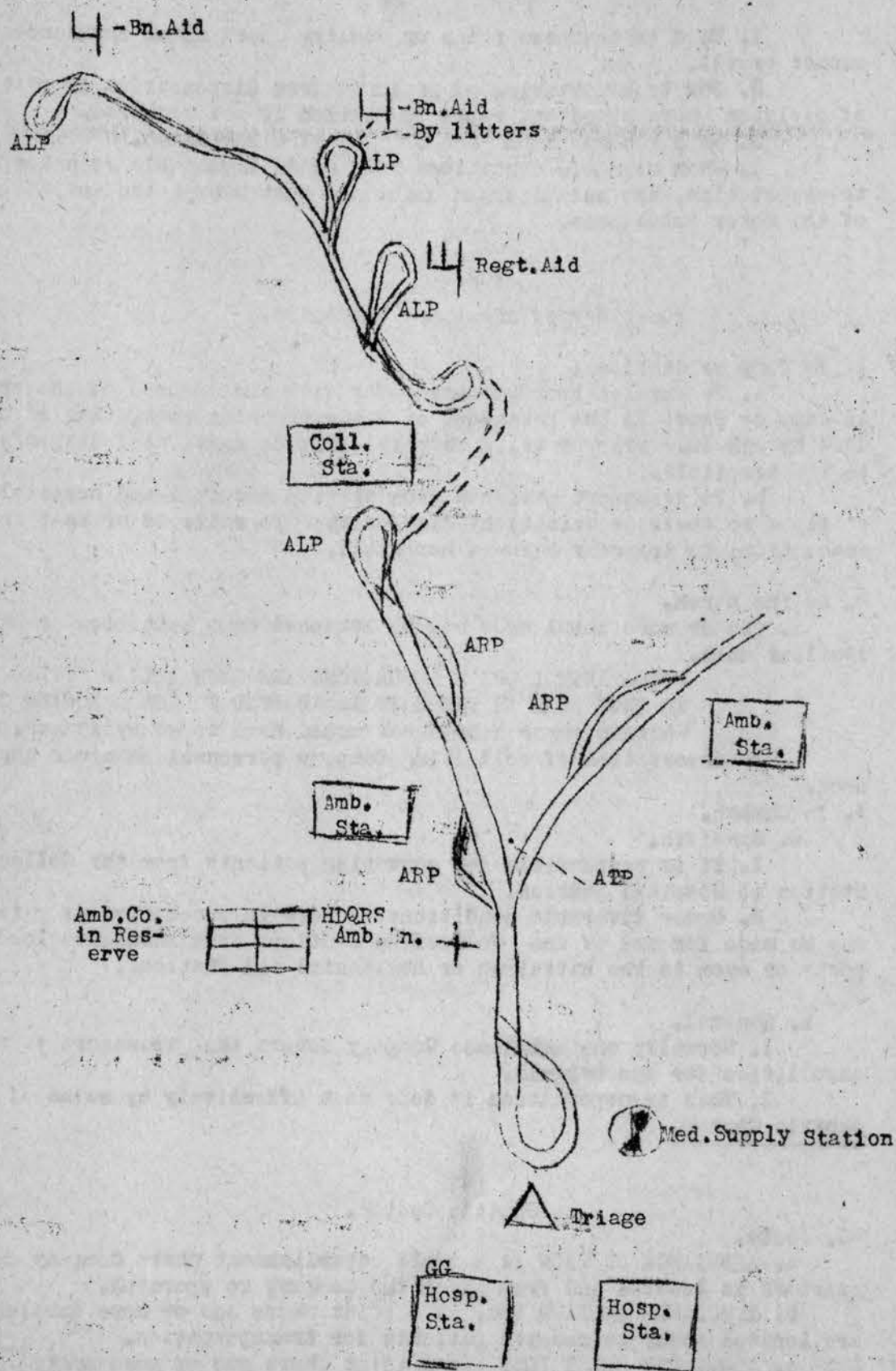
All men assigned to three squads, namely:

- (A) Aid Station Sqd, (B) Litter bearer Sqd. (C) Co. Aid Sqd,
Staff Sgt. in charge 8 Pvts or Pvts 1st Cl. 8 Pvts or Pvts 1st Cl.
& Surgical Asst.
Sergeant- Property,
Exchange, Water &
Food,
Corporal-Asst dresser,
Sterilizer & AFS
3 Pvts.-Clerk, Wagoner
& General utility.

(f) cont'd.

d. AMBULANCE TRAFFIC POST, consists of a soldier stationed at a crossroad junction to direct ambulance traffic to its proper designation.

2. Diagram of Shuttle System.



Ambulance Bn. Cont'd.

(d)

Adaptability for Special Duties.

1. Used to traverse roads or country where motor ambulances cannot travel.
2. For transportation of patients from dispensaries in rear of division where speed and rapid evacuation is not required.
3. As a reserve ambulance Company of a battalion.
4. When climatic conditions make roads impassable to motor transportation, the animal drawn ambulance must assume the duties of the motor ambulances.

(e)

Functions of Ambulance Companies.

1. In Camp or Station.
 - a. To furnish transportation for sick and injured of the troops in camp or Post(In the permanent or semi-permanent post, this is best done by schedule trip or trips from the camp or regimental dispensary to the hospital).
 - b. To transport patients from station hospital and hospital stations to their organization's dispensary: To railroad or boat in evacuation: To transfer between hospitals.

2. On the March.

- a. One or more ambulances may be attached to a battalion or other similar unit.

NOTE- ANIMAL DRAWN AMBULANCES ARE MUCH BETTER SUITED TO THIS WORK AS THE GAIT IS ADAPTED TO THE MARCHING COLUMN whereas motor ambulances would have to go by stages.

- b. Transportation of collecting Company personnel whenever any is used.

3. In Combat.

a. Specific.

1. It is responsible for conveying patients from the Collecting Station to Hospital Station.
2. Under favorable conditions of terrain evacuation of patients may be made forward of the Collecting Stations from ambulance loading posts or even to the battalion or Regimental aid stations.

b. General.

1. Normally one ambulance Company covers the transportation of casualties for one brigade.
2. This transportation is done most effectively by means of the Shuttle System.

(f)

Shuttle System.

1. Posts.

- a. AMBULANCE STATION is a small establishment where Company Headquarters is located and from which the Company is operated.
- b. AMBULANCE LOADING POST is a point where one or more ambulances are located ready to receive patients for transportation.
- c. AMBULANCE RELAY POST is a point where one or more empty ambulances are located ready to move to the next post to replace an ambulance that has gone to the rear.

(c) Cont'd.

Diagram of Personnel and Equipment.

COMPANY - HEADQUARTERS

2 Officers
1 Technical or 1st Sgt.
1 Sergeant.
14 Pvs. 1/cl or Pvs.

1 Motor -Cycle
with side car.



1st. Amb. Platoon (19)

1 Sgt. Platoon Leader

2nd Amb. Platoon (21)

1 Sgt. Platoon Leader

↑
1 Bicycle

1st Section

5 Drivers
4 Res Drivers

5- Ambulances-AD

20-Mules, Draft

2nd Section

1 Corps
5 Drivers
3 Reserve Drivers

5 Ambulances AD

20 Mules, Draft

1st Section

1 Corps
5 Drivers
4 Res. Drivers

5 Ambulances AD

20 Mules, Draft

2nd Section

1 Corps.
5 Drivers
4 Res. Dri.

5 Ambulances (AD).

20 Mules, Draft.

13 Horses, riding distributed as follows:-
14 Mules, draft
1 Wagon, spring.- (2 Mules)
2 Wagons, escort- (8 Mules)
1 Kitchen, rolling. (4 Mules)

(c)

Animal Drawn Ambulance Company.

Personnel

Consists of two (2) officers and fifty-six (56) enlisted men. For administrative purposes divided as follows:-

1 Company Headquarters- (2 Officers
(16 Enlisted men.

Officers (2) - 1 Capt. or 1st Lt. (Commanding)
1 Capt. or 1st Lt. (2nd in Command)

Non-Commissioned Officers (2) - 1 Tech.Sgt (1st Sgt.)
1 Sgt. (Supply-Mess-Stables)

Pvts 1/cl or Pvts.(14)

1 Company Clerk.
2 Cooks
1 Tailor
1 Artificer
1 Saddler

2 Horseshoers
1 Bugler-Orderly
1 Wheelwright.
4 Wagoners-Escort wagons.

2. First Platoon, (19)

Non-commissioned officers (2) 1 Sergeant-Platoon leader.
Charge of first section.
1 Corporal-Charge of 2nd Section.

Pvts 1/cl or Pvts. (17)

10 Wagoners (Ambulance Drivers)
7 Reserve drivers & general utility.

3. Second Platoon (21).

Non-commissioned officers (3) - 1 Sergeant - Platoon Leader.
2 Corporals in charge of 1st section
1 in charge of 2nd section.

Pvts. 1/cl or Pvts. (18)

10 Wagoners (Ambulance Drivers)
8 Reserve drivers & general utility.

Equipment

94 Mules, draft.
13 Horses, riding.
20 Ambulances (AD with equipment)
2 Wagons, escort,

1 Wagon, spring
1 Kitchen, rolling.
1 Motorcycle.
1 Bicycle.

(b) Motorized Ambulance Company, (War Strength)
Personel.

Consists of Two Officers and Fifty-six (56) Enlisted Men for administrative purposes divided as follows:-

- 1-Company Headquarters) Enl. 14
Officers(2) 1 Capt. or Lt. M.C. (Com'dgr)
1 Capt. or Lt. M.C. (2nd in Command)
Enlisted Men(14)
Non-commissioned Officers (2)
1 Tech. Sgt. (1st Sgt.)
1 Sgt. (Supply-Mess-Trans.)
Privates 1/c or Privates. (12)
1 Company Clerk 2 Auto Mechanics.
2 Cooks 1 Bugler-Orderly & Bicyclist.
1 Chauffer 1 Artificer
2 Truck Drivers 1 Tailor
1 Motorcyclist
- 2-First Platoon (21).
Non-commissioned Officers (2)
1 Sgt. Platoon Leader, Charge of 1st Section
1 Corporal, Charge of 2nd Section.
Pvts. 1st Cl. or Pvts. (19)
10 Chauffers-Ambulances Drivers.
9 Reserve Drivers and general utility.
- 3-Second Platoon (21)
Non-commissioned officers (3)
1 Sgt. Platoon leader.
2 Corporals
1 in charge of 1st section
1 " " " 2nd "
Pvts. 1st Cl. or Pvts. (18).
10 Chauffers- Ambulance Drivers.
8 Reserve drivers and general utility.

Equipment.

- | | |
|--------------------------------------|---------------------------------|
| 20 Ambulances (Motor with Equipment) | 1 Trailer Kitchen. |
| 2 Trucks (1-1/2 ton cargo) | 1 Trailer Water tank, 180 gal. |
| 1 Motorcycle with side car | 1 Trailer, spare parts (medium) |
| 1 Touring Car (5 passenger) | 1 Bicycle. |

Diagram of Personel and Equipment.

Amb. Co. # 1 (motor)
Company Headquarters.

Amb. Co. #2 (motor)

Personel and Equip-
ment same as Amb. Co.
#1.

2 Officers
1 Tech. or 1st Sgt.
1 Sgt.
12 Pvts. 1st Cl. or Pvts.

Five passenger car (motor)

1st Amb. Platoon

1 Sgt. Platoon leader

2nd Amb. Platoon

1st Sgt. Platoon leader.

1 Bicycle

1st Section

5 drivers
5 Res. drivers

2nd Section

1 Corporal
5 Drivers
4 Res. Drivers

1st Section

1 Corporal
5 Drivers
4 Res. Drivers

2nd Section

1 Corporal
5 Drivers
4 Res. Drivers

5 Amb. motor

2- trucks 1-1/2 or 2 tons
1 Water tank trailer

Trailer kitchen

5 Amb. motor

Trailer spare parts.

AMBULANCE BATTALION

1- GENERAL INFORMATION.

(a)

The Ambulance Battalion is a unit of the Medical Regiment. In active combat conditions the Ambulance Battalion is the most important entity in the system of evacuation in the Division Area.

(b) Organization

It consists of a Battalion Headquarters and three Ambulance Companies, two of which are motor drawn and one animal drawn.

(c)- Operating Capacity.

Under ordinary conditions one(1) motor ambulance company evacuates one(1) collecting company station and will be able to hold one fourth of its ambulances in reserve. Variable factors influencing this operating capacity are as follows:-

1. The rate at which casualties are received and treated at the Collecting station.
2. The distance from the Collecting Station to the Hospital station.
3. The condition and number of roads allotted as ambulance routes.
4. The activity of long range hostile artillery fire and the weather.

(d)-Prime Function.

To inaugurate promptly and maintain an ambulance service that will insure a steady flow of casualties from the collecting station to the hospital station, and supply this service with as few ambulances as possible.

(e)-Characteristic Features.

1. It is responsible for the transportation of all casualties, who are not able to walk, from the collecting station to the hospital station.
2. When conditions are favorable the ambulance company may establish ambulance loading posts in advance of the collecting station, where patients may be transferred from litter bearers of the collecting company to the ambulances and transported to the Collecting station.
3. The Ambulance Company is an important link in the system of supply for the medical elements forward, namely, Collecting Company and Regimental Medical Detachment.
4. The Ambulance Battalion is essentially a transportation unit. Transportation is sufficient to transport the entire personnel and equipment. It also affords transportation for the personnel of the Collecting Company, whenever it is necessary to move quickly the Collecting Company to a new location or when it is desired to conserve the strength of the Collecting Company personnel before and after the period of activity.

2- SPECIAL INFORMATION

(a) Battalion Headquarters.

Personnel.

Officers (2)- 1 Major, M.C. (Commanding Bn.)

1 Capt. or Lieut. (Adjutant)

Enlisted Men (4)- 1 Tech. Sgt. (Sgt. Major)

1 Sgt. (Personnel & Supply)

2 Pmts. f/c or Pmts. (Clerk-Chauff.)

) These men are furnished from the service company of the Medical Regiment.

Equipment

2 Wall tents, small (officers)

1 Pyramidal tent (Office)

6 Tables, folding

1 Regimental Field Desk, Blank Forms, Regulations Stationery.

1 Touring car (5 passenger)

6 Chairs, folding.

2 Lanterns.

1 Typewriter.

Duty

Direct and supervise the activities of the companies and coordinate their efforts.

GRAPH NO. 3.

INFANTRY DIVISION

INFANTRY BRIGADE.

INFANTRY BRIGADE.

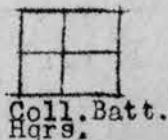
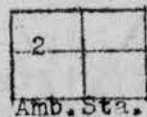
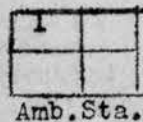
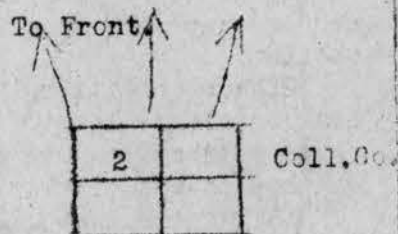
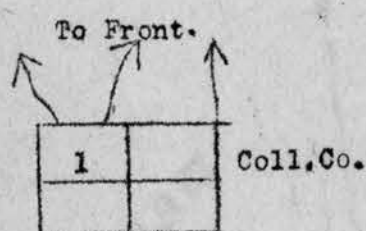
Inf. Regiment. Inf. Regiment.

Inf. Regiment. Inf. Regiment.

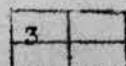
Art. Regiment.

Art. Regiment.

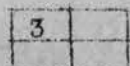
Engineer Reg.



To Hosp. Co.



Reserve Coll. Co.



Reserve Amb. Co.

Not drawn to Scale.

GRAPH NO. 2.

ONE BRIGADE OF INFANTRY.

FIRST INFANTRY REGIMENT.

SECOND INFANTRY REGIMENT.

FRONT LINE.

Infantry Batt.

Infantry Batt.

Infantry Batt.

Infantry Batt.

Batt Aid
Sta.

Batt Aid
Sta.

Batt Aid
Sta.

Batt Aid
Sta.

Reg. Aid.
Sta.

Reg. Aid.
Sta.

Engineer Batt.

Art. Batt.
Aid Sta.

Art. Batt.
Aid Sta.

Inf. Batt. in
Reserve.

Inf. Batt. in
Reserve.

1.

Collecting Sta.
One mile from front line.

To other Brig. &
Of Division

Collecting
Batt. Hq.

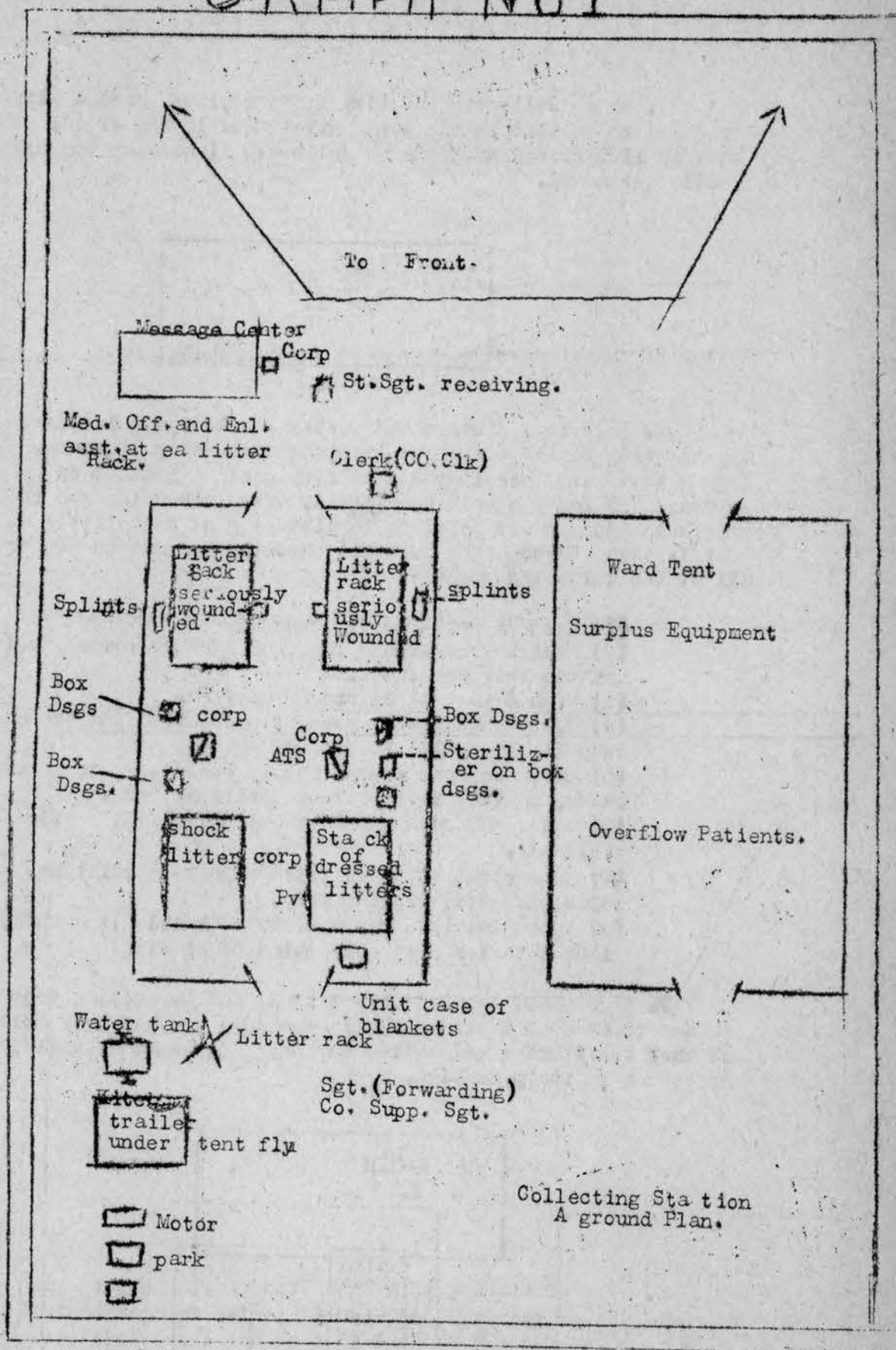
Amb. Sta.

To Hosp.
Co.

Coll. Co. in Reserve

Not Drawn To Scale.

GRAPH NOT



NOT DRAWN TO SCALE

THE COLLECTING COMPANY, CONT'd.

D. Every Collecting station has a definite ground plan prepared to facilitate the work anticipated in the field. This plan is illustrated by graph as follows: (assuming the use of all equipment).

SEE GROUND PLAN
GRAPH NO. 1.

E. Important factors and tactical principles influence the selecting of sites for establishing collecting stations. Among these are anticipated casualty estimates based on previous and local battle conditions. Time schedules and the physical endurance of soldiers in littering of casualties must likewise be considered. Site choosing depends on any or all of the following points:

- (1) Natural drift of the wounded.
- (2) Must be accessible from the rear by motor ambulances, and possibly the front.
- (3) Ground must be spacious and firm.
- (4) Place should have natural protection and cover from direct small arm fire of enemy.
- (5) Avoid too conspicuous roads, buildings, or cross roads, as they invite enemy artillery fire.
- (6) Water and wood should be plentiful and easily available.
- (7) Be careful of heavy foliage where persistent poisonous gases might settle.
- (8) Avoid possible fluctuations of battle line which might interfere with activities of station.

F. A graph of one Infantry brigade and supporting troops in one plain combat situation gives a good general conception of what territory a collecting company will cover of casualties, or covers in its operation.

SEE GRAPH
NO. 2.

G. The next graph is a schematic drawing showing two brigades of Infantry side by side, with supporting troops, which demonstrates the general idea of how three collecting companies, or the collecting battalion of a medical regiment might be tactically distributed.

SEE GRAPH
NO. 3.

THE COLLECTING COMPANY, CONT'D.

- 1 Trailer, kitchen, (not motorized).
- 1 Trailer, water tank, 180 gallons,
(not motorized).
- 2 Motorcycles with side-cars.
- 1 Bicycle, (not motorized).

3. DUTIES.

The duties and mission of a Collecting Company are well defined, and can satisfactorily be considered under the following phases:

A. In Camp. (Temporary or permanent).

- (1). Performs it's own internal administration.
- (2). Institutes a training program for personnel to include basic military and technical instruction. Basic military includes fundamental training for soldiers in the school of the soldier, litter drill, army regulations, courts-martial, etc; while the technical training pertains to instruction in communications and contact, litter bearer work, first aid, sanitation, tent pitching, etc.
- (3). Furnishes armed guard for Medical Regiment.
- (4). Supplies sanitation squads, (supervision only), for incinerators, and other related devices, disposal plants, delousing plants, and mosquito control.

B. On the March.

- (1). Marches in rear of combatant troops of division, or in medical regiment echelon.
- (2). Details in ambulances may accompany advance guards and flank patrols.
- (3). Detachments establish march collecting posts along lines of march of the division.

C. In Combat.

- (1). Establishes and operates collecting station at suitable site about 1500 to 3000 yards from front line, best average being about one ~~mile~~ mile.
- (2). Makes contact with, and evacuates by litter the seriously wounded of the Battalion and Regimental aid stations of the brigade to which it is attached.
- (3). Directs walking wounded to collecting station.
- (4). Receives, sorts, and makes records of all classes of casualties which arrive at station, including the dead.
- (5). Gives temporary treatment or supplemental first aid to casualties in collecting station, affords shelter, and serves special foods.
- (6). Forwards casualties by ambulance to the hospital station.
- (7). Makes exchanges and replacements of medical supplies to Battalion and Regimental aid stations by means of empty litters.
- (8). Establishes a message center.
- (9). Reverts trivial casualties to their organizations by aid of military police.

THE COLLECTING COMPANY, CONT'd.

(2). First Section.

1 Sgt., section leader.
16 Privates 1/c or privates which constitute
4 litter bearer squads of 4 men each.

(3). Second Section.

1 Sgt., section leader.
14 Privates 1/c or privates which constitute
three - 4 men litter bearer squads and one - 2 men
squad.

D. Third Platoon, or litter bearer platoon.

(Organized indentically as second platoon).

E. Summary of Personnel in Collecting Company.

	Officers.	Enlisted.
Company Headquarters	1	16
First Platoon	1	14
Second Platoon	1	33
Third Platoon	1	33
Totals	<u>4</u>	<u>96</u>

2. Equipment.

Only the minimum amount of equipment and supplies are furnished to afford collection and render temporary treatment to all classes of battle casualties, and to provide the necessary transportation for the company. The company equipment is briefly:

A. Personal:

That which is issued to each individual in the company.

B. Organizational:

(1). Basic.

2 large ward tents with accessories; 4 officers tents; kitchen and mess materials.

(2). Technical.

Drugs, chemicals, and reagents.
Surgical Dressings.
Surgical Instruments and supplies.
Hospital furniture and equipment.
Field equipment and supplies.
Food supplies for patients.
Miscellaneous supplies and equipment.
Fifty hand litters.
Two wheeled litter carriers.

(Note: All equipment and supplies are boxed, crated and numbered with packers list in each instance).

(3) Transportation (motorized)

1 Truck, 3/4 ton Cargo.
2 Trucks, 1 1/2 to 2 ton Cargo.

THE COLLECTING COMPANY.

1. A Collecting Company, of which there are three in the battalion, as the name implies is so organized and provided with the proper equipment for the primary object of collecting the wounded from certain battalion and regimental aid stations. The war strength of the Company is composed of 4 officers and 96 enlisted men of the Medical Department in all grades, sub-divided into a Company Headquarters and three platoons, and distributed as follows:

A. Company Headquarters.

- 1 Captain, Medical Corps, Commanding.
- 1 Technical Sergeant, first sergeant.
- 1 Sgt., - supply, forwarding, - (in coll. sta. during combat).
- 1 Sgt. in charge of mess.
- 1 Sgt. in charge of transportation.
- 1 Corporal in charge of message center.
- 1 Private 1/cl, company clerk, - (in coll. sta. during combat).
- 1 Private 1st class, bugler, orderly, messenger.
- 2 Privates 1/cl or privates, cooks.
- 2 Privates 1/cl or privates, motorcyclist, trained messengers.
- 3 Privates 1/cl or privates, truck drivers.
- 1 Private 1/cl or private, tailor.
- 1 Private 1/cl or private, artificer.

(Remarks: Company Headquarters performs the general administration duties, exercises command, maintains all records, correspondence, message facilities, supply, messing, and transportation for company).

B. First Platoon. (Collecting Station Platoon).

(1). Platoon Headquarters.

- 1 Captain, or Lt. Medical Corps, Platoon leader. (in coll. sta. during combat).
- 1 Staff Sergeant, platoon sgt., 1st section leader. (receiving Sgt. of coll. sta. during combat).

(2). First Section. or collecting station section.

- 3 Corporals in charge respectively of slightly wounded, A.T.S. and morphine, and shock litters.
- 3 Privates 1/cl or privates in charge of dressing litters, and assistants to medical officers.

(Note: Officer of second platoon, Company supply sgt. and company clerk join station section during combat).

(3). Second Section. or communications section.

- 1 Sergeant, section leader.
- 6 Privates 1/cl or privates who serve as communication and contact agents.

C. Second Platoon. or litter bearer platoon.

(1). Platoon Headquarters.

- 1 Capt. or Lt. Medical Corps, platoon leader, (Note: this officer joins Coll. Sta. during combat).
- 1 Staff Sergeant, platoon sergeant.

(D. M. T. 300-2)
TRAINING GUIDE FOR THE COLLECTING COMPANY

The Collecting Battalion.

1. There is one Collecting Battalion in every Medical Regiment. A Collecting Battalion consists of a Battalion Headquarters, and three Collecting Companies, totaling 14 Officers and 288 enlisted men in all grades. The Collecting Battalion is the most forward element of the medical regiment in a division of Infantry during combat. The Collecting Battalion provides the connecting link between the battalion and regimental aid stations of the combatant units of the division, and the subsequent collection and evacuation to the rear of all front line casualties. It is essentially a marching unit except when going into position when a battle is eminent, when ambulances from the ambulance battalion may be utilized to carry the personnel.

2. Normally only two companies of the battalion function in combat simultaneously, while the third remains in the rear as the battalion reserve force. Each full collecting company in operation will ordinarily serve one brigade of Infantry and its supporting artillery and other troops.

3. Briefly, the personnel, equipment and duties of the battalion Headquarters are as follows:

A. Personnel.

- 1 Major, Medical Corps, Battalion Commander.
- 1 Capt. or 1st Lt., Med. Corps, Adjutant.
- 1 Technical Sergeant, Med. Dept., Sergeant Major.
- 1 Sergeant, Medical Department, Supply, Communication.
- 2 Privates 1st cl. or Privates, Medical Department, to act as clerk and chauffeur.

(Note - All enlisted men are detailed from the service Company.)

B. Equipment.

Only sufficient equipment is allowed to maintain a small office and keep the required field records, namely:

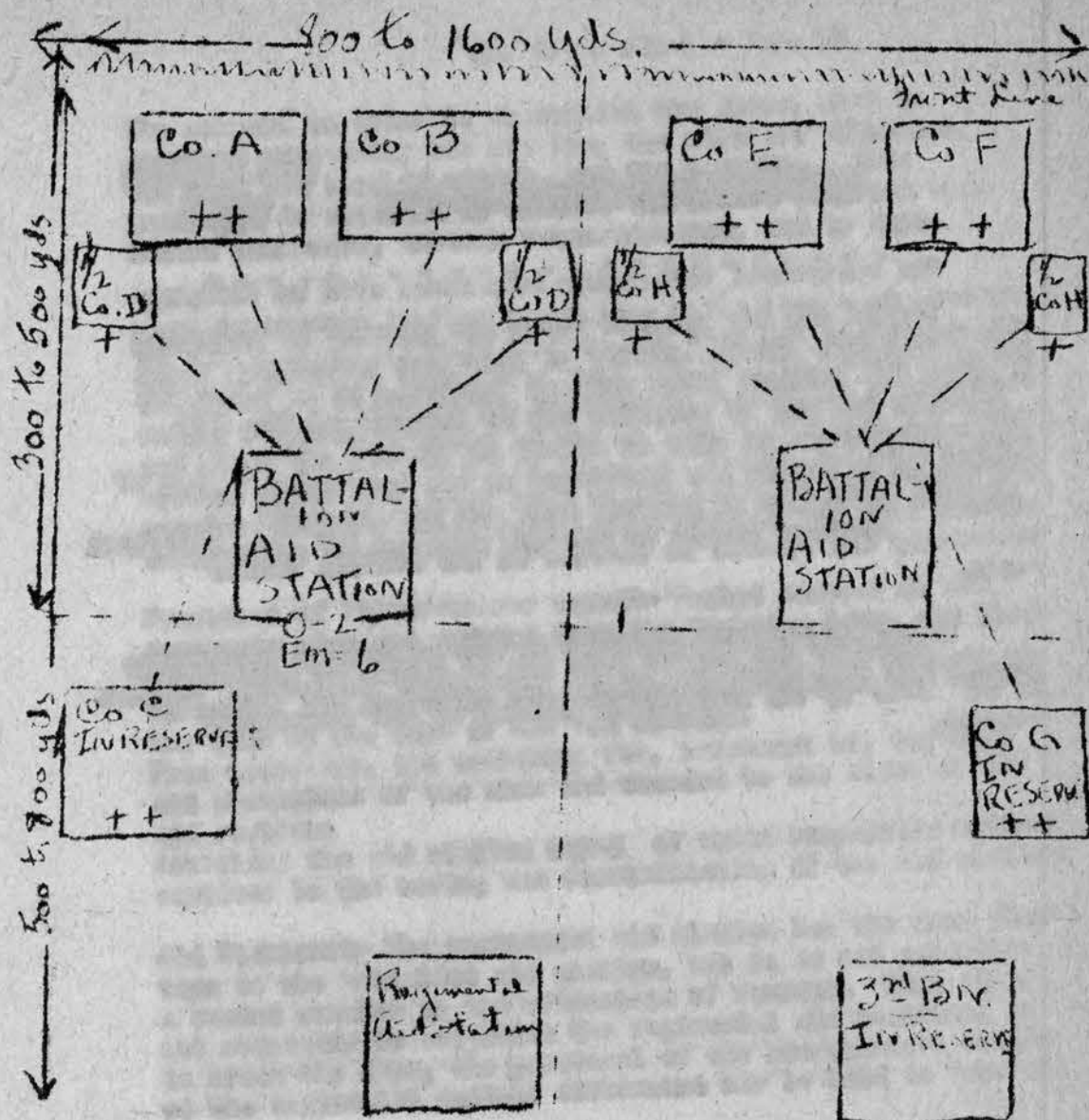
- | | |
|-----------------------------|--|
| 2 small tents, (officers), | 1 typewriter |
| 1 pyramidal tent, (office), | 1 regimental field desk with necessary stationary, etc., |
| 6 folding chairs, | |
| 6 folding tables, | 1 five passenger motor car. |

(Note - This equipment is carried by one of the motor trucks of a designated collecting company in the battalion).

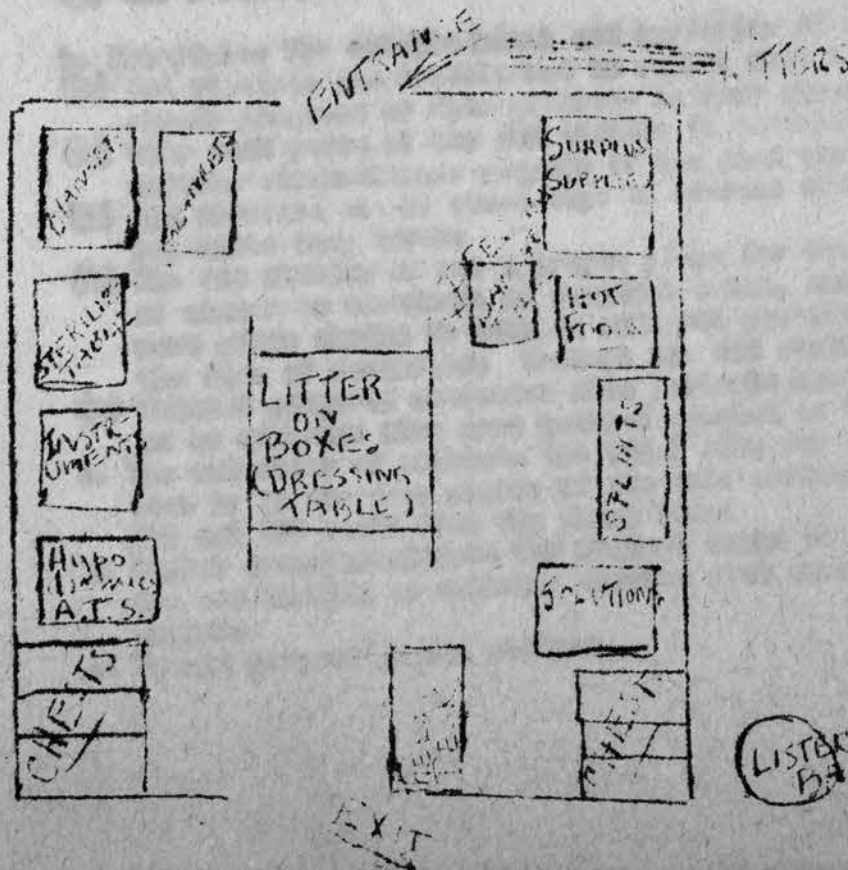
C. Duties.

The battalion headquarters is a tactical rather than an administrative unit. The battalion commander is expected to coordinate the activities of the three companies in the battalion, directing their training and work under all conditions. Battalion headquarters should be situated in combat, as far as practicable, in close proximity to the ambulance battalion headquarters, as these two units are closely allied and must coordinate their work. A convenient and suitable place midway between collecting stations and hospital stations would be a desired site for these headquarters, where also the reserve collecting company should remain.

REGIMENTAL MEDICAL DETACHMENT



BATTALION AID STATION



REGIMENTAL VETERINARY DETACHMENT

The regimental veterinary detachment with an infantry regiment is a part of the regimental medical detachment for administration but does not operate with it. It consists of one veterinary officer and four veterinary enlisted men who establish a regimental veterinary aid station in the area where the greatest number of animal casualties will occur, namely with the combat trains. A collecting squad composed of two veterinary enlisted men is sent forward to bring in animals from the forward areas. The equipment for the regimental veterinary aid station is carried on the medical combat wagon.

Animal casualties gathered in the regimental veterinary aid station are evacuated to the veterinary collecting station in the rear by the collecting platoon of the veterinary company.

The surgeon in order to accomplish the above, must be informed concerning his mission, the military situation, the plan and time of action, and the terrain. This knowledge is obtained by contact and orders from his combatant commander, through reconnaissance, and by maps.

Functions of company aid men:- Company aid men follow their respective companies in battle, giving such first aid treatment as is possible, tagging sick, wounded and dead, direct walking wounded to the position of the aid station, and place the casualties unable to walk in advantageous positions where they can be sheltered and picked up by litter squads. Company aid men also forward to battalion surgeon information in messages carried by litter bearers.

Functions of litter-bearer squad:- Prompt removal of all seriously sick and wounded from the fighting line, and their evacuation by litter to the site of the aid station. Directing and assisting the walking wounded from the fighting line to the site of the aid station. When necessary, the searching for, treatment of, tagging, and evacuation of the sick and wounded to the sight of the aid station. Assisting the aid station squad of their respective medical sections in the moving and reestablishing of the aid station.

Aid Stations:- The regimental aid station has the same function as the battalion aid station, but it is not generally a second echelon in the evacuation of wounded. When it is not necessary to establish the regimental aid stations, as is often the case, the personnel of the headquarters section of the regimental medical detachment may be held in reserve.

a. Functions.

- (1) Reception and recording of casualties.
- (2) Examination, dressing or redressing of wounded.
- (3) Temporary shelter when practicable.
- (4) Administration of antitetanic serum, narcotics, hot drinks, or food.
- (5) The delivery of casualties to collecting station personnel.

b. Principles for establishment and operation of aid stations.

- (1) Aid stations are established in combat when there is no steady progress or when progress is very slow.
- (2) Only such parts of the aid station is established as immediate circumstances require or the need can be foreseen.
- (3) Aid stations at all times kept in contact with the combat units they serve.
- (4) The aid station is not a proper place for the initiation of elaborate treatment of surgical cases, and the treatment given should be such as will not greatly retard the flow of casualties through the aid station.
- (5) Medical property evacuated with patients must be replaced by exchange with next medical echelon to the rear.

c. The selection of sights:- The ideal site for an aid station is at the rear center of the unit served, between 300 and 800 yards from the front line.

d. Combat transportation:- The medical wagon is held as near the aid station as suitable shelter from enemy fire will permit.

e. Ground plan of an aid station.

- c. Medical wagons carrying the field medical sets of medical sections while so marching are a constituent part of the battalion combat train; in like manner the medical wagon of the headquarters medical detachment part of the combat train of the headquarters company. When operations are imminent or march conditions cease these wagons are released to the battalion or regimental surgeon by Bn-4 or R-4, as the case may be. The detachment baggage and forage wagon marches with and is a part of the regimental field train.
- d. Ambulances accompanying marching troops for the collection and evacuation of march casualties will ordinarily/detailed from ambulance companies. Ambulances and personnel so detailed are under the immediate control of the regimental surgeon for the duration of the march. When march conditions cease, ambulances revert to their normal command status and return to their organizations. If but one ambulance is with the regiment, it follows the headquarters medical detachment at the rear of the column. If additional ambulances accompany the column, they may be marched with the section medical wagons.
- e. March Casualties:-- Sick or disabled soldiers are ordinarily reported to the commanding officer of the unit by their squad leader. The commanding officer usually directs the soldier to see the medical officer at the next halt or issues a pass for the soldier to drop out of the column and await the arrival of a medical officer. The medical officer who examines the soldier returns this pass to the soldier's company commander, showing thereon the disposition which he has made of the case. The medical officer disposes of the case in accordance with the condition found upon hurried examination. He may relieve the soldier of his pack and require him to continue the march; he may put him in an ambulance for disposition at the end of the march, or on any other piece of transportation if there is no ambulance attached to the organization; or he may require him to march at the end of the column, where he can be kept under observation. In case the march order provides for march collection posts, casualties are continued with the column until the next station is reached. If an evacuation point only is designated, casualties unable to continue with the column are left by the roadside or delivered to ambulances in the rear for evacuation. All casualties separated from their organization are plainly tagged by a medical officer. All arms and personal equipment of sick or disabled foot soldiers remain with them; the mount, saddle equipment, and arms of mounted soldiers are returned to their organizations.

3. In Combat.

General.

The tactics employed by the combatant units constitute the determining factor in the tactics to be employed by attached medical troops.

All tactics as employed by medical detachments in the field have as their object the rendering of support and assistance to the combatant troops.

Support and assistance is rendered by:-

- (1) The finding, tagging, sorting and separation of the disabled from the able.
- (2) The establishment of aid stations, the collection and treatment of casualties.
- (3) The prevention of any unnecessary movement to the rear on account of sickness and injury.
- (4) Aiding in the preservation of morale by early medical attention and removal of the wounded.
- (5) Examination of the dead and sanitary supervision of their disposal.
- (6) Preparation of records of dead and wounded.

b. Equipment.

Animals and transportation.

- 1 Medical wagon to transport Batt. Aid.
- 1 Motorcycle with side car.
- 5 mounts

Technical.

- 1 battalion aid station consisting of
 - 2 small paulins
 - 12 Litters
 - 1 Chest (Med. & Surg.)
 - 1 Prophylactic chest.
 - 6 Boxes of dressings, Blankets, Splints & Lister Bag, etc.
- The individual equipment of officers & men.

c. General duties.

- 1. Organized to function as a tactical medical unit serving its battalion.
- 2. Establishes and maintains, when necessary battalion aid station and dispensary.
- 3. Provides medical care and treatment of the troops in its battalion.

Employment of the entire Medical Detachment

1. In Garrison and camp.

Principal functions are:-

- a. Training (Medico-military
(Tactical
Technical
- b. Sanitation (Inspectorial
(Advisory
- c. Operation of dispensaries.

2. On the march.

The medical service of the regiment concerns itself with the care and evacuation of march casualties. To this end the detachment is disposed in the column as follows:-

- a. The regimental surgeon, accompanied by his mounted orderly, usually marches with that part of the staff which accompanies the regimental commander. The assistant regimental surgeon marches with the headquarters medical detachment, the position of the latter in column to be determined by the orders issued for the march. Dental officers march with the headquarters medical detachment when not assigned to medical sections. The veterinary personnel of the headquarters medical detachment marches with the regimental field train.
- b. Battalion surgeons, accompanied by their mounted orderlies, march with the battalion commander. Assistant battalion surgeons march at the head of their respective medical sections. When there is but one medical officer with the battalion he marches at the rear of the battalion column going forward when necessary for the purpose of making contact with and gaining information for the commanding officer. Company aid men march with the battalion section, except that when contact with the enemy is expected they march with their assigned companies. The remaining personnel of the section marches at the rear of the battalion.

Harnessing and care of Animals.

The efficiency of an organization can be fairly judged by its neatness and Military appearance. This is especially applicable to its transportation, since, no matter how good an appearance the men are, the effect will be spoiled if the ambulances and wagons are not kept in a clean and orderly manner. There are many details which must be looked after very carefully in order to attain the greatest efficiency, such as, care of animals, proper fitting and care of harness, training and selection of teamsters, and general cleanliness and upkeep of the vehicles.

The teamster is responsible for the proper condition, care and operation of his team and ambulance, and must be instructed in the proper manner to keep them in the best possible condition.

Feed animals so that they may get the best value from their ration. Feed clean food, properly prepared, frequently, and in small quantities.
Feed animals so that it will not injure them. Never when they are heated.

Water animals rationally. (They should have all they want to drink.)
 Never water animals when they are heated unless the exercise is to continue immediately after feeding, wait an hour. Before feeding is the best time.

Work animals rationally. Never to exhaustion. If hard work is to be expected have them in condition to perform it. Keep animals well by proper care. Give them clean places to live in and protect them from exposure, by the use of proper shelter. Keep them from standing in mud. Few things will break them down more quickly. Groom animals thoroughly and keep them well trimmed. Watch their feet and see that they are properly cared for.

Harness and its proper adjustments is a most important matter in relation to draft animals. Harness improperly adjusted invariably results in injuries thus producing inefficiency of service. The object sought is to have that part of the harness (collar) of such a type and fit as to permit the least possible oscillating or sliding movement. If oscillation is not overcome, serious injury will result. For the Military service there are two general classes of harness to be considered namely, The Hame and the Breast Collar.

Hame Collar: A horse with a upright shoulder is comparatively easy to fit with the hame collar, whereas an-oblique shoulder is more difficult since in the latter case there is a tendency for the collar to rise when bearing weight. Necks and shoulders vary greatly in size and shape. They also vary in the same animal, according to his condition. Making the fitting of the hame collar more difficult. The object of fitting collars is to reduce friction to the minimum. Points to be observed in fitting hame collars are as follows:

- (a) The collar is first placed upon the animal without attachments for observation.
- (b) The collar must lie easily on the shoulder from top to bottom.
- (c) It must bear evenly over the shoulder blades.
- (d) The space between the insides of the body of the collar and neck should admit the fingers and nothing more.
- (e) There should be only sufficient space at the bottom of the collar to admit the hand and wrist.

New collars never fit as well as old ones. If necessary to use a new collar for immediate hard work, the best method is to wet the collar thoroughly by soaking in water for an hour or so, and putting it on the animal at work, until thoroughly dry. This will mould the collar to the shape of the shoulders. When collars are removed they should be thoroughly cleaned of sweat and dirt.

The size of collars supplied the service vary from 18 to 24 inches in length, each size differing by one inch. The larger the body of the collar, the greater the surface receiving the distribution of the weight, and for this reason collars with large body surfaces are the most desirable.

Breechings: The fit of this is next of importance to that of the collar. Adjustments are accomplished by changes of the side, quarter, and choke straps.

Bridle and Bridle Reins: The bridle should fit the head moderately close, but not tight enough to cause any tension upon the poll nor upon the corners of the mouth by the bit. The bridle or check reins should always be loose and fastened over the hame or to a hook in the back band. The throat latch should be buckled loose enough to pass the flat hand between it and the throat.

Curb Chains: If used, should be carefully adjusted.

Lines: Outside line attached to outside ring of the bit, the inside rein fastened to the outer rein and passed over and fastened to the inside bit ring of the opposite animal.

Trace Loops: Adjusted so that no pull is transmitted to the back band when the animal is pulling.

Belly Band: Band should be fastened loosely.

Bits: The snaffle bit has a pinching action on the bars of the mouth due to the joint in the middle of the mouth piece. This bit should be selected to fit the mouth, without pinching or having much play outside the mouth, and it should be adjusted as high up as possible without drawing up the corners of the mouth.

Care of Leather: When leather is in proper condition it is clean, soft and pliable, and will stand severe strain. The proper method of cleaning and oiling new leather is as follows: Required, bucket of warm water, a sponge and a can of saddle soap. Unbuckle all parts of the harness and hang them on racks or wagon pole. Wet the sponge and squeeze it nearly dry and work up lather of saddle soap and apply on the leather, working it on both sides of the leather in order to clean it well. Change water when dirty and make fresh lather when necessary.

Work lather into leather until it has disappeared. Put a little oil (Neatsfoot) on a rag and apply it to the flesh side of the leather rubbing it quickly over the whole surface, so that it will be evenly distributed,

and that too much will not be absorbed in one spot. The leather is worked with the hands until no oil remains on the surface. If oil is applied to the hair side of the leather it is sure to leave spots and a nice even colored leather cannot be had.

(k)

Miscellaneous.

1. An Ambulance Company on the march will occupy approximately 341 yards.
2. Total weight carried by an ambulance Company (motor) is about 8 tons; by the animal drawn Ambulance Company, about 3 tons.
3. Capacity of ambulance:- Four patients lying; two patients lying and four sitting; or eight sitting.
4. A message center is established at the Ambulance Station to receive and forward all messages.

2. For the purpose of insuring precision in function each hospital company is divided into:-

a. A Company Headquarters in charge of:-

1. General administration of the company.
2. Company records.
3. Hospital records.
4. Organization property and patients' effects.
5. Repair of organization equipment.
6. Company mess.
7. Hospital mess.
8. Company communications.
9. Sanitation and police including burial of the dead.

b. A technical platoon.

Treatment section in charge of:-

1. Surgery
2. Medicine
3. Dentistry

Nursing section in charge of:-

1. Nursing in all wards.

c. Transportation platoon.

Transportation section in charge of:-

1. All vehicles of the company.

Litter section in charge of:-

1. Litterage of patients.

3. The personnel of the company consists of:-

a. Commissioned.

- 1 captain, Medical Corps, commanding.
- 4 captains or lieut's, M. C.
- 2 captains or lieut's, D. C.
- 1 captain or lieut, M. C. or M.A.C.
- 8 officers

b. Enlisted.

- 1 technical sergeant, M. D.
- 4 staff sergeants, M. D.
- 8 sergeants, M. D.
- 4 corporals, M. D.
- 75 Privates first class or privates., M. D.
- 92 enlisted

4. The equipment of the company consists of:-

a. Personnel:

That which is issued to each individual in the company.

b. Organizational:

1. Basic; 20 large tents, kitchen equipment and other utilitarian items.
2. Technical; (All boxed in convenient labeled containers).
 - a. Drugs, Chemicals and reagents.
 - b. Surgical dressings.
 - c. Surgical instruments and appliances.
 - d. Hospital furniture and equipment.
 - e. Field equipment and supplies.
 - f. Laboratory apparatus and supplies.
 - g. Dental operating set.
 - h. Food supplies for patients.
 - i. Miscellaneous supplies and equipment.
3. Transportation: (All motorized).
 - a. Truck, cargo, $1\frac{1}{2}$ tons17
 - b. Trucks, cargo, $3/4$ ton 2
 - c. Touring car 5 passenger 1

TRAINING GUIDE FOR HOSPITAL COMPANY

Before considering the Hospital Company itself a few remarks on the Hospital Battalion would be appropriate.

THE HOSPITAL BATTALION

1. The Hospital Battalion of a Medical Regiment consists of a Hospital Battalion Headquarters and three hospital companies and provides a special mobile form of hospitalization required, typically in an infantry division in mobile warfare, pending the prompt evacuation of patients to a hospital in the rear where they can receive definitive treatment.
2. All the companies of the battalion are motorized to insure mobility. (a most valuable characteristic). A fundamental requirement is that the battalion must not lose contact with the division which it is serving.
3. The maximum shelter capacity of the three companies of the battalion, using litters and not cots, is about 1500. This figure is based on the use of 14 of the 20 company ward tents in each company as wards. If cots are used, the maximum shelter capacity is 1200.
4. The personnel, equipment and duties of the Hospital Battalion Headquarters may be summarized:-
 - a. Personnel
 - 1 - Major, M. C., commanding battalion.
 - 1 - Captain or Lieut. M. C., adjutant.
 - 1 - Technical Sgt. M. D., Sergeant Major.
 - 1 - Private First Class, M. D., Clerk
 - 1 - Private, M. D., Chauffeur(Note. All enlisted men detailed from the Service Company).
 - b. Equipment

Only such equipment as is necessary to maintain a small mobile headquarters is allowed viz.,

 - 2 small wall tents for officers.
 - 1 pyramidal tent for office.
 - 6 folding tables.
 - 6 folding chairs.
 - 2 lanterns.
 - 1 typewriter.
 - 1 regimental field desk complete, with necessary stationery and blanks.
 - 1 five passenger motor car.(Note. All this equipment is transported by one of the vehicles of one of the Hospital companies of the battalion).
 - c. Duties.

The Battalion Headquarters is a tactical rather than an administrative unit. In general its functions in the person of the battalion commander, is to direct and supervise the activities of the three hospital companies of the battalion, and to coordinate their efforts.

THE HOSPITAL COMPANY

1. The hospital company of which there are three in the battalion of a medical regiment has a personnel and equipment on the principal of providing only the minimum in men and other facilities for temporary hospitalization.

- d. Motorcycle with side car 1
- e. Trailer, kitchen (not motorized)..... 1
- f. Trailer, tank 180 gallons..... 1
- g. Bicycle, (not motorized)..... 1

5. Duties.

a. General. While the personnel of the hospital company must be trained to take care of all casualties as they arrive, a hospital company may be called upon to handle only one class of patients at one time. Thus during battle, the hospital station of one company receives only gassed cases. A new situation of few days later may necessitate this company's taking over all surgical cases. On other occasion, it may receive all sick of the division. In large stations, with two or more companies functioning, a part of one company may be designated to receive and sort for the entire station, while the remainder of the company receives one class of patients, as sent to it by the receiving department. To recapitulate, any hospital company may function in any of the following capacities:

General

Surgical

Gas

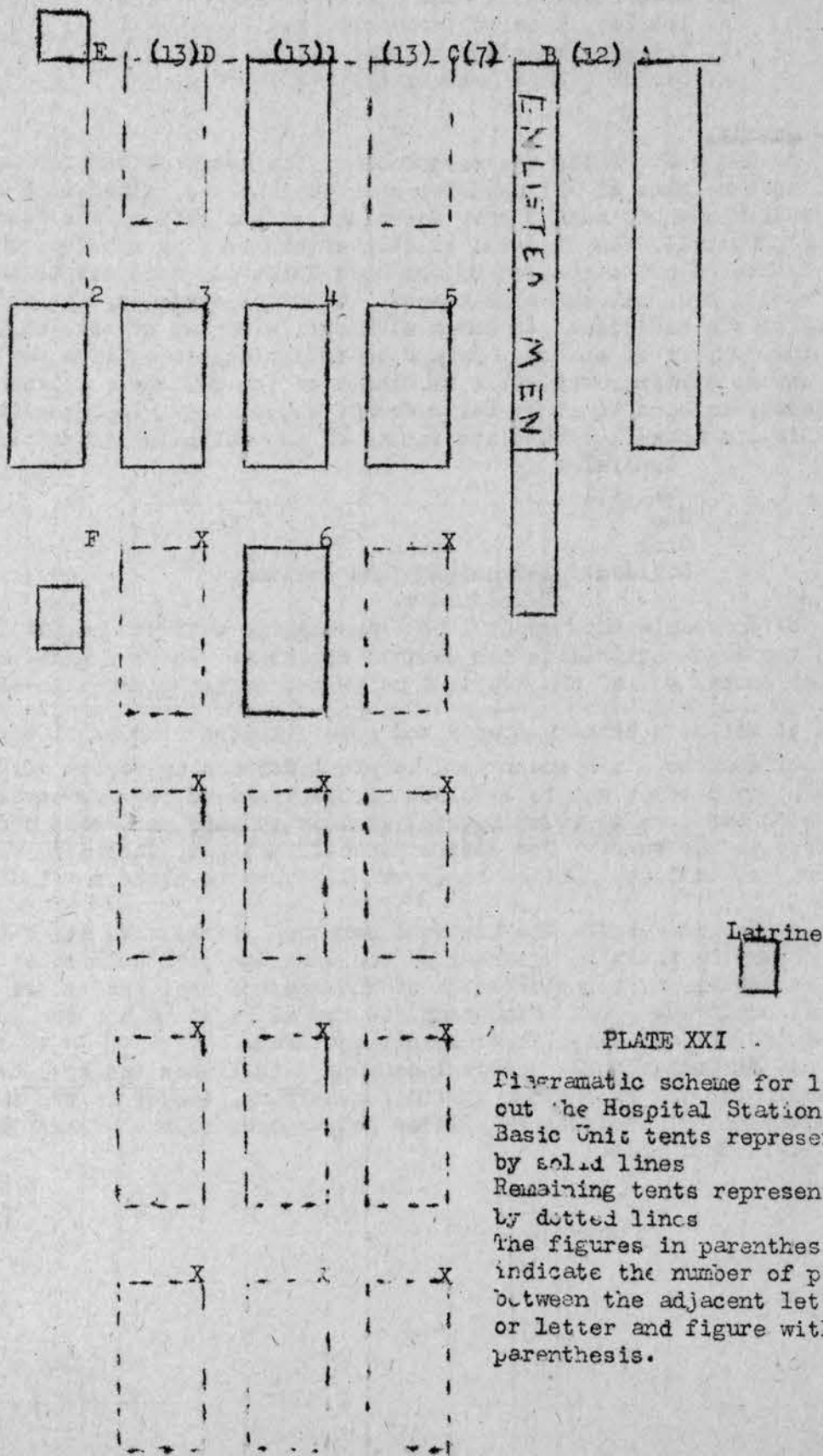
Sick

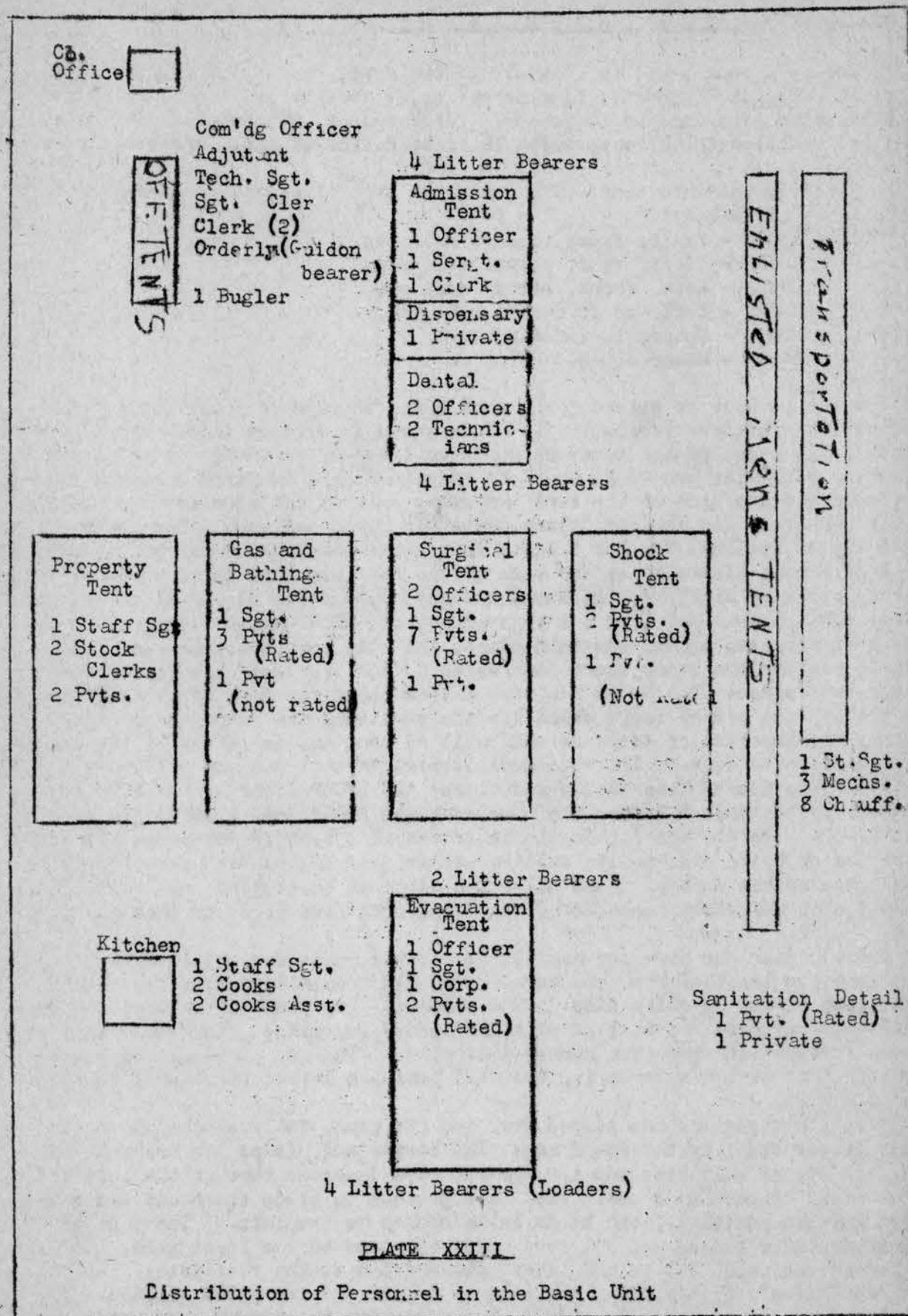
Divided: 1-Receiving and sorting
2-Treatment.

b. In camp:- The hospital company encamps with its hospital battalion in the area assigned to the medical regiment. In permanent and semi-permanent camps, one of the hospital companies is established in hospital station to act as a sorting agency and give reception and treatment to the divisional sick as a dispensary and hospital for the trivially ill. Normally, any patient who is liable to be hospitalized for any condition longer than ten days is evacuated immediately to more permanent sanitary formations in the rear. The entire medical regiment, including the hospital open for business must be ready at all times to proceed with its division.

c. On the march:- The hospital company marches with its battalion with the service train in the rear of the division with such other parts of the personnel and transportation of the medical regiment as are not otherwise employed. On making camp for one night stand the company is allocated to its particular medical regiment area.

d. In Combat:- The hospital company establishes and operates a hospital station for the reception, sorting, recording, temporary treatment and shelter of all division casualties preparatory to the evacuation out of the divisional area.





THE WARD TENT

The ward tent complete consists of one tent, weight 351 pounds; four uprights, weight 88 pounds; four corner poles, weight 36 pounds; 72 large and 56 small pins, weight 80 pounds. Total weight, 555 pounds. Its dimensions are: length 50 feet; width 16 feet; height of wall, 4 feet 6 inches.

Pitching the ward tent:- The following abbreviations are used here for the purpose of brevity:

RFCWP - Right, front, corner wall pin,
RRCWP - Right, rear, corner wall pin,
LFCWP - Left, front, corner wall pin,
LRCWP - Left, rear, corner wall pin,
NCO - Noncommissioned officer,
S - Minor Squad.

For the purpose of pitching the ward tent, a squad of 8 men under a non-commissioned officer is required. This squad is divided into 4 equal minor parts. The sides of the tent are numbered 1-2-3-4, beginning at the front and going clockwise around to the left side. Each S is given a number corresponding to one side of the tent and works only on the side corresponding to its number. The command "Pitch Tents" is given and each minor squad proceeds as follows: No. 1 of S 1 gets four short pins. No. 2 of each S gets a maul or ax and places it at the side of the tent where he is to work. The tent unrolled by S 2, 3, 4, the hoods and guy ropes being placed at the right of the tent space. No. 1 of S 1 then places the RFCWP which is driven in by No. 2 of the same squad, who then places the wall loop over the pin. He next crosses the other short pins which he has procured, one to each corner of the tent space. The No. 2 man of S 1 ties the front door by placing a pin through the proper loops which for the ward tent are found as follows: One at the junction of door and side wall of tent and the other at the edge of the opposite door. The rear door is tied in the same manner by No. 2 of S 3. The fourth minor squad now places the LFCWP after it has been aligned, by the NCO; S 2 does the same with the RRCWP and, lastly, S 3 places the LRCWP. Before the latter pin is driven, the tent is stretched from the front and opposite side to its fullest extent, and the pin is moved four inches toward the center. Each No. 1 man now gets short pins and drops them, one at each wall loop, each No. 2 man drops long pins opposite each guy rope.

The corner guy pins are now placed. Their positions are 11 feet ($5\frac{1}{2}$ long pin lengths) from the corner wall pin and in line with the eighth wall loop of the opposite side. The remaining guy pins are driven, one opposite each guy rope and in line with the corner guy pins. The wall pins are driven in line with the four corner wall pins. The guy pins all slip toward the tent at the same angle, the wall pins are driven straight into the ground.

The guy ropes are now placed over the guy pins, fully slackened and in their proper order by the No. 2 men. The corner wall loops are all removed from the corner wall pins and the uprights are inserted through the left side of the tent by the No. 1 men. They also proceed to place the hoods and the storm guys in position, the hoods being opened to the left. The tent is now ready to be raised and S 1 goes under the tent to the front pole, S 2 to the second pole, S 3 to the third pole and S 4 to the rear pole. At the command "Raise" by the NCO, the tent is raised and the poles aligned. No. 1 men remain at the pole and No. 2 men tighten the corner guys under the direction of the NCO. The corner uprights are placed and then the command "All Tighten" is given and, each S working on its proper side of the tent, all guys are drawn down.

Striking:- At the command "Strike Tents" each S goes to its proper side of the tent. The No. 1 men remove all of the wall loops except from the RFCWP and the RRCWP; they next remove the corner uprights. The No. 2 men slacken all the guy ropes and untie the storm guys and the hood guys. The guy pins are not removed. When this is accomplished, the No. 1 men go into the tent, each to his proper upright, and move the butt to the left about 8 inches. The command "Down" is given and each No. 1 man runs through the left side of the tent carrying the pole with him, placing it in a pile with the others at the front of the tent. The No. 2 men remove the hoods and storm guys, carrying them to the front of the tent where they are rolled up and placed in a pile. The No. 1 men then remove all the wall pins except the RFCWP and the RRCWP and the No. 3 men remove all of the guys and pull the pins. As soon as all the pins, with the exceptions noted, are removed, the minor squads grasp the rings at the top of the tent and draw the tent to the right as far as the remaining wall pins will permit. The No. 1 men of S 1 and 3 then straighten out the front and rear ends of the tent and remove the remaining wall loops. The tent is now ready to fold.

Folding:- The tent being ready to fold, the No. 1 man of S 1 grasps the front door, the No. 1 man of S 3 grasps the rear door and they walk toward each other on the tent, dragging in the ends until the rectangle is formed, with the ends of the triangle at the two end rings at the top of the tent. All No. 1 men then grasp the bottom of the skirt and draw it into the tent until the top of the wall is just uncovered. All guys are then thrown onto the tent except four at the front of the tent, and the hoods and storm guys are scattered over the canvas. Next, the top edge is folded in for a distance of 18 inches and then once more until the edge just touches the upturned skirt. Then one more fold is made bringing the two outside edges together. The air within the folds is forced out by walking on the canvas. The tent is rolled from the rear end into a firm drum shaped roll. The loose guys are crossed and the drum is secured by tying. The pins, mauls, and axes are gathered into piles and the tent is ready to load.

DENTAL COMPANY (DENTAL SERVICE)

1. Personnel

- 2 officers
- 2 privates, enlisted assistants
- (In case of stress the Company Commander may assign additional assistants) .

2. Equipment

(a)

Set, Operating
Chair
Engine
Chest, Instrument
Box, supply

(b)

Set, Laboratory
Chest, supply
Outfit, acetylene
Box, supply

3. Duties

(a) In camp:-

In camp the space would be assigned to the Dental Surgeon in a convenient tent pertaining to the hospital company functioning as a camp dispensary and temporary hospital. The Dental Surgeon will attend only minor cases of his own division. Dental patients requiring extensive or prolonged treatment are evacuated to the rear. This procedure is necessary to assure the mobility of the unit.

(b) On March:-

The Dental officer and his enlisted assistants on the march would each carry a small field case for the treatment of acute trivial dental disabilities (i.e. relief of pain, etc). He may be assigned any other medical or administrative duty in the hospital company by the commanding officer. (i.e. in charge of transportation, etc).

(c) In Combat:-

In actual combat when patients are received at hospital station, the dental officers not only take care of their specific dental work but may perform any duty that may arise either administrative or professional according to necessity. (i.e. in charge of sorting station, assistant to Surgeons, actual operating surgeons, anesthetists, etc.)

THE SERVICE COMPANY.

1. The Service Company is an integral part of the Medical Regiment, and is an important cog in the successful operation of the regiment under all circumstances. As the name indicates, this company exists for the purpose of furnishing service of one character or another for the maintenance of the entire regiment, and further in some instance it provides certain limited service in the form of medical supplies and laboratory service to the entire division. The full company contains 4 officers, 1 Warrant officer, and 80 enlisted men of the medical department in all grades, with pertinent equipment, subdivided into a company headquarters, a regimental headquarters section, a battalion headquarters section, a band section, a general supply section, a medical supply section, and a medical laboratory section, as follows:

A. Company Headquarters.

- 1 Capt. or Lt. Med. Corps, Commanding Company.
- 1 Technical Sgt., first sergeant.
- 1 Sgt., mess and supply.
- 1 Pvt 1/c or Pvt, company clerk.
- 2 Pvts., (rated) cooks.
- 1 Pvt 1/c or Pvt, bugler, mail orderly, orderly.
- 1 Pvt 1/c, motorcycle driver and messenger.
- 1 Pvt 1/c or Pvt, chauffeur.
- 1 Pvt miscellaneous.

Equipment:

- 1 bicycle.
- 1 motorcycle.
- 1 trailer, kitchen.
- 1 trailer, water tank.
- 1 truck, 1½ - 2 ton.

B. Regimental Headquarters Section.

- 1 Master Sgt., Regimental Sgt. Major.
- 1 Staff Sgt., assistant to Master Sgt.
- 1 Sgt., assistant to Sgt. Major.
- 3 Pvts 1/c, clerks.
- 1 Pvt, mail orderly
- 1 Pvt, in message center.

Equipment.

- 10 horses, riding.
- 1 bicycle.
- 1 motorcycle.
- 1 motor car, 5 passenger.

C. Battalion Headquarters Section.

- 3 Technical Sgts, Sgts Major.
- 3 Sgts, assistants to Sgts Major.
- 3 Pvts 1/c, clerks.
- 3 Pvts, chauffeurs.

(Note: One each of the above group is assigned to each battalion headquarters of the regiment).

D. Band Section.

- 1 Warrant Officer, band leader.
- 26 enlisted men in all grades, musicians.

(Note: The band in addition to furnishing music for the regiment, may assist when occasion demands, in the other sections of the company, and in first aid and in litter bearer duties).

E. General Supply Section.

- 1 Captain or Lt. Med. Corps, Commanding.
- 1 Staff Sgt., regimental supply sergeant.

THE SERVICE COMPANY, Cont'd.

E. General Supply Section, cont'd.

- 1 Sgt. assistant to Staff Sgt.
- 2 Pmts 1/c, clerks.
- 4 Pmts, motorcyclist, chauffeurs, and miscellaneous.

Equipment.

- 1 motorcycle
- 2 trucks, $1\frac{1}{2}$ - 2 ton.

(Note: This section is responsible with procuring, storing, and issuing all supplies and materiel for the regiment, other than medical supplies).

F. Medical Supply Section.

- 1 Capt. or Lt. Med. Corps, Commanding.
- 1 Staff Sgt., chief clerk.
- 1 Sgt. assistant to Staff Sgt.
- 2 Pmts 1/c, clerks.
- 4 Pmts, motorcyclist, chauffeurs, miscellaneous.

Equipment.

- 1 motorcycle
- 2 trucks, $\frac{3}{4}$ to 2 ton.

(Note: This section is charged with the procurement, storage, and issue to all units of the division of the necessary medical, dental and veterinary supplies, i.e., the medical supplies).

G. The Medical Laboratory Section.

- 1 Capt. or Lt. Med. Corps, in charge.
- 8 enlisted men in all grades.

(Note: This section serves as a field laboratory to the entire division with special reference to water analyses, prevention and control of epidemic and communicable diseases; and performs certain technical and clinical laboratory tests for the hospital companies).

Equipment:

- 1 motorcycle
- 1 truck, 2 ton.

H. The Service Station.

When certain of the sections of the Service Company are grouped together and operating in one confined area, this group is known as the Service Station. The normal composition of such a Station is the following:

- Company Headquarters
- General Supply Section
- Medical Supply Section
- Medical Laboratory Section
- Band Section.

(Note: The Service Station might regularly be established in the vicinity of Medical Regimental Headquarters and the hospital station, as far as circumstances will permit, and should be under close supervision of the regimental commander. Appropriate markings by printed signs of each section is necessary).

The Veterinary Company.

The Veterinary Company is a component of the Medical Regiment. It replaces what was formerly known as the Veterinary mobile section. It performs the same service for animals of an Infantry Division that the remainder of the Medical Regiment does for men.

To carry out this function during combat it establishes a Veterinary Collecting Station, centrally located where the greatest number of animal casualties may be expected. Such a location is usually a mile or two in advance of the Hospital Station, covering the Regimental Veterinary Aid Stations and the animal trains.

Organization.

The Veterinary Company is composed of three officers and seventy enlisted men, organized into a company headquarters and two platoons of two sections each.

The first platoon is divided into two sections and its function is the collection of animal casualties at the veterinary aid stations and their evacuation by lead lines or ambulance to the veterinary collecting station.

The second platoon has two distinct functions, performed by the first and second sections respectively.

The first section establishes the veterinary collecting station.

The second section has charge of all transportation both animal and motor.

Functions of a Veterinary Company.

Establish Veterinary Collecting Station.

Evacuation of animal casualties from the veterinary aid stations of an infantry division to the veterinary collecting station.

Care and treatment of animal patients at the collecting station and their preparation for further evacuation to the rear.

The veterinary collecting station is normally evacuated by collecting platoons from veterinary evacuation hospitals in the rear.

THE ESCORT WAGON.

The escort wagon is used for transporting supplies for the Army both in garrison and in the field. When in the field it is known as the combat wagon.

CARE OF THE WAGON.

When in the field a daily examination of the wagon is necessary.

a. Upon return from the field the wagon should be overhauled and repaired.

b. When on field duty the wagon should be examined at the end of each days march to see that spokes of wheels and nuts on axles and bolts are tight and make proper repairs.

c. Tail gates and chains are not allowed to hang down or drag. The tail gate must be kept closed.

d. Wagons are greased twice a week. If in constant use they are greased daily. The old grease, dirt, and sand should be removed before greasing. The axles is raised for greasing with a jack.

e. Wagons should be kept under cover whenever practicable. Mud should be washed off at the end of each days work.

f. Wagons should be painted at least once a year. Olive-drab color is used. The iron parts are painted black. The canvas cover should be water proofed with a paint prepared for that purpose.

g. All wagons including canvas covers are marked with letters "U.S." with white paint, height of letters 4 inches. The wagon is marked in the center of the panel under the drivers seat and the canvas cover in the middle on both sides. The wagon and canvas cover are also marked on both sides and rear with the unit they belong to.

LOADING THE WAGON.

Wagons should not be overloaded, as doing so will result in injury to them and to the harness and animals. The standard load for the escort wagon is 3000 pounds including weight of driver.

In loading, heavy articles should be placed in the bottom of the wagon bed and in front, with lighter articles in rear and on top.

Articles should not have spaces between them in order to prevent shifting. No weight should be placed on the tail gate. The bows should be placed well down into the staples and not be raised to provide greater loading space. After loading the cover is placed on the bows and tied down to the rings on the side of the bed. The ends are drawn together by a rope, the ends of which are crossed and tied to rings on opposite side of the wagon. When wagons are loaded the load should be lashed with a lash rope before the cover is put on. This makes the load secure.

RATES OF TRAVEL.

The rate depends upon the size of the load, condition of roads, and the weather. Heavy loaded wagons maintain the rate of march prescribed for infantry or $2\frac{1}{2}$ to 3 miles per hour and 12 to 15 miles per day.

ROAD RULES.

Common rules of the road are observed at all times. Halts are made at the side of the road leaving a clear passage. On a hill teams coming up have the right of way over those going down.

The Veterinary Service as a part of the Medical Department, U. S. Army, is charged in peace and war with duties under two heads.

- a. Care and treatment of the animals of the army.
- b. Inspection of meat and dairy supplies used by the army.

CLASSIFICATION OF ARMY ANIMALS.

Horses riding (1000-1250 lbs)	Mules light draft (1050-1200) lbs)
Horses light draft (1200-1450 lbs)	Mules heavy draft (1200-1500 lbs)
Horses heavy draft (1450-1700 lbs)	Mules Pack (1000-1200 lbs)

The minimum height is 15 hands except pack mules which may be $14\frac{3}{4}$ hands.

The height is measured at the highest point in the withers.

A hand is four inches.

As a rule only geldings (castrated males) are purchased. All colors are purchased except grey and white.

STABLES.

The purpose of stables is to protect the animal from the elements and not to keep him warm.

Essentials of a good stable.

Good site,	Proper stable arrangement.
Good drainage.	Proper surroundings.
Good ventilation.	Good construction.
Good light.	Good floors.
Good water supply.	Good fittings.
Good roads.	

PICKET LINES.

Picket lines are used to tie animals to when outside the stable or when in the field with no stables available.

A two inch rope or wire cable is drawn tight over posts $5\frac{1}{2}$ feet above the ground. The ground under the picket line must be built up so it will drain. A mixture of rocks, cinders and clay makes a very good picket line standing. The picket line site should be on high ground.

CARE OF HORSES FEET.

Horses should be shod once each month.

The feet should be cleaned out daily at time of grooming.

GROOMING ANIMALS.

Each animal should be groomed daily for fifteen minutes.

Purpose of grooming.

- | | |
|---------------------------------|--|
| a. Removes dirt and body waste. | D. Improves health and condition of animals. |
| b. Stimulates skin secretions. | |
| c. Prevents skin diseases. | e. Improves appearance of animals. |

FEEDING ANIMALS

Horses and mules in the army are fed three times daily, morning, noon and night. Hay oats and bran furnish the bulk of the ration. Most of the hay is fed at night in order that the horse may have all night to eat it. Animals are watered three times daily before feeding grain. Oats are fed three times daily. For proper rest the horse require a good bed. Wheat straw is best for this purpose. Salt in the solid form is kept before the animals at all times.

DEMONSTRATION- ONE NIGHT CAMP.

Subject: Field Sanitation for Line Students.

Place: Instruction Camp.

Texts: A.R.40-205, -et seq. Army Medical Bulletin No.15.

Procedure: (1) Definitions and discussions.

(2) Demonstration of Camp.

(a) Shelter tents.

- 1 Straight company streets.
- 2 Ditching done uniformly as far as possible.

(b) Rolling kitchen.

(c) Lyster Bag-chlorinization of water.

1. Holds 35 gallons.
2. 1 gram bleaching powder in sealed tube.
3. First mixed in cup with little water, then poured into bag, agitated and allowed to stand 30 minutes before use.
4. Test with ortholodine (2d tube).
5. Treat with contents of 3d tube to remove excess of chlorine and make water palatable.

(d) Flagging a stream.

(See sketch and chart on reverse side of this sheet).

(e) Straddle trench.

1. Each deposit to be covered.
 - a Protection from flies.
 - b Insures prompt digestion by denitrifying bacteria.

(f) Old latrine.

(g) Straub incinerator- its use.

(h) Breaking camp.

(3) Venereal diseases.

War Department policy as presented by Company Commander, Chaplain and Surgeon.

Administrative features.

Prophylaxis- administration-advantages and short comings.

HYGIENE AND SANITATION.



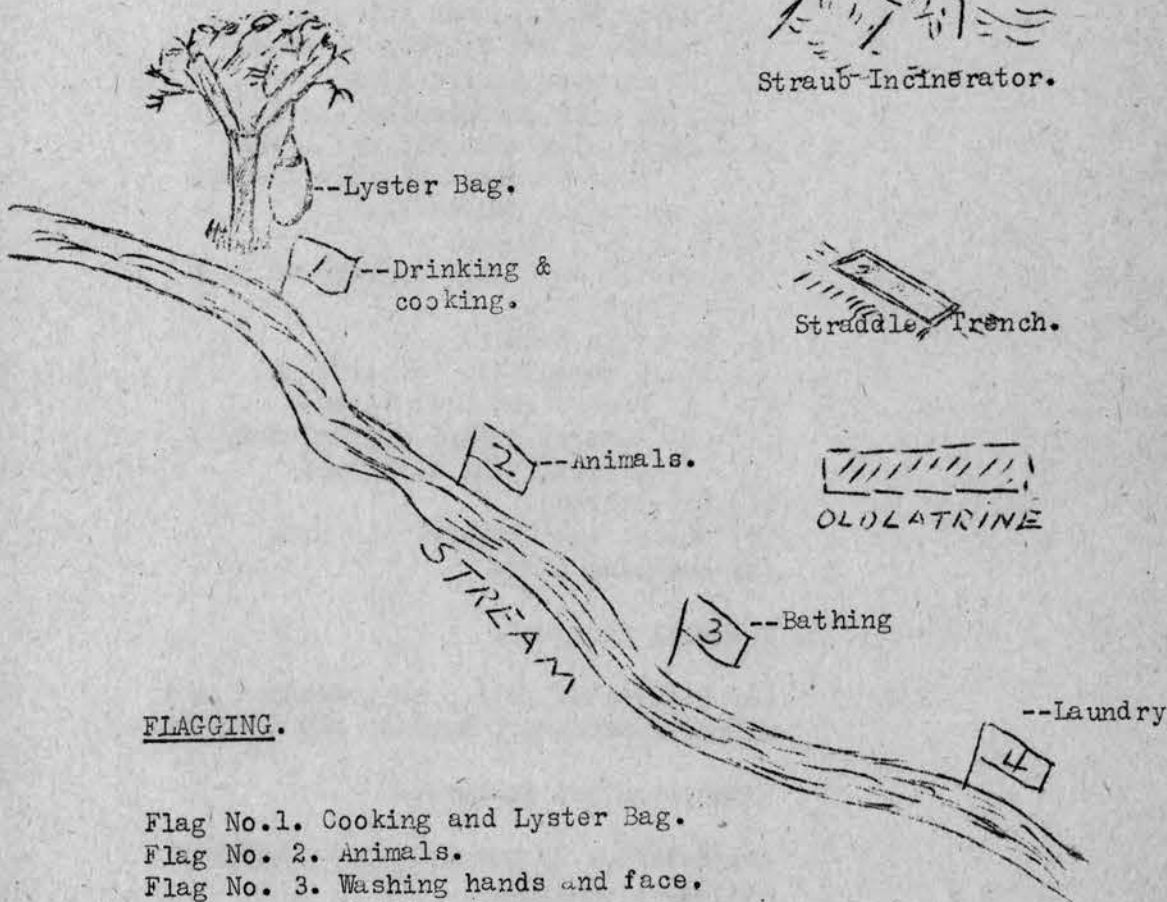
Rolling Kitchen



Line of shelter tents.



Straub Incinerator.



FLAGGING.

- Flag No. 1. Cooking and Lyster Bag.
- Flag No. 2. Animals.
- Flag No. 3. Washing hands and face.
Bathing for men.
- Flag No. 4. Laundry for clothing.

(Guard placed to enforce orders)

HYGIENE AND SANITATION.

DEMONSTRATION- SEMI-PERMANENT CAMP.

Subject: Field Sanitation for Line Students.

Place: Instruction Camp.

Texts: A.R. 40-200, et. seq. Army Medical Bulletin No. 15.

Procedure: Definitions reviewed.

Discussion - Demonstration.

1. Pyramidal Tents.

(a) Floored- walled and screened- stoves.

(b) One floored.

(c) One- no accessories.

(d) Guthrie incinerators.

(e) Rock Pile Incinerator-
Must be but one layer of rock or
evaporation will not occur.

(f) Deep pit latrines-
Spray daily with a mixture of:-
1. 1 pound of lamp black.
2. 5 gallons of crude oil.

(g) Iceless refrigerator.

(h) Spoiled canned food.

(i) Field Kitchen Range.

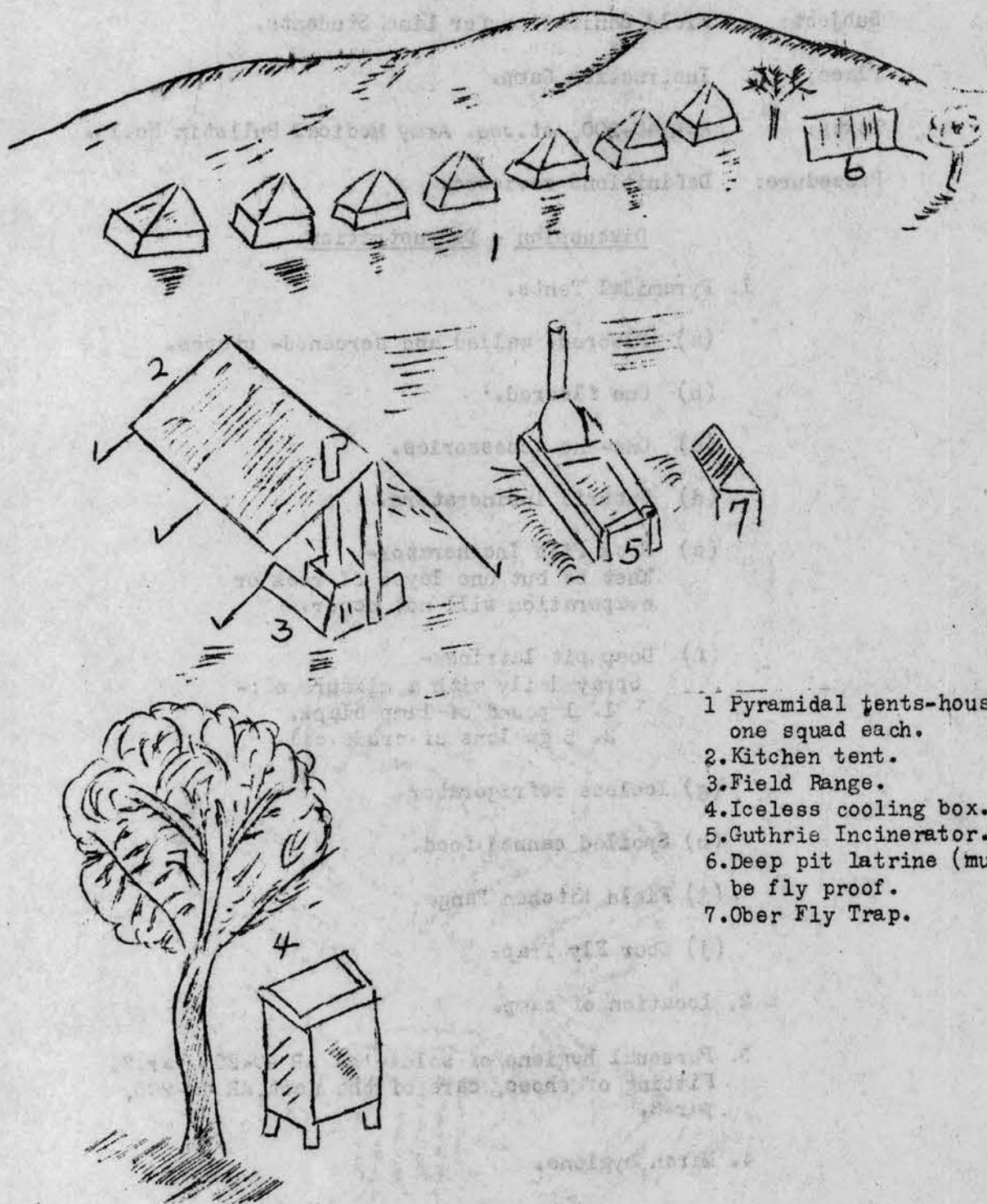
(j) Ober Fly Trap.

m 2. Location of camp.

3. Personal hygiene of soldiers- AR 40-205, par. 7.
Fitting of shoes, care of the feet, AR 40-205,
par. 8.

4. March hygiene.

HYGIENE AND SANITATION.



Camp Snelling, Minnesota.
June 21, 1927.

R.O.T.C. TRAINING GUIDE

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HYGIENE AND SANITATION- PREVENTIVE MEDICINE.

A.R. 40-200 et seq.

TEXTS: "Hygiene and Sanitation". Medical Field Service School.

"Army Medical Bulletin No. 15. " " " "

References: Ford, Ashburn, Lelean and Rosenau.

1. DEFINITION:

Hygiene: a The science of health.b Those measures which the individual applies to himself to promote health and well being.

Sanitation: Those measures which the individual or the group of individuals apply to their environment to promote health and well being.

2. IMPORTANCE:

(a) Since the keeping of authentic records it is indicated that the average length of life has been increased from 26 to nearly 57 years.

(b) Our Revolutionary Soldiers ran 7 times as many chances of dying from disease as from being killed in battle. The figure had dropped to about four to one in the Civil War and in the great War on the day of the Armistice our battle losses were greater than our losses from disease. Before demobilization could be completed however, the losses from disease slightly outnumbered our battle losses.

3. RESPONSIBILITY FOR IN THE ARMY:

a Commanding Officer order and enforce.b The Medical Department advises.

4. THE CLASSIFICATION OF DISEASES;

a Communicable diseases----- (preventable)b Non-communicable diseases----- (non-preventable)

NOTE: For the purposes we discard such terms as contagious, infectious, and consider the diseases as communicable or non-communicable; preventable or non-preventable.

5. GROUPING:

If we group communicable diseases in accordance with their most usual method of transmission from one individual to another we find but five (5) sub-headings, as follows:

1. Respiratory- sputum or droplet borne.
2. Intestinal group- food and water borne.
3. Insect borne.
4. Contact diseases.
5. Miscellaneous group.

NOTE: In using this grouping we follow that used in A.R. 40-205, et seq. Further amplification is found in paragraphs which follow.

6. SPECIAL TERMS. (see A.R. 40-205)

a Contact: A person quartered in the same tent or occupying a near by bed in a squad room or otherwise closely associated as at mess with another infected with the causative organisms of a communicable disease.b Carrier: An individual who harbors and excretes pathogenic parasites without showing the usual evidences of infection. Carriers may be further classified as follows:

Paragraph 6 (SPECIAL TERMS)-continued.

1. True carriers: Carriers who harbor parasites which are pathogenic and virulent.

True carriers are further subdivided into:

a. Incubationary carriers: Individuals who are temporary carriers while in the incubation stage of a communicable disease.

b. Convalescent carriers: transitory or chronic: The transitory or temporary carriers are persons recovering from a communicable disease but who have not yet eliminated all the causative organisms.

Chronic convalescent carriers are persons who have apparently entirely recovered from the disease but have some concealed lesion which permits the parasite to continue its growth. The excretion of the parasite in such cases is often intermittent.

c. Contact carriers: May be either temporary or chronic. They have acquired their parasites by association with cases or carriers without themselves having developed the disease.

d. Pseudo carriers: Persons who harbor organisms morphologically and culturally indistinguishable from pathogenic and virulent parasites, which are however, on further study found to be non-pathogenic. During the course of the study these cases must be considered as true carriers until proven otherwise.

e. Suspect: A person exhibiting signs or symptoms which, though not definitely diagnostic in character, strongly suggest some stage of a communicable disease.

f. Quarantine: Is the application of such restrictive measures to the activities of the carriers, contacts, suspects and cases of communicable disease as may be reasonably expected to check the spread of the disease.

Quarantine may be either absolute or a working quarantine.

1. Working quarantine: Is the segregation of selected groups, carriers, contacts, etc., in such a manner that they are not brought into contact with other groups or persons, yet the performance of certain duties- such as drill, fatigue, instruction, etc., is not interfered with.

2. Absolute quarantine: Is the detention of contacts, carriers, suspects of persons ill with a communicable disease, or other groups of individuals, in complete isolation either individually or collectively as the case may warrant.

7. SPUTUM BORNE; DROPLET BORNE DISEASES: Those transmitted through discharges from the respiratory tract.

- | | | |
|---|-----------------------------|------------------------|
| a | 1. Measles. | |
| | 2. Mumps. | |
| | 3. Diphtheria | (a. Coryza |
| | 4. Scarlet Fever | (b. Laryngitis |
| | 5. Common Respiratory----- | (c. Tonsillitis acute. |
| | 6. Influenza | (d. Bronchitis acute. |
| | 7. The pneumonias. | |
| | 8. Epidemic meningitis. | |
| | 9. Pulmonary tuberculosis. | |
| | 10. Whooping cough. | |
| | 11. Plague- pneumonic form. | |
| | 12. Poliomyelitis. | |

Paragraph 7 (SPUTUM BORNE-DROPLET BORNE DISEASES) continued.

b. Preventive measures:

1. General.

- a. Ventilation-floor space.
- b. Expectoration.
- c. Care of floors.
- d. Clothing and bedding.

2. Special measures-when applicable:

- a. Prompt isolation.
- b. Hospitalization of suspects.
- c. Frequent inspection of men.
- d. Control of contacts (working quarantine)
- e. Detection and control of carriers.
(Laboratory work for detection).

8. INTESTINAL GROUP: Those transmitted through discharges from the intestinal tracts or through FOOD and WATER.

a. 1. Typhoid group.

- 2. The dysenteries-bacillary-amoebic.
- 3. Common diarrheas.
- 4. Cholera.
- 5. Helminthic infestations.
- 6. Food poisonings- B. Enteritis. B. Coli.
- 7. Botulism.
- 8. Salmonellosis.
- 9. Malta Fever---Goats Milk.

b. Preventive measures:

1. General.

- a. Control of water.
- b. Control of food-Freshness, fitness, refrigeration, storage, preparation.
- c. Food handlers- examination.
- d. Personal hygiene
- e. Elimination of flies (see par. 11 d)
- f. Disposal of excreta.

2. Special methods.

- a. Prompt isolation of cases.
- b. Hospitalization of suspects.
- c. Control of contacts.
- d. Detection and control of carriers.
- e. Establishment of immunity when possible.

9. INSECT BORNE DISEASES:

1. Mosquito borne.

- a. Malaria- by Anopholes.
- b. Yellow Fever by Aedes Egypti (Stegomyia)
- c. Dengue- By Culex
- d. Filariasis by Culex.

2. Lice borne.

- a. Typhus.
- b. Relapsing fever.
- c. Trench fever.

3. Flea borne.

- a. Bubonic Plague.

4. Tick borne.

- a. Rocky Mountain Fever.

5. Fly borne (as hosts)

- a. Trypanosomiasis----- (1 Sleeping sickness)
- b. Filariasis, some forms----- (2 Surra Horse.)
- c. Tularemia----- (The Horse Fly or flesh or fur of infected rabbits)

Paragraph 9 (INSECT BORNE DISEASES) continued.

6. Fly borne (mechanical)

- a. Intestinal group.
- b. Erysipelas.
- c. Anthrax.
- d. Glanders.
- e. Small pox.
- f. Tuberculosis.

10. MOSQUITO.

We must understand the insect before we can successfully combat him.

a. 1. Reproduction- The life cycle-adult-egg-larva-pupa- adult.

The eggs are deposited on water, either singly or in rafts according to the habits of the species. These hatch- the larvae appear in from two or three days. The larva develop into pupae in about seven days and the adults emerge in from seven to nine days. Thus life cycle may be completed in the period of two weeks. (The identifying characteristics of the various species are omitted from this outline for lack of space)

The adults take refuge in nearby vegetation after hatching and the females go forth in search of a meal of blood before ova deposit.

All larvae are air breathers and must come to the surface to breathe- oil forms a tenacious film which they cannot break through and smothers them.

Common breeding places are: Tin cans, broken bottles, buckets, bowls, trunks, flower vases, gutters, horse's tracks, hollow stumps, tree trunks, bamboo, pitcher plants, marshes and streams with grassy edges, in fact any place where water will remain for a period long enough for the eggs to develop larva, the larva to develop pupa, and for the adult to emerge.

b. Facts about the mosquito:

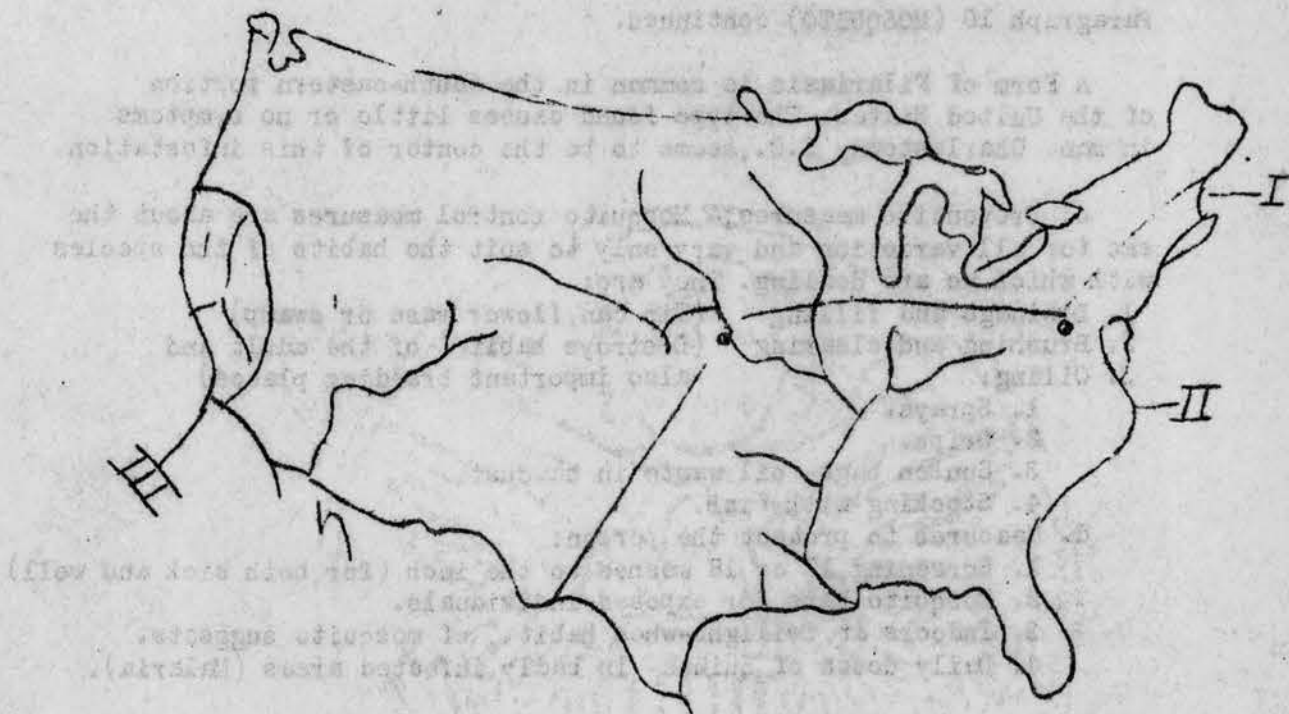
Mosquitoes have been classified according to their habits. We have.

- 1. Domestic. Examples: Culex and Aedes Egypti- these breed readily in and about habitations.
- 2. Semi-domestic. Example: Anopholes- these breed about habitations or in the open and readily enter habitations in search of food.
- 3. Wild. Example: some varieties of the Anopholes- these breed in marshes, swamps and streams and are not to be found in or about habitations.

Twenty five (25) varieties of Anopholes have been proven carriers of Malaria, but only four (4) of this number is to be found of any importance in the United States (see list on map)

A yearly survey of the mosquito population of each army station is made and specimens sent to Washington for final study and classification.

This survey shows there to be three very definite and well defined areas in the United States where transmitters are found.



In Area I we have:

- a. Anopheles Quadrimaculatus.
- b. Anopheles Crucians.
- c. Anopheles Punctipennis.

In Area II:

- a. Anopheles Quadrimaculatus.
- b. Anopheles Crucians.
- c. Anopheles Punctipennis.
- d. Anopheles Pseudo Punctipennis.

In Area III

- a. Anopheles Quadrimaculatus.
- b. Anopheles Punctipennis.
- c. Pseudo Punctipennis.

Area I begins on the Massachusetts coast to the northward and embraces the Atlantic seaboard, meeting the second area near the head-waters of the Chesapeake Bay.

The outline of Area II by a line beginning at Eagle Pass, on the Texas border running northeast to Fort Leavenworth, Kansas, thence eastward to merge with the 1st area about the Chesapeake. Evidence seems to be accumulating to indicate that the line should bend sharply upward as it crosses the valley of the Mississippi.

Area III embraces the valley of the San Joaquin and Sacramento Rivers.

Other mosquitoes transmitting disease are widely distributed over the United States.

Dengue manifests itself in important epidemics in the south. Yellow Fever has repeatedly appeared in serious epidemic form in the United States especially in those cities frequently visited by ships from the Southern countries. Prior to the work of Walter Reed, all commerce was frequently held up by the most rigid quarantine on account of the ravages of this disease.

Paragraph 10 (MOSQUITO) continued.

A Form of Filariasis is common in the south-eastern portion of the United States. The type found causes little or no symptoms in man. Charlestown, S.C., seems to be the center of this infestation.

c. Preventive measures;- Mosquito control measures are about the same for all varieties and vary only to suit the habits of the species with which we are dealing. They are:

1. Drainage and filling (Tin can, flower vase or swamp)
2. Brushing and clearing (Destroys habits of the adult and also important breeding places)
3. Oiling:
 1. Sprays.
 2. Drips.
 3. Sunken bags- oil waste in sawdust.
 4. Stocking with fish.
- d. Measures to protect the person:
 1. Screening, 17 or 18 meshes to the inch (for both sick and well)
 2. Mosquito bars for exposed individuals.
 3. Indoors at twilight-when habits of mosquito suggests.
 4. Daily doses of quinine- in badly infected areas (Malaria).

11. FLIES:

a. Two forms are of importance in the United States.

1. Musca domestica- House fly.
2. Fannia canicularis- Latrine fly.

b. Life cycle: Adult-egg-larva-pupa- adult.

The female lives from four to six weeks. She deposits about 500 eggs in batches from 75 to 100. The larvae (maggots) leave their food and burrow not more than 4 feet away nor more than 2 to 4 feet deep. They are found in the soil, brown seed like bodies. The adult emerges full grown and the female produces eggs in about nine days.

c. Foods:-

Both the adult and the larva are large eaters but both are said to have feeble digestive powers. Therefore the adult seeks pre-digested or putrifying material of animal or vegetable origin both for food and as a breeding place.

These conditions are ideally presented in large wounds, the bodies of dead animals, human or animal excrement or the food wastes about human habitations.

d. Preventive measures: (Destroy adults and prevent breeding).

1. Disposal of garbage and excreta.
2. Elimination of wastes.
3. Protection of food supplies.
4. Screening.
5. Traps and fly paper.
6. Poisons, papers, etc.
7. Swatters.

12. LICE:

a. Varieties:-

1. Pediculus Vestimenti- also called Pediculus Carriers. Lives in the clothing- feeds on blood- deposits eggs in the seams of clothing, occasionally on the hair of the body.

Paragraph 12 (LICE) continued.

2. Pediculus Capitis.

Lives in the hair of the body, etc.

3. Phthirus Pubis.

Lives in the pubic hair. When in great numbers will be found elsewhere in the hairy parts. Eggs (nits) are easily seen where the pubic hair fades out in the groins. They will be found firmly attached to the shaft of the hair close to the skin.

b. Preventive measures- treatment:

1. Pediculus Vestimenti.

- a. Do not sleep in underclothing.
- b. Bathe at least once a week.
- c. Freshly laundered underwear once per week.
- d. Sterilizing infested clothing under steam.
- e. Iron or press clothing.
- f. Immerse in gasoline (does not kill eggs)

2. Pediculus Capitis.

- a. Shave head.
- b. Clip hair short.
- c. Apply kerosene to kill adults.
- d. Apply vinegar to kill nits.

3. Phthirus Pubis.

- a. Mercury in some form-ointment or solution.
- b. Shave all hairy regions.

13. FLEAS:

a. Rat flea.

b. Preventive measures:-

1. Extermination of rodents- rats and ground squirrels.
 - a. Cats and Dogs.
 - b. Traps.
 - c. Poisons.
 - d. Rodent proof construction.
2. Prevent rats from newly arrived ships from reaching land.
3. Destruction of insects;
 - a. Powders, etc.

14. BED BUGS:

a. Not proven carriers but suspected of Plague, Typhus and Relapsing Fever.

b. Preventive measures:-

1. Fumigate with sulphur- 2 lbs to 1000 cubic feet.
2. Paint beds with coal oil and place in sun.
3. Close house and raise temperature to 140 degrees for several hours.

15. CONTACT DISEASES:

- a. Skin group.
- b. Venereal group (see ROTC Training Guide DMT 600-4.)
- c. Small pox.
- d. Chicken pox.

16. MISCELLANEOUS GROUP:

- a. Tetanus.
- b. Rabies.

17. MILK (See U.S.P.H.S. Standard and Methods).

a. General consideration.

Milk is one of the most important and is the most dangerous of our food stuffs. It is an almost perfect culture medium for many pathogenic organisms. Eternal vigilance and pains taking care are the prices that must be paid for a safe milk supply. The intelligent carefulness must begin in the pasture land and end in the baby's bottle. Milk has caused more deaths than any other food.

b. Diseases transmitted by milk:

- 1. Diphtheria.
- 2. Scarlet Fever.
- 3. Typhoid Fever.
- 4. Septic sore throat.
- 5. Malta fever.
- 6. Foot and mouth diseases.
- 7. Milk sickness.
- 8. Diarrheas- in children and adults.
- 9. Cholera.

(These diseases for the most part enter the milk from its handlers).

c. Grades of milk (See Lt. Col. Eakins, V.C. USA, Military Meat Dairy Hygiene).

NOTE: The standards and classification of the American Association of Medical Milk Commissioners, 1912, are quoted. They are very high. "The target at which to shoot", but reaching them must be a matter of evolution rather than sudden action.

"A" Certified Milk.

- 1. Raw milk from a certified herd.
- 2. From a dairy barn and plant scoring over 90% (see score board in text)
- 3. To be delivered within 30 hours and have 10,000 or less per c.s.
- 4. To be of normal proportion- Fat- C.H. and Proteid.

"B" Inspected Milk.

- 1. Raw milk from a tested herd.
- 2. From farm plant scoring 70% or better.
- 3. Proper refrigeration during transportation.
- 4. To reach the consumer with 100,000 or less bacteria.
- 5. To have normal proportion, Fat, C.H. and Proteid.

"C" Pasturized Milk.

- 1 No milk from a dairy scoring less than 55% on score board accepted for pasturization.

Paragraph 17 (MILK) continued.

Pasturized milk continued.

2. Raw milk containing more than 750,000 bacteria not accepted.

3. Pasturization:

a. Holding method:-

Heat suddenly to 145 F for 30 minutes.

b. Flash method:-

Heat suddenly to 160 F for 5 minutes.

c. Cool at once to 50 F and maintain refrigeration till sale-after either method.

d. Milk to be consumed having not less than 50,000 bacteria per c.c.

"p". Reductase test:-

1. Dissolve a Methylene Blue tabloid (supplied for the purpose of the test) in 200 c.c. of water and add 1 c.c. of this to 10 c.c. sample of milk. This gives Robin Egg Blue.

2. Place in water at 90 F and read:-

a. Very bad milk:- decolorized in 20 minutes or less.

b. Bad milk:- Decolorized in less than 2 hours.

c. Fair milk:- Holding color for 2 hours.

d. Good milk:- Holding color at the end of five hours.

18. FOOD POISONINGS:

a. Ptorains- the products of decomposition- alkaloid like.

b. Meat poisoning- infections- Bacillus enteritis. B. Cholera. B. Proteus.

c. Botulism.

d. Salmonellosis.

e. Poison foods- mushrooms, etc.

19. IMMUNIZATION AND IMMUNITY.

a. Classification:-

1. Natural immunity.

a. Racial.

b. Individual.

2. Acquired immunity.

a. That conferred by a previous infection.

3. Artificial immunity.

a. Temporary immunity.

b. Tetanus.

1. Immune sera:-

a. Diphtheria- anti-toxin.

b. Tetanus-anti-toxin.

c. Scarlet Fever-anti-toxin.

d. Meningitis-anti-toxin.

e. Pneumonia- anti-toxin.

Paragraph 19 (IMMUNITY) continued.

2. Bacillary suspensions- sterile.
 - a. Plague.
 - b. Cholera.
3. Miscellaneous vaccines:-
 - a. Rabies (attenuated virus)
 - b. Relatively permanent.
 1. Killed bacteria in suspension.
 - a. Typhoid group.
 2. Toxin- Anti-Toxin method:-
 - a. Diphtheria (Shick)
 - b. Scarlet fever (Dick)
 - c. Botulism-used in Vet. Service.
 3. Inoculation with mildred kindred diseases.
 - a. Small pox.
 - b. Practical application:-
 - 1 Relatively permanent immunity:-
 - a. Small pox.
 - b. Typhoid fever.
 - c. Diphtheria-toxin, anti-toxin (Shick)
 - d. Scarlet fever, toxin, anti-toxin (Dick).
 2. Temporary immunity:-
 - a. Diphtheria- serum.
 - b. Tetanus- serum.
 - c. Scarlet fever (serum).
 - d. Pneumonia-type-ene-serum for treatment.
 - e. Meningitis- serum for treatment.
 - f. Cholera- bacillary suspension.
 - g. Plague-bacillary suspension.
 - h. Rabies- serum.

20. HELMINTHIC INFESTATIONS.

- a. Varieties:-
 - 1 Hook worm.
 - a. Ancylostoma duodenale.
 - b. Necator americanus.
 2. Ascaris ambriodes (round worm)
 3. Tape worm.
 - a. Taenia saginata- beef tape worm.
 - b. Taenia solium- pork worm.

NOTE: Many interesting worm parasites are omitted from this outline for lack of space.

- b. Prevention:-
 1. The Hook Worm:-This is decidedly the most important from a military standpoint on account of the wide spread of the infestation.
 - a. Life cycle:-
 1. The adult lives in the small intestines of man, wound the mucosa in many places drawing blood for food.
- It appears that a toxin is produced by the organism which increases the anaemia. The female produces vast numbers of eggs.

Paragraph 20 (HELMINTHIC INFESTATIONS) continued.

2. The eggs reach the earth and in the presence of warmth, moisture and oxygen develops the larva in 24 hours.

3. The larva burrows about the surface of the earth living upon the organic matter it finds there. It molts, sheds its skin (ecdysis) in about two days. A week later it becomes encysted in a second shed. It is now capable of fastening to and penetrating the skin of man. Ground thus infected will not become free in five months.

The larva is capable of skin penetration ~~xxx~~ at any point, the soft skin of the toes preferred (ground itch). Penetrating the skin the lymphatics are reached and in turn the right heart, the lungs and again by penetration the alveoli, thence over the epiglottis and into the small intestine of the new host.

- b. The attack on the disease:
 - 1. Proper disposal of feces - prevent ground pollution.
 - 2. Treatment of those infected.
 - 3. Cause shoes to be worn.
- 2. *Ascaris lumbricoides*.
 - a. The life cycle:
 - 1. The adult lives in the small intestines by choice without producing wounds. Eggs develop into larvae in the earth and these are swallowed by the new host from soiled hands with uncooked foods or water.
 - b. Prevention:-
 - 1. Proper disposal of feces.
 - 2. Personal hygiene.
 - a. Washing hands and face.
 - 3. Preparation of food.
 - 4. Eliminate the carrier by treatment.
- 3. Tape worms.
 - a. Life cycle:-
 - 1. Adults live in the intestines of man. Eggs escape from gravid segments and from their host.
 - 2. Hogs become infected with the tinea solium by eating human feces. Cattle swallow the embryo of the tinea saginata with their food or water.
 - b. Prevention.
 - 1. Proper disposal of feces.
 - 2. Proper inspection of animals - anti and postmortum.
 - 3. All meats to be cooked.

2;1

21. WATER:- General consideration.

a. Water is very abundant in nature, it reacts freely to temperature and is not found chemically pure. Water is continually passing thru a cycle. We classify it as to its position in the cycle as:

1. Vapor.
2. Rain water-mists-fogs-snows-etc.
3. Surface water, ponds, lakes, streams and rivers.
4. Ground water-deep wells and springs.

b. 70% of the human body by weight is composed of water.

c. A loss of 10% of this water is ordinarily fatal.

d. Under normal conditions the body requires from 2000 to 3000 ~~xxxxx~~ mls of water per day. Most of this is taken with foods.

e. Some of our cities are delivering more than 200 gallons per capita per day. It has been estimated that with careful husbanding modern man can live well on 17 gallons per day (Rosenau) counting the average baths, laundry, etc. The remaining 183 gallons per day is used for fire fighting, street cleaning or municipal purposes.

f. Water is either good or bad (1 Polluted.
(2 Infected.
(3 Contaminated-
(chemicals from factories,
(etc.)

1. Polluted water contains organic matter of animal or vegetable origin.

2. Infected water contains bacteria generally from human or animal sources.

g. When rain water reaches the earth and becomes surface water it is always polluted and infected from the contact with the earth's surface. Natural factors at once begin its purification.

1. Aeration- oxidation.
2. Action of bacteria.
3. action of algae, etc.
4. Solar action----(a. Vaporization
(b Bactericidal)
5. Sedimentation
6. Filtration.

The statement is found in some texts that the water of a stream 25 miles below a sewer discharge will be found in practically the same condition as that above it.

This opinion is now entirely discredited by recent work where massive sewage infection has been traced 200 miles or more down stream. The distance a running stream will require to purify itself will depend on several factors and vary greatly with the amount of the infection received.

21. Water (cont'd).

unless currents are a factor, the water of a lake one to one and a half miles off shore from the mouth of a sewage stream will be found in very good condition, so rapid are the natural factors of purification under these conditions. This is not a dependable factor of safety however. Example: Lake Michigan off the Calumet River.

1. Selection of a water supply:-

- a. Ground water-free from excess of earthly salt desired.
- b. Surface Water- chief source must be purified. (No surface water is safe for use without treatment.)

22. WATER PURIFICATION.

a. In large scale plants we find some adaptation to the four step method:-

1. Coagulation (Alum-sulphate of aluminum- or sulphate of iron.). (This is not needed in very clear waters.)
2. Sedimentation-Large settling basins. (Not needed in clear waters)
3. Filtration-slow or rapid methods.
4. Chemical purification-oxidation thru chlorine.

b. Field methods:

1. Lyster bag (A.35 gallon container).

Chlorine or Bleaching Powder method:-

- a. Fill the bag with cleanest and clearest water obtainable.
 - b. Add one, two or more tubes of "bleach" which has been previously stirred in a cup of water.
 - c. Test with ortholidine solution and add more bleach if needed to give an excess of free chlorine.
 - d. Allow to stand 30 minutes.
 - e. Remove the excess chlorine by the addition of Sodium Thiosulphate.
- The water is now ready for use.

NOTE: The calcium hyochlorite, the ortholidine and the sodium thiosulphate are each supplied in sealed glass tubes.

c. Lyster Bag (35 gallon container).

12. Lyster bag - Iodine method:-

- a. fill bag as usual.
- b. Stir in 10 c.c. U.S.P. Tn. Iodine.
- c. Allow to stand 30 minutes.

NOTE: The Bleach method is preferred and the iodine method is to be considered a second "line of defense".

23. WATER STANDARDS. (See U.S.P.H.S. reprint, No. 1029, August 10th, 1925).

a. Physical and chemical properties:-

- | | |
|-----------------------|--|
| 1. Clear | 5. Free from toxic salts. |
| 2. Colorless. | 6. No excess of soluble minerals. |
| 3. Odorless. | 7. No excess of chemicals used in treatment. |
| 4. Pleasant to taste. | |

23. Water standards (cont'd).

b. Bacteriological standards.

1. The B.Coli group is taken as the "indicator" by authorities. The presence of more than an occasional colony of this group is taken to indicate fecal contamination and danger.

U.S.P.H.S. standards require below one coli group per cc. and that less than 10% of the 10 cc. samples taken for the test to negative.

2. These organism excluded, water is classified as good if it contains fewer than 1000 per cc. as potable if less than 10,000 per cc. and as non potable if above that number.

24. FOOD.

The requirement varies with the nature and amount of work done.

Office work.....30 cal. per kilogram, body weight.

Average work.....40 cal. per kilogram, body weight.

Excessive work.....Increased amount.

ARMY RATION.

Calories.

1. Special for intensive operations.....5000

2. Normal.....4000

3. Mobile-in rapid movements.....3500

4. Reserve (Iron) Emergency.....2825.

An average man 70 Kilos-154 lbs, if doing average work. 70 x 40, 2800 cal., leaving an excess for any shrinkage or wastage occurring between purchase and serving.

Minimum proteid requirement variously estimated at .75 to 1.50 grams per kilo, body weight. 1 gram per kilo-not far from a proper estimate.

Accessory food factors- Vitamine not to be overlooked- diseases caused by their neglect-scurvy-Beri-Beri-Pellagra- Xerophthalmia.

Preparation- avoid constant frying.

Serve something uncooked- Fresh fruits.

25. AIR.

a. Composition- a mixture of:-

1. Oxygen.....20.94.

2. Nitrogen.....78.09

3. Carbon Dioxide..... 0.03.

4. Argon..... .94

5. Traces of Helium, Krypton, neon, hydrogen, peroxide, ammonia, ozone.

b. Facts and definition:-

1. Our great need is for oxygen.

2. Nitrogen is a diluent.

3. C.O.2 is given off by animal life and is used as a food by plant.

4. Argon is absolutely inert so far as is known.

5. Humidity, the amount of water in a gaseous state in the air.

6. Dewpoint- saturation, when dewing occurs. Varies with the temperature.

7. Relative humidity, the approach to the dewpoint expressed in the scale of 100.

Paragraph 25 (AIR) continued.

b. Facts and definition (continued)

8. The diffusability of gases prevents marked variations in nature-contains an equilibrium.

9. Oxygen may be experimentally reduced to 10% and man will accommodate to the condition.

10. Carbon dioxide may be increased from 1.2 to 2.5 as in breweries with no discomfort.

11. Carbon dioxide at 3% and oxygen at 15% cause no symptoms.

(a) This figure is never reached even in poorly ventilated rooms)

c. Conclusions:- The adaptability of the body is very great.

1. Other factors needed to explain the danger in poor ventilation.

a. Examinations:-

1. Odors.

2. Droplet infections.

3. Respiratory diseases.

b. Effect of humidity

1. Heat stroke----- (Black hole of Calcutta.

(Steamer Londonderry.

(Pris. of Austerlitz

26. VENTILATION

a. Ventilation standards:-

1. Floor space..... 60 sq. ft. minimum 50.

2. Cubic air space..... 720 cu. ft. minimum 500

3. Avoid draft... insure air exit and vent.

4. At least five feet from bed rail to bed rail (head and foot sleeping)

27. SUNLIGHT.

1. A most important factor-one of nature's great aids in maintaining health and comfort.

2. Goes hand in hand with ventilation.

a. Large airy rooms.

1. Ordinary glass filters out the ultra-violet ray-direct sun-light needed- great sterilizer.

2. Air and sun bedding.

3. Furl tents.

28. DISPOSAL OF WASTES.

(The particular problems confronting cities and towns and their solution, attempted or accomplished, are omitted from these notes, as not being essentially within the scope of our study as army officers, who are called upon to properly direct the sanitation of hurried and temporary large concentrations.

Paragraph 28 (DISPOSAL OF WASTES) continued.

Importance:-

- a. Prevents fly borne diseases.
- b. Prevents contamination of surface water.
(our principal source of supply)
- c. Prevents rodent and insect breeding.
- d. Maintains pleasant and healthful surroundings.

29. EXCREMENT-

Latrines:-

- a. Straddle Trench:-
 1. Construction.
 2. Proper use.
 3. Bacterial action of soil.
 4. Final disposition of.

NOTE: (Should not be used in trench warfare if possible to avoid)

b. Deep pit:-

1. Construction- fly proof.
2. Use of oil and lamp black- 1 pound to five gallons.
3. Disposal of.

c. Removable pail type:-

1. Special incinerators.

d. Urine soakage pits:-

1. Construction- importance of in many soils.

30. KITCHEN WASTES.

1. Incineration- Guthrie type.
2. Disposal of animal foods to contractors.
(Safe guards needed)
3. Burying (when applicable)
4. Burning and flattening cans.

31. STABLE WASTES.

1. As fertilizer:-

- a. Spread thin to dry.
- b. Plowed in at once.

2. Incineration:-

- a. Windrows.
- b. R.R. Iron or basket incinerators.

3. Proper rickling.

32. OTHER WASTES.

- a. Local incineration.
- b. Dumps- proper method of establishing and operation.

33. HYGIENE.

"We march with our muscles, run with our lungs, gallop with our heart, resist with our stomach and succeed with our brains".
No sharp line can be drawn between hygiene and sanitation. During the World War one half of all young men examined had physical defects. 12% of all men were rejected as unfit. These figures give food for serious thought as many defects are preventable at first and later remedial when taken early.

Paragraph 33 (HYGIENE) continued)

Personnel hygiene- see A.R. 40-205, par. 1-7.

a. Baths- at least twice a week.

1. Reasons for:

- a. Stimulates physiological processes of skin.
- b. Removes dirt and germs.
- c. Prevents fouling of air.
- d. Direct tonic effect.

2. Kinds:-

- a. Cold 40-60 degrees.
- b. Tepid 80-90 degrees.
- c. Warm 90-100 degrees.
- d. Hot 100 plus degrees.

3. Effect of baths:-

- a. Cold- stimulates skin and peripheral nerve endings- increases resistance to infection.
- b. Hot- relaxes muscle, tissue, removes soreness, promotes sleep.
- c. Showers- impact of water is stimulating in itself, therefore better than tub.

4. Precautions:-

- a. Special attention to hairy parts.
- b. Wash under the arms.
- c. Wash crural folds and crotch with soap.

b. Daily toilet:-

1. Hands washed after each visit to the latrine.
Wash scalp once a week.

2. Soap- best has an excess of alkali to combine with fat liberated from skin.

3. Teeth washed twice a day. Cavities kept filled. Root abscesses often cause grave effects and must be eliminated.

4. Mouth and throat kept clean, infected tonsils removed, or cardiac and other diseases may follow.

5. Hair- regulations prescribe short hair, not over two inches in length.

6. Toilet articles- each man must have his own, kept clean, especially tooth brush.

7. Shaving- Men must shave themselves. "Barbers Itch" other skin diseases and occasionally syphilis are transmitted thru the public barber.

8. Bowels should move daily- exercise, vegetable foods and particularly regular habits most important.

c. Exercise and recreation- most important.

a. Forms of:-

1. Strength- simultaneous sustained forceful action of many muscles leads to hypertrophy and later when not used to loss of tonicity.

2. Speed- quick contractions and relaxations accompanied with nervous tensions leads to moderate increase in size.

3. Endurance- moderate movements prolonged- muscles subordinate to power of heart and lungs.

4. Skill- speed, repetition, accuracy of muscles together with development of physical faculties.

NOTE: Number 2 and 4 best for the training of the soldier.

Paragraph 33 (HYGIENE) continued.

b. Effects of:-

1. Muscles get four times the blood.
Body uses 20 times oxygen.
Body gives off 25 times carbon dioxide.
2. Lactic acid formed-toxic in excess.
3. Temperature raised.
4. Heart increased rate-blood pressure increased.
5. Muscles hypertrophy by increase of size but number of fibers.
6. Lungs- opens all alveoli, increases chest measurement, especially expansion.
7. Height and weight increased.

c. Fatigue:-

Excessive.

1. All body functions depressed.
2. Marked mental effects-loss of memory.
Will power weakened- morale decreased.

NOTE: Medical Officers must use every precaution to prevent fatigue of men as wars may be lost from such factors.

34. EQUIPMENT- Soldier.

- a. Optimum load 33 1/3 % of body weight.
- b. Maximum load 45% of body weight.
Above this, efficiency decreases by ratio of three to one.

U.S. Soldier too heavily loaded.

c. Distribution of load:-

1. Weight of straps on trapeze.
2. As near center of gravity as possible.
Center of gravity .6 c.m. in front of line connecting the centers of the femoral heads opposite the body of third lumbar vertebra.
3. Avoid pressure on chest and abdomen for obvious reasons.
4. Clothing:-
Change often eliminates dirt and lice.
Keep dry at all times, increases morale and reduces food requirement.
Change to night clothes for bed.
Sock should not have holes.

35. FEET.

Napoleon said he won his battles by the legs of his soldiers.

Feet are as important now as then.

1. Shoes-fitted by shoe device when carrying weight on back. Must not be run down at the heel. Kept dry and soft with dubbing.
2. Bathe feet in cold water often when on march.
3. Rigid foot inspections at frequent intervals to correct defects early required by Company CO.
4. Stinking feet- Bromidrosis.
 - a. Paint with 10% formalin solution.
 - b. Germans and French use 10% solution Chromic acid.

36. MARCH HYGIENE.

1. Start early in the morning.
2. Have meal before starting.
3. 15 minute halt first hour- 10 minutes each hour thereafter.
Men should discard packs at this time.
Provide small straddle trench.
4. Route step least fatiguing, very important, uniform rate.
5. Open collar, roll up sleeves.
6. Change order of march and side of road used to relieve men.
7. Water drinking early in the march to be discouraged.

TRAINING GUIDE-HYGIENE AND SANITATION

Instruction for giving Venereal

Prophylaxis

1. Patient must roll shirt and undershirt to arm pits and drop breeches and drawers to the knees.
2. Inspect for disease. The examination must be complete and ulcers and urethral discharge are to be excluded.
3. Have patient urinate to wash out urethra.
4. Cover prophylactic bench with several thicknesses of toilet paper placed about the crotch in the seat.
5. Apply green soap over genitals and hairy parts and work up lather with wet cotton. With a second piece of cotton wash off lather. (The better the mechanical cleaning - the better the results).
6. Repeat the washing, using 1-2000 bichloride (The anti-chancroidal step)
7. Four cc of 1 to 1½ protargol solution is injected into the urethra by attendant and held in for 5 minutes by the watch. (The anti-gonorrheal step).
8. Calomel Ointment U.S.P., (the anti-spirochetal step) is rubbed thoroughly on all portions of the penis, especially about the glans, corona and on the exposed portions of the scrotum. All parts are then wrapped in toilet paper to remain several hours undisturbed.
9. Make out prophylaxis slip. Both patient and attendant sign.

NOTE:(1) A comfortable, especially constructed bench or seat, the front portion notched out or cut away so that the patient sitting comfortably may wash the part and administer the treatment is a great aid to proper procedure.

(2) A supply of soap and calomel ointment pledgets may be conveniently made by rolling an appropriate amount in half sheets of toilet paper. Then when a small hole is punched out the contents are available as from a collapsible tube.