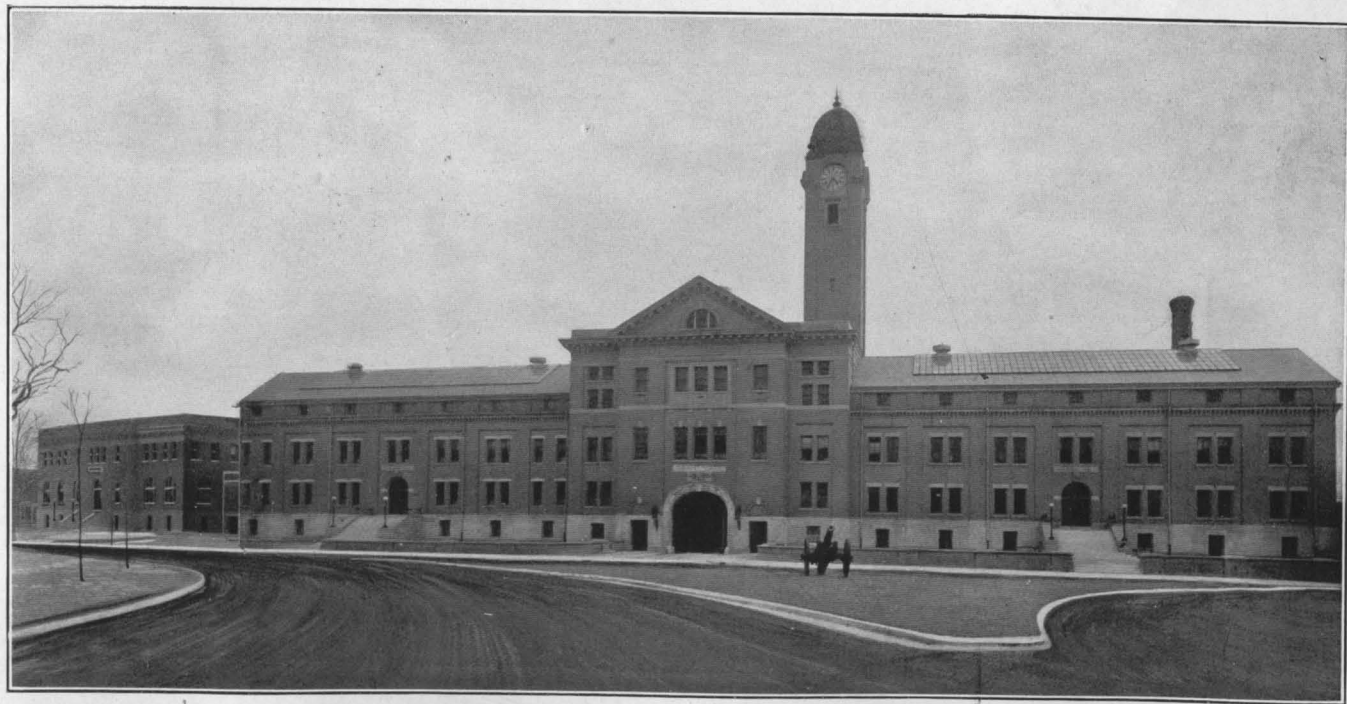




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THE ARMY SERVICE SCHOOLS

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Press of The Army Service Schools
Fort Leavenworth, Kansas

1916

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History

THE school was established in 1881 by General William Tecumseh Sherman, Commanding the Army of the United States, as a School of Application for Cavalry and Infantry. In 1886, the name was changed to the United States Infantry and Cavalry School. As such it continued until the opening of the war with Spain in 1898. From 1881 to 1898, the classes pursued a two-year course.

From 1898 to 1902, the academic operations of the school were suspended owing to the army being engaged in active operations in the field.

In September of 1902, the school was reopened as the "General Service and Staff College" and has been in continuous operation to the present time, except for a temporary suspension in 1914, incident to the occupation of Vera Cruz.

During 1905, the school was renamed the United States Infantry and Cavalry School. In 1907, it was again changed to the Army School of the Line, but in 1908, this school was merged with several other recently established schools, and the whole designated as the Army Service Schools [by which they are known today.]

Since 1902, the basic school (The Army School of the Line or whatever the designation) has been a one-year course.

In 1904, The Army Staff College was established with a view of giving selected members of The Army School of the Line further instruction and training in the duties of Staff officers and the higher functions of command.

In 1905, The Army Signal School was established. The Army Field Engineer School was organized in 1910. The Army Field Service and Correspondence School for Medical Officers was organized in 1910, for the special instruction of selected officers of the Regular Army and National Guard.

In 1915, a Correspondence Course for officers of the Medical Reserve Corps was established. Since 1911, a special three months' course for field officers has been maintained. From 1881 to the present time nearly 1,400 officers have been graduated from the various schools.

Book Department

SHORTLY after the reopening of the School in 1902, under the direction of the Secretary of the Schools, a Book Department was established for the purpose of prompt supply to officers on duty at the Schools of the textbooks, maps, sketching material, etc., required in connection with the school work. This Department has developed with the Schools and today is an extensive institution. In addition to furnishing officers on duty at the Schools with their necessary school equipment, the Book Department renders the same service to officers of the Regular Army and National Guard all over the world. In connection with the school plant the Book Department operates a printing office, a bookbindery, and a map reproduction plant, the latter containing drafting, photographic, and lithographic departments. Each department mentioned is under an expert foreman, and the entire plant has enormous capacity for serving the military establishment. The work performed is only along military lines and for those engaged in the service of National Defense.

The Book Department is engaged in the publication of books, pamphlets, maps, etc., prepared by the schools and used in the school work. It also handles military publications from other sources required for the use of officers. Its map reproduction facilities are of the best.

Mailing List

The Book Department maintains a subscription mailing list for school publications, available to officers of the Regular Army and Militia, naval and military.

This mailing list is for the purpose of keeping officers of the various services in touch with the work of The Army Service Schools. Subscribers receive from time to time, throughout the year, map problems, solutions, lectures, maps, and the other matter prepared and used in connection with the regular work of the schools and in the several courses of instruction.

The quantity of matter sent out each year on this mailing list varies, depending upon the production of the schools. No regular schedule of mailing is maintained, subscribers are charged each year according to the amount of matter sent out. To date, the yearly charge has varied from twenty-five cents to one dollar. Bills are rendered annually about July 1st. New subscribers are supplied with all matter for the current year in which they subscribe. A subscriber's name is removed from the mailing list only upon request, or for other sufficient reason. A simple request, addressed to the secretary of the schools to be placed upon the mailing list, is all that is required to secure this service.

The Schools Comprising The Army Service Schools, and the Courses of Instruction Therein

THE ARMY SERVICE SCHOOLS

The group of schools established at Fort Leavenworth, Kansas, consisting of The Army School of the Line as the basic school, The Army Staff College, The Army Signal School, The Army Field Engineer School, and The Army Field Service and Correspondence School for Medical Officers as special affiliated schools, are known as The Army Service Schools.

The object of The Army Service Schools is the better preparation of the mobile army for war.

COMMANDANT

There shall be detailed as commandant of The Army Service Schools an officer of the grade not lower than that of brigadier general, especially selected for the duty and detailed in orders from the War Department.

ASSISTANT COMMANDANT

The senior line officer of the staff of the Schools on duty thereat will be the assistant commandant of The Army Service Schools.

The assistant commandant of The Army Service Schools will be charged with the immediate administration of the Schools.

SECRETARY, THE ARMY SERVICE SCHOOLS

The secretary of The Army Service Schools, an officer of grade not lower than that of captain, will be the custodian of the records of all the schools, will disburse the money allotted by the War Department for the support of the schools, and will be responsible for the property of the schools. He will be assisted by such officers and enlisted men and civilians as may be deemed necessary by the commandant of The Army Service Schools.

I. The Army School of the Line

This school will be known as The Army School of the Line. Its object is the instruction of specially selected officers from the line of the Army in the proper methods to be employed in the leading and care of troops in time of war and their training in time of peace.

The assistant commandant of The Army Service Schools will also be the director of The Army School of the Line.

STUDENT OFFICERS

Selections of student officers will be made as follows:

(a) One officer of grade not lower than that of captain and of not less than five years' commissioned service from each regiment of cavalry, field artillery, and infantry serving within the limits of North America and the Hawaiian Islands, and such other officers as are hereinafter specified. Officers will not be detailed from regiments serving or about to serve in the Philippine Islands, but in lieu thereof additional officers may be detailed from regiments of the same arm which have most recently returned or are about to return from Philippine service to home stations; but not more than five officers will be detailed from the field artillery for any one class.

(b) The commanding officer of each regiment of cavalry, field artillery, and infantry serving within the limits of North America and the Hawaiian Islands will submit directly to the Adjutant General of the Army, not later than January 1 of each year, the names of two officers (one as principal and the other as alternate) recommended for instruction at the school. From the officers thus recommended selections will be made by the Secretary of War.

In making recommendations of officers for detail as students at The Army School of the Line, regimental commanders will comply with each of the following requirements:

That an officer who is on detached service and will have been absent from his regiment for more than two years at the time of the beginning of the annual session of the school (September 1) will not be considered available for detail by the War Department and will not be designated.

That an officer who has heretofore been graduated at The Infantry and Cavalry School will not be designated.

That regimental commanders will ascertain before designation whether the detail is desired, and that no officer will be designated who does not desire the detail.

That where no qualified officer in the regiment desires the detail, that fact will be reported and none designated.

That no officer will be designated until he first shall have passed a physical examination at his post and been found by the medical officer or officers to be in good health, and that no officer suffering from any disease of the eye will be designated.

The certificate of a medical officer as to the designated officer's physical condition will in all cases accompany the regimental commander's recommendation.

(c) In a similar manner the Chief Signal Officer of the Army may annually recommend one permanent officer of his corps, with the same limitations as to grade and length of service.

The officers finally selected to attend The Army School of the Line will be announced in orders from the War Department.

RULES GOVERNING ATTENDANCE AND EXAMINATION OF MILITIA
OFFICERS FOR ADMISSION

By direction of the President the following regulations governing the attendance of militia officers as students at The Army School of the Line, as contemplated in section 16 of the acts of Congress approved January 21, 1903, are announced:

A militia officer in order to be eligible for the course of instruction at the school must be not less than 21 nor more than 35 years of age and not above the grade of colonel. He must be of sound health, of good moral character, and a citizen of the United States. He must have been a member of the Organized Militia at least three years and must have such preliminary educational qualifications as will enable him to participate profitably in the course of instruction. No married militia officer will be admitted to the school without the special authority of the Secretary of War.

Militia officers desiring to attend the school must be nominated to the Secretary of War by the governors of their respective States or Territories or by the commanding officer of the Militia of the District of Columbia not later than January 1 of each year, and in each case the nomination must be accompanied by an affidavit of the nominee stating whether he is married or single, his age, citizenship, and length of service in the Organized Militia, and agreeing, in case the course is once entered upon, to attend and pursue the course of study at the school and be bound by and conform to the rules and discipline imposed by its regulations; a certificate of a medical officer of the Organized Militia, or any other physician in good standing, showing the physical condition of the nominee; and a certificate from the commanding officer of his regiment or other satisfactory person as to his good moral character and preliminary educational qualifications.

Militia officers who have complied with the foregoing regulations and who may be selected by the Secretary of War as candidates will be authorized to report at posts nearest their homes on the second Tuesday in July for preliminary examination. The physical examination will first be conducted. If a candidate be found physically deficient, a report in the case will be made at once to The Adjutant General of the Army by telegraph, and no further examination will be conducted without special authority from the Secretary of War.

If the physical examination be satisfactory, the candidate will then be examined in the following general educational subjects:

- (a) Writing.
- (b) Orthography.
- (c) Grammar.
- (d) Arithmetic (Wentworth's or its equivalent).
- (e) Geography (with special reference to the United States).
- (f) History of the United States (Barnes's or its equivalent).
- (g) Algebra, to quadratic equations (Wentworth's or its equivalent).

- (h) Plane geometry (Wentworth's or its equivalent).
- (i) Plane trigonometry (Wentworth's or its equivalent).

In lieu of this examination a graduating diploma from a high school or other educational institution of recognized standing whose curriculum embraces the subjects in question will be accepted.

The candidate will then be examined in the following military subjects, the textbooks being indicated:

- (a) Administration:

Army Regulations (omitting Articles L, LII, and LXXVII to end).

- (b) Manual of Guard Duty.
- (c) Drill Regulations (of the arm).
- (d) Provisional Small-Arms Firing Manual.
- (e) Field Service Regulations.
- (f) Military Law:

Military Law, Davis.
Manual of Courts-Martial.

- (g) International Law:

International Law, Davis (omitting Chapters V, VI, VII, XI, XV, and appendices).

- (h) Hippology:

Horses, Saddles, and Bridles, Carter (1906).

- (i) Military Hygiene:

The Elements of Military Hygiene, Ashburn.

In lieu of examinations in any of the foregoing subjects certificates of proficiency from garrison schools in such subjects will be accepted.

The examination will be written, will take place in the presence of a designated officer, and the questions will be prepared by the staff of The Army Service Schools. At the close of the examination candidates will return to their homes. The examination papers will be forwarded to the commandant, who, after having them marked by a board consisting of three officers, will report to The Adjutant General of the Army the names of those who have passed successfully. From the names thus submitted the selection of militia student officers will be made by the Secretary of War. The examination papers in each case will be filed with the records of The Army Service Schools.

The expense to the Government on account of militia officers attending the school is limited strictly to travel allowances, commutation of quarters, heat, light, and subsistence. The travel allowances consist of the mileage or transportation allowed by law. Commutation of quarters will be the same as provided by law for officers of corresponding grades in the Army. The allowances for subsistence will be at the rate of \$1 per day. Militia officers are entitled to commutation of quarters and subsistence only while they are actually in attendance at the school and pursuing a course of study. They are

not entitled to any allowances while absent on either ordinary or sick leave.

The method of granting sick and ordinary leaves of absence to militia officers will be the same as that prescribed in Army Regulations, as limited by this order, for officers of the regular establishment. Sick leaves will be limited to 30 days and ordinary leaves to 10 days within one school term for militia officers.

Each militia officer must provide himself, at his own expense, with the proper uniform of his State, Territory, or District, and with the required textbooks. The course will require the entire time of the student, so that no outside occupation during the school term will be practicable.

The course of instruction for militia officers will be the same as that for officers of the Army, and they will, upon graduation, be classified in the same manner. They will receive certificates of proficiency in such subjects as have been satisfactorily completed by them, and will be eligible, if their class standing is sufficiently high, for selection as students at The Army Signal School or The Army Staff College. Militia graduates of The Army School of the Line or The Army Field Engineer School, recommended for The Army Staff College or The Army Signal School for the following year, will be authorized, by direction of the Secretary of War, to proceed to their homes. If subsequently detailed by the War Department to take the course for which recommended, they will be authorized to proceed to Fort Leavenworth at the proper time.

Militia officers will be subject to the rules governing examinations and proficiency prescribed in paragraphs 24 to 29, inclusive. Any militia officer showing neglect of his studies or a disregard of orders, will, upon the recommendation of the academic board, approved by the commandant, be deprived of the privilege of further attendance at the school.

When a militia officer is graduated at the school the fact of his graduation will be reported by the commandant to the governor of his State or Territory or to the commanding general of the militia of the District of Columbia, who will also be notified in regard to the positions in the militia for which the officer is considered qualified.

The names of militia graduates will also be reported to The Adjutant General of the Army and will be entered in the register in The Adjutant General's Office, in accordance with section 23 of the act of Congress approved January 21, 1903, as being well, or especially well, qualified for such commands or duty as may be recommended by the academic board, approved by the commandant.

COURSE OF STUDY

The course of study will be embraced in three departments, as follows:

I.—The department of military art.

II.—*The department of military engineering.*

III.—*The department of military law.*

I. *Military art*

The course will comprise the following subjects or fields of inquiry:

(a) *Troops in campaign.*—Organization, field orders, marches, camps, supply, and the care of troops in the field. Instruction in sanitation and the care of troops to be given by The Army Field Service and Correspondence School for Medical Officers.

Instruction by conferences, lectures, and practical problems.

(b) *Tactics.*—Of the single arm and of the arms combined.

Instruction by conferences, lectures, demonstrations, and practical work in map problems, terrain exercises, tactical rides, and maneuvers on the map and in the field.

(c) *Weapons and munitions of war.*—Instruction by conferences, lectures, and practical demonstrations relating to modern military weapons and munitions and their employment in war.

(d) *Military history.*—Instruction by conferences and lectures.

(e) *Hippology and equitation.*—Instruction by lectures, discussions, and practical demonstrations.

Practical instruction in equitation (not considered in determining class standing).

(f) *Lectures and discussions on questions of current military interest* (not considered in determining class standing).

(g) *Conduct of war.*—Instruction by conferences and practical problems.

II. *Military engineering*

Instruction in military engineering will be given by The Army Field Engineer School. The course will comprise theoretical and practical work in the following subjects.

(a) *Military topography, map reading.*—The principles and practice involved in the use of all classes of maps for military purposes.

Instruction by conferences and practical examinations, and by studies of terrain, assisted by the staff class.

(b) *Military topography, surveying.*—The principles and practice involved in the making of topographical surveys, with special reference to the subsequent instruction in sketching.

Instruction by conferences, field practice under the staff class as instructors, and field problems.

(c) *Military topography, sketching.*—The principles and practice involved in the rapid making of individual road, outpost, position, and place sketches, and their combination and reproduction.

Instruction by lectures, conferences, field practice under the staff class as instructors, and field problems.

(d) *Field engineering.*—The making and handling of engineering

devices to facilitate or hinder the operations of troops in the field. Instruction by conferences, lectures, and demonstrations.

(e) *Field fortification*.—The theory and application of the principles of field fortification with special reference to its relation to tactics.

Instruction by conferences, lectures, and the solution and discussion of field and map problems involving the location and preparation of defensive positions.

III. *Military law*

The course will comprise the following subjects. Instruction will be given by conferences, lectures, and study of cases:

(a) *Elements of law*.—Law in general and the relation of military and martial law thereto.

(b) *Criminal law*.—With special reference to military tribunals.

(c) *Law of evidence*.—With special reference to military tribunals.

(d) *Practical exercises*.—Applying the principles of law to the procedure of military tribunals and to military administration generally.

EXAMINATIONS

Proficiency and class standing of student officers will be determined only by thorough examination in theoretical work and tests in practical work. To be declared proficient in any subject of the course of study, a student officer must obtain not less than 75 per centum of the maximum value assigned to that subject. If the subject is divided into theoretical and practical parts, he must obtain not less than 75 per centum in each, and if the practical part consists of two or more distinct classes of work, he must obtain not less than 75 per centum in each class.

The division of a subject of the course of study into theoretical and practical parts, and of the latter in distinct classes, will be regulated by the academic board with the approval of the commandant.

In the *theoretical part* of a subject the final examination will be held as soon as practicable after the completion of that part. Any student officer absent from such examination on account of sickness or other cause will be examined as soon as practicable after his return to duty, the examination being similar to, but not identical with, the one from which he was absent.

In the *practical part* of a subject the test will consist of a series of exercises or problems sufficient in number and scope to determine the degree of proficiency of student officers in that part; any student officer not completing such series on account of sickness or other causes will be averaged on the marks he has received on that portion of the series completed by him, *provided* he has completed not less than 50 per centum of the work prescribed for the series, and not

otherwise; and, *provided further*, if such *practical part* consists of two or more distinct classes of work, that he shall be averaged separately on each class in which he has completed not less than 50 per centum of the work. When a student officer, through no fault of his own, has failed to complete 50 per centum of any series or class of exercises or problems, and is thus prevented from attaining an average as prescribed herein, such exercises or problems will be given him as the academic board may prescribe for the purpose of determining his proficiency and standing.

A student officer failing to obtain 75 per centum in an examination in the *theoretical part* of a subject will be reexamined in that part as soon as practicable, but such reexamination will determine only the question of proficiency, his order of merit or standing in the class being determined by the mark made at the original examination. If he fails to obtain 75 per centum in the practical part or any class of the practical part of a subject, he will not be entitled to a reexamination therein, and will be declared deficient.

If a student officer is found deficient upon reexamination in the *theoretical part* of a subject, or makes less than 75 per centum in any class of the practical part, he will be reported as deficient to the War Department, with a statement as to the cause of failure as determined by the academic board, with a view to his being relieved from duty at the school: *Provided*, That if the commandant and academic board are satisfied that the said officer has done his utmost to master the subject, he may (in order to afford him opportunity to complete the remainder of the course) be permitted to continue with his class until it is graduated.

RECORD, ARRANGEMENT AND PUBLICATION

For record at the school and at the War Department the class, upon graduation, will be arranged in order of merit and graded as follows:

(a) Honor graduates: Those graduates from the head of the class down in regular order, and not exceeding five, who receive the recommendation of the academic board, approved by the commandant. They will be borne upon the Army Register as "honor graduates" of The Army School of the Line.

Distinguished graduates: Those (exclusive of honor graduates) who receive the recommendation of the academic board, approved by the commandant, for detail to The Army Staff College. They will be described in the Army Register as "Distinguished graduates" of The Army School of the Line.

(c) Graduates: Those who have obtained at least 75 per centum in all the examinations or reexaminations and tests prescribed above. They will be borne upon the Army Register as "graduates" of The Army School of the Line.

For publication, the honor graduates may be arranged according to merit in a separate list, but all other graduates will be arranged

alphabetically in two lists, one of distinguished graduates and the other of graduates.

SPECIAL SCHOOLS

I. The Army Staff College

This college will be known as The Army Staff College. Its object is to train the selected graduates of The Army School of the Line for the more important duties with large commands in time of war.

The assistant commandant of The Army Service Schools will be also the director of The Army Staff College.

STUDENT OFFICERS

Selections of student officers will be made as follows:

(a) They will be detailed annually, by the War Department, from the highest graduates of the latest class of The Army School of the Line who receive the recommendation of the academic board, approved by the commandant, and who desire to take the course: *Provided*, That an officer once detailed to The Army Staff College, and through sickness or War Department orders is prevented from completing the course, may be redetailed as a member of a succeeding class, upon the recommendation of the academic board, approved by the commandant.

(b) With the exceptions noted under (c) of this paragraph, no officer of the Army will be detailed for instruction in The Army Staff College who has not been graduated at The Army School of the Line with a standing as high as No. 18, exclusive of militia officers, and no militia officer will be eligible for admission to the college unless he has been graduated at The Army School of the Line with a percentage as high as that of the regular officer lowest in class standing who has qualified in accordance with the foregoing. No officer will be detailed for instruction in The Army Staff College without the recommendation of the academic board, approved by the commandant.

(c) In addition to the students who become eligible under (a) and (b) of this paragraph there may be detailed annually by the War Department, upon the recommendation of the academic board, approved by the commandant, not to exceed two graduates of The Army Field Engineer School, who may so desire, to receive instruction in The Army Staff College. To become eligible for such detail graduates of The Army Field Engineer School must attain a percentage in the course in military art as high as the student officer graduating No. 18 in that course of The Army School of the Line.

(d) The student body of The Army Staff College shall be arranged into two (2) sections, as follows:

1. Based upon special qualifications or lack of qualifications for the elective subjects of either course, to be determined by the academ-

ic board, the preference of individuals being considered as far as practicable.

2. By transfer, by the academic board, in the early part of the course.

COURSES OF STUDY

Courses of study will be embraced in five departments as follows:

Compulsory course	{ Department of Military Art. Department of Military Engineering. Department of Military Law.
Elective course	{ Department of Languages. Department of Staff Supply.

I. *Military Art*

The course will comprise the following subjects or fields of inquiry:

(a) *Staff duties:*

To include duties of the General Staff, supply, and administration.

Instruction by lectures and conferences and practical problems.

(b) *Tactics:*

Instruction by lectures and conferences.

Map problems and terrain exercises, tactical and staff rides, and maneuvers on the map and ground.

Practice in criticising and umpiring practical exercises in The Army School of the Line and The Army Field Engineer School.

Practical demonstrations of the uses of all means afforded by the Signal Corps for gaining information and furnishing lines of information in the theater of operations, including balloons, wireless and ordinary telegraph, telephones, etc., in conjunction with field exercises.

(c) *Military history:*

Instruction by lectures and conferences and if practicable by an historical ride.

(d) *Strategical and tactical cooperation of the Army and Navy:*

Lectures on modern navies and naval warfare, with special reference to cooperation with an army. These lectures will be given, when practicable, by an officer of the United States Navy.

(e) *Care of troops:*

Instruction in the care of troops will be given by The Army Field Service and Correspondence School for Medical Officers as called for by the schedule of The Army Staff College, approved by the commandant.

II. *Military engineering*

Instruction in military engineering will be given by The Army Field Engineer School. The course will comprise practical work in the following subjects:

(a) *Military topography, sketching.*—The making of rapid individual, road, position, outpost, and place sketches; combined road and position sketches; the organization and direction of sketching and surveying parties covering large areas, and the methods of combining the resulting sketches; photographic and mechanical processes for reproduction of maps and drawings; assisting in the instruction of the Army School of the Line in the practical work in military topography.

Instruction by lectures, demonstrations, and field problems:

(b) *Fortification.*—The principles and application of field, provisional, and permanent fortifications and the attack and defense of fortified places.

Instruction by lectures and by field and map problems in the location and preparation of defensive positions and in fortress warfare.

III. *Military law*

The course will comprise the following subjects, instruction to be given by conferences, lectures, study of cases, and original research:

Military government and martial law, the laws of war, and the military in aid of the civil authorities.

IV. *Languages*

The course of instruction in languages will be elective for the student officer and will comprise instruction in French, German, Spanish, or any other foreign language in which it may be practicable to give instruction: *Provided*, That no student officer will be permitted to elect one of these languages unless he has a satisfactory knowledge of Spanish, to be determined by the senior instructor, department of languages. The course in each language will comprise instruction in reading, writing, and speaking, with a special view to acquiring a conversational knowledge of the language. Instruction will be given by conferences, lectures, and conversational practice.

V. *Staff supply*

(a) *Staff administration and supply:*

Going into details as to the lines of communication and base, their organization, etc., with reference to supply work.

(b) *Mechanical traction:*

Including study of gasoline engines and practice with motor trucks.

- (c) *Movements by rail and over sea:*
- (b) *Law:*
Having particular application to the duties of administration and supply.
- (e) *Military and commercial geography:*
- (f) *Animals and vehicles—draft and saddle animals:*
Purchase, inspection, training, and conservation of green animals. Animal endurance in saddle, draft, and pack. Vehicles, traction and packing. Forage and feeding. Transportation of animals by rail and over sea. Organization and management of horse depots. Veterinary hygiene.
- (g) *Supplies and fiscal administration:*
Furnishing, purchasing, inspection, care and issue. Returns and accountability.

EXAMINATIONS

There will be no examinations in The Army Staff College. Should any student officer neglect his studies or other military duties, he will, upon the recommendation of the academic board, approved by the commandant, and by authority of the Secretary of War, be relieved by the commandant from duty at The Army Staff College and be sent forthwith to join his regiment or corps.

RECORD, ARRANGEMENT AND PUBLICATION

For record at The Army Staff College and at the War Department, the members of the class, upon satisfactory completion of the course, will be designated as graduates. The term "graduate" will signify that the student officer has attained a proficiency in all of his work satisfactory to the academic board.

In all published lists the names of the graduates will be arranged in alphabetical order.

II. The Army Signal School

This school will be known as The Army Signal School. Its object is: (1) To prepare officers of the Signal Corps for the better performance of the duties of their profession, to provide instruction in signal duties for such officers of the line as may be designated therefor, and to make research and practical experiments in such subjects as relate to the duties of the Signal Corps. (2) To supplement the instruction given in The Army School of the Line and The Army Staff College along the special technical lines of the Signal Corps as called for by the schedules of the latter schools, having especially in view the relation of the Signal Corps to the whole Army and the function it fulfills in time of war.

There will be detailed a field officer of the Signal Corps to report

to the commandant of The Army Service Schools for duty as director of The Army Signal School.

Selections of student officers will be made as follows:

(a) The Chief Signal Officer of the Army may submit to The Adjutant General of the Army, not later than January 1 of each year, the names of not less than two nor more than five officers holding permanent or detailed appointments in the Signal Corps for instruction in the school.

(b) Also there may be detailed such officers of the rank of captain, first lieutenant, or second lieutenant of over five years' service, from the Army at large as may make application to The Adjutant General of the Army and receive the recommendation of the commandant of The Army Service Schools, or who may come under the provisions of paragraph 103 of this order, provided that the total number of officers thus to be detailed under (a) and (b), exclusive of militia officers, shall not exceed 15; also such signal officers of the Organized Militia as may apply for entrance, subject to the provisions of paragraphs 10 to 22, inclusive, excepting paragraph 14 of this order.

The officers finally selected to attend The Army Signal School will be announced in orders from the War Department.

EXAMINATION OF MILITIA OFFICERS FOR ADMISSION

The following will be substituted for the examination in military subjects as set forth in paragraph 14:

- (a) Administration. (Consult especially the following paragraphs, Army Regulations, 1910: 13, 14, 15, 16, 18, 57, 76, 77, 80, 83, 134, 135, 138, 188, 191, 192, 196, 197, 203, 751, 792, and 1578 to 1586, inclusive.)
- (b) Manual of Guard Duty.
- (c) Manual for Courts-Martial.
- (d) Field Service Regulations (Articles II, III, IV, and V.)
- (e) Provisional Drill Regulations for Signal Corps Troops, 1911.

In lieu of examinations in any of the foregoing subjects certificates of proficiency from garrison schools in such subjects will be accepted.

COURSE OF STUDY

The course of study will be embraced in one department as follows:

I.—*The department of signal engineering.*

I. *Signal engineering*

The study of this subject will be divided into two parts, theoretical and practical.

Theoretical instruction will be conducted by means of lectures, recitations from the authorized manuals and textbooks, technical con-

ferences, and written problems, and will comprise the following subjects or field of inquiry:

- (a) Fundamental laws of electricity and principles of electrical engineering.
- (b) Electrical signaling.
- (c) Visual signaling.
- (d) Aeronautics.
- (e) Tactical relations of signal troops.
- (f) Fire control equipment for artillery.
- (g) Telegraph lines and submarine cables.
- (h) Gas and oil engines.
- (i) Photography.
- (j) Codes and ciphers.

Practical instruction will consist of laboratory, photographic, and aeronautical work and exercises in the field.

The laboratory course will embrace instruction in making fundamental electrical measurements, and in the operation, repair, and maintenance of various instruments and appliances used by the Signal Corps, such as buzzers, telephones, various forms of telegraphs, and wireless apparatus.

In visual signaling instruction will be given in the use of flags, heliographs, acetylene lanterns, rockets and bombs, field glasses and telescopes.

The aeronautical course will embrace practical instruction as far as possible in packing, unpacking, and assembling balloons and flying machines, the manufacture and transportation of hydrogen gas, inflation of balloons, operation of motors, and ascensions.

Instruction will be given in operating gasoline and oil engines.

The practical instruction in photography will consist of the taking, developing, and printing from negatives under field conditions.

The field exercises will embrace the use of the various instruments and appliances used for military signaling in all its branches and in the solution of field problems. Preparatory to the solution of field problems, lectures will be given on divisional tactics, and map problems solved involving the employment of signal troops.

Theses

Each student officer will prepare a thesis on some professional subject approved by the director The Army Signal School, and submit the same in the required form prior to June 15 of each year.

Technical conferences

There will be conducted in connection with The Army Signal School, under the general supervision of the director, a series of technical conferences for the presentation of original papers and for report, criticism, and discussion of papers pertaining to military field

signaling or signal engineering procured from current military journals or other available sources.

The student officers and the signal troops connected with The Army Signal School will be used to cooperate as far as possible with the department of military art of The Army School of the Line, The Army Field Engineer School, and The Army Staff College in furnishing military lines of information of all kinds required in terrain exercises, maneuvers, and staff or tactical rides, to the end that the student officers of all these institutions may obtain the maximum benefit from the exercises prescribed.

EXAMINATIONS

Any student officer of this school whose progress in any of his studies is not satisfactory to the academic board will be examined therein under the provisions of the rules governing examinations and proficiency prescribed in paragraphs 24 to 29, inclusive.

RECORD, ARRANGEMENT AND PUBLICATION

For record at the school and at the War Department the members of the class, upon the satisfactory completion of the course, will be designated as graduates. The term "graduate" will signify that the student officer has attained a proficiency in all of his studies satisfactory to the academic board or has obtained at least 75 per centum in each of those subjects in which he has been examined or reexamined.

In all published lists the names of the graduates will be arranged in alphabetical order.

They will be borne upon the Army Register as graduates of The Army Signal School.

III. The Army Field Engineer School

This school will be known as The Army Field Engineer School. Its object is: (1) The instruction of officers of the Corps of Engineers and of engineer officers of the Organized Militia in their military duties. (2) To furnish such instruction in military engineering as the schedules of the other schools comprising The Army Service Schools may call for.

There will be detailed a field officer of the Corps of Engineers to report to the commandant of The Army Service Schools for duty as director of The Army Field Engineer School.

STUDENT OFFICERS

Selections of student officers will be made as follows:

(a) The Chief of Engineers will submit to The Adjutant General of the Army, not later than January 1 of each year, the names of not

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less than 2 nor more than 10 officers of the Corps of Engineers, of grade not below that of captain, for instruction in the school.

(b) There may also be detailed such engineer officers of the Organized Militia as may apply for entrance, subject to the provisions of paragraphs 10 to 22, inclusive, excepting paragraph 14 of this order.

The officers finally selected to attend The Army Field Engineer School will be announced in orders from the War Department.

EXAMINATION OF MILITIA OFFICERS FOR ADMISSION

The following will be submitted for the examination in military subjects as set forth in paragraph 14:

- (a) Administration. (Consult especially the following paragraphs, Army Regulations, 1910: 6, 9, 13, 14, 15, 16, 18, 57, 76, 77, 80, 83, 134, 135, 188, 191, 192, 196, 197, 203, 214, 226, 227, 232, 453, 455, 457, 751, 773, 792, and 1515 to 1532, inclusive.)
- (b) Manual of Guard Duty.
- (c) Manual for Courts-Martial.
- (d) Field Service Regulations (Articles II, III, IV, and V).
- (e) Manual of Field Engineering, Beach (Chapters I-X, inclusive).
- (f) Topographical Surveying and Sketching, Rees (Chapters I, II, III, and XV, omitting analytical solutions).

In lieu of examination in any of the foregoing subjects certificates of proficiency from garrison schools in such subjects will be accepted.

COURSE OF STUDY

The course of study will be embraced in two departments, as follows:

- I.—*The department of military engineering.*
- II.—*The department of military art.*

I. *Military engineering*

The study of this subject will be both theoretical and practical. Theoretical instruction will be by lectures, conferences upon assigned lessons, and written examinations. Practical instruction will be by problems and terrain exercises.

The course will comprise the following subjects and fields of inquiry:

- (a) Military map making with especial reference to large areas.
- (b) Organization, duties, and equipment of engineer troops.
- (c) Field fortification, including mining and demolitions.
- (d) Engineering works on lines of communication.
- (e) Castrametation.

II. *Military art*

The study of this subject will be in all respects identical with the study of the same subject in The Army School of the Line, and will be conducted under the direction of the director and instructors of that school. Student officers of The Army Field Engineer School will be graded in the military-art course in the same manner as student officers of The Army School of the Line.

Theses

Each student officer will prepare a thesis on some professional subject approved by the director of The Army Field Engineer School, and submit the same in the required form prior to June 15 of each year.

EXAMINATIONS

Any student officer of this school whose progress in any of his studies is not satisfactory to the academic board, will be examined therein under the provisions of the rules governing examinations and proficiency prescribed in paragraphs 24 to 29, inclusive.

RECORD, ARRANGEMENT AND PUBLICATION

For record at the school and at the War Department, the class, upon graduation, will be arranged in order of merit as follows:

(a) Honor graduates: Those graduates from the head of the class down in regular order who have obtained 95 per cent. or over in Military Engineering (including the thesis) and whose standing in Military Art is equal to, or better than, that of the student of The Army School of the Line of that year who graduates fifth in the course in Military Art, and who receives the recommendation of the Academic Board, approved by the commandant. They will be borne upon the Army register as "Honor Graduates of the Army Field Engineer School."

(b) Graduates: All other student officers who have completed the course satisfactorily, to do which each must have obtained at least 75 per cent. in each of those subjects in which he has been examined or reexamined. These shall be borne upon the Army Register as "Graduates of the Army Field Engineer School."

IV. The Army Field Service and Correspondence School for Medical Officers

This school will be known as The Army Field Service and Correspondence School for Medical Officers.

It will consist of two parts: One, The Field Service School for Medical Officers, at which attendance in person for the pursuance of

a graded course of study is required; the other, The Correspondence School, wherein answers and solutions to such questions and problems as may be sent to designated medical officers, at their posts or stations, are required. Its object is:

In The Field Service School:

(a) To instruct officers of the Medical Corps and medical officers of the Organized Militia in their duties as administrative and staff officers on field service, and to make research into such subjects as may concern medical officers under field conditions.

(b) To give such technical instruction to students in the other schools as the schedules of those schools, approved by the commandant, may call for.

In The Correspondence School:

(c) To afford opportunity for such wider elementary instruction in the methods and purposes of military plans and movements as will enable medical officers of the Regular Army better to fulfill their duties in the field, and to prepare them to participate to better advantage as students in actual attendance at The Field Service School for Medical Officers.

There will be detailed a field officer of the Medical Corps, to report to the commandant of The Army Service Schools, for duty as director of The Army Field Service and Correspondence School for Medical Officers.

PERIOD OF INSTRUCTION

Selection of student officers will be made as follows:

(a) The Surgeon General will submit to The Adjutant General of the Army not later than January 1 of each year the names of not less than four nor more than eight officers of the medical corps whom he recommends for detail for instruction in this school.

(b) Medical officers of the Organized Militia who may apply for entrance and whose admission may receive the approval of the Secretary of War, not to exceed a total of six in any one session, may also be detailed for instruction in the school, subject to the provisions of paragraphs 11, 16, 18, 20, 21, and 22 of this order.

The officers finally selected to attend the Army Field Service School for Medical Officers will be announced in orders from the War Department.

COURSE OF STUDY

The course of study will be conducted under The Field Service School for Medical Officers, The Army Staff College, and The Army Field Engineer School. Its details will be prepared by the director of The Army Field Service and Correspondence School for Medical Officers, in cooperation with the directors of The Army Staff College and The Army Field Engineer School, subject to the approval of the

commandant. In a general way, its scope will be as follows:

Under The Field Service School for Medical Officers the course will comprise:

(1) General sanitary organization and organization of sanitary detachments, units, and formations; sanitary equipment and supply; the transportation of sick and wounded; weapons, ranges, and positions; tactical use of the sanitary service in war; the sanitary service of the line of communications and the base; hospital trains and ships; the use of the Red Cross and other voluntary aid associations.

Instruction will be by lectures, conferences, problems, terrain exercises, tactical rides, and the practical use and direction of field sanitary units.

(2) The civil sanitary function of the Medical Department in occupied territory.

Instruction will be by conferences and problems.

Under The Army Staff College:

Organization and administration of troops in the field; orders; the elementary principles of tactics; staff administration and supply.

Instruction will be by lectures, demonstrations, tactical and staff rides, and maneuvers on map or terrain.

Under The Army Field Engineer School:

(1) Military topography, map reading: The principles and practice involved in the use of all classes of maps for military purposes.

(2) Military topography, sketching: The principles and practice involved in the rapid making of simple road and position sketches.

Instruction will be by lectures, conferences, and field practice.

CERTIFICATES OF PROFICIENCY

Student medical officers who complete the course satisfactorily will receive certificates setting forth that fact.

NEGLECT OF DUTY

Should any student officer neglect his studies or other military duties, he will, upon recommendation of the academic board, approved by the commandant, and by authority of the Secretary of War, be relieved by the commandant from duty at The Army Field Service and Correspondence School for Medical Officers and sent forthwith to join his proper station.

REPORT ON QUALIFICATIONS

At the end of the course of instruction the director will report upon the qualifications of each student officer for the performance of the administrative duties of the sanitary service in the field.

This report will be forwarded by the commandant, with such remarks in the case as he deems proper, to The Adjutant General of the Army for file with the personal record of the officer concerned.

CORRESPONDENCE COURSE

There will be detailed by the War Department, upon recommendation of the Surgeon General, not to exceed 30 officers of the Medical Corps of the Regular Army to take the correspondence course each year.

The questions, problems, etc., forming this course of instruction will be prepared by the director of The Army Field Service and Correspondence School for Medical Officers, under the direction of the commandant.

The commandant of The Army Service Schools will furnish copies of the questions to be answered and problems to be solved to each of the officers designated to take the course. For this purpose a list of the officers nominated by the Surgeon General will be furnished the commandant prior to the beginning of the course. Copies of the questions and problems will then be transmitted by the commandant to each officer, through the commanding general of the department in which he may be serving.

SPECIAL COURSES

With a view to enlarging the usefulness of The Army Service Schools to the Army, not to exceed 20 officers of the Regular Army will be detailed to pursue a special course in tactics between January 1 and April 1 of each year.

To be eligible for this detail officers must be of grade not lower than that of major.

Such officers as are to be detailed for this special course will be selected by, and announced in orders from, the War Department.

The course of instruction will be prepared by the director of The Army Staff College, and will be under his immediate direction. Instruction will be given by the various schools and departments of The Army Service Schools in accordance with the schedule for the special course, as approved by the commandant.

Upon completion of the course the commandant will make a special report to be forwarded to The Adjutant General of the Army for file with the records of the officers.

General Regulations for the Government of The Army Service Schools

POST ADMINISTRATION

Such of the officers and enlisted force with their equipment on duty in the garrison or at the schools, Fort Leavenworth, Kansas, as may be deemed necessary by the commandant, will be available for the practical instruction of student officers.

The commandant will order the expenditure of such authorized quantities of ammunition for field guns, machine guns, and small

arms as may be deemed necessary for instruction at The Army Service Schools.

DISCIPLINE

The schools and college will be governed by the rules and discipline prescribed for military posts and by their own special regulations. Matters pertaining to them and to the course of instruction will be subject exclusively to control of the War Department, and all communications for officers on duty with the schools will be sent through the commandant directly and not through department headquarters.

PERSONNEL AND STAFF .

The personnel of the schools will consist of all officers, enlisted men, and civilian employees on duty thereat. The staff will consist of all officers not students on duty thereat, other than the commandant and his personal aides.

THE COMMANDANT

The commandant will see that the work of The Army Service Schools is coordinated and that cordial cooperation is maintained at all times.

He is authorized to convene the academic board for consideration of any matters affecting The Army Service Schools or of a single school which is a constituent part of The Army Service Schools. At such session the senior officer present will preside.

He will apply to The Adjutant General of the Army for the detail of officers for duty at the schools and will assign them to duty as assistant commandant, directors, instructors, and secretary, as may be necessary.

On the 31st of August of each year he will make a report upon the schools and college, setting forth their progress and such changes as are deemed desirable to promote further progress and improvement. This report, as also the appended reports of the directors, librarian, secretary and disbursing officer, will embody the statistical information heretofore included in annual reports.

He will furnish annually, for use in the office of the Chief of Staff and of the president of the Army War College, bound volumes containing the record of each student officer of the schools and college, as reported to The Adjutant General of the Army under the provisions of paragraph 99, G. O. 128, War Department, dated September, 19, 1911.

Upon the completion of the course of instruction at the end of the school year he is authorized, unless prevented by special instructions, to grant to the officers and men under his control the same leaves of absence and furloughs as department commanders are author-

ized to grant under the provisions of Army Regulations. But during the course of instruction he will not, without authority of the Secretary of War, grant leaves of absence to officers involving absence from duty, except in cases of emergency, and then only for a period not exceeding 10 days at any one time.

He will make application to the War Department for such articles of engineer, ordnance, and signal property as may be necessary.

ACADEMIC BOARD

The academic board will supervise the methods of instruction and work in the several departments and schools, the preparation of annual reports and schedules, assist the commandant in coordinating the courses of instruction and securing uniformity in publications of the schools.

There will be but one academic board for The Army Service Schools. It will consist of the commandant, the assistant commandant, the directors of the various schools which constitute The Army Service Schools, and the senior instructors of the departments of military art, languages, and law of The Army School of the Line. The secretary of The Army Service Schools will be the secretary of the academic board, but will have no vote. A majority of the academic board will constitute a quorum for the transaction of business, but no action or recommendation of the academic board will be final until approved by the commandant. All deliberations, discussions, and individual votes will be confidential.

CORRESPONDENCE

All official correspondence relating to the schools from officers on duty therewith will be addressed to the secretary.

LIBRARY

The librarian, under the direction of the commandant, will be charged with the administration and interior economy of the library.

He will be responsible for the books and other property therein and will render an annual report thereof to the secretary.

There will be a library committee for the schools and college, consisting of the secretary, the librarian, and one other officer designated by the commandant from among those belonging to the staff of the schools and college. Subject to the approval of the commandant, this committee will be charged with the preparation of regulations for the administration and interior economy of the library and with the selection of books to be purchased therefor.

INSTRUCTORS AND STUDENT OFFICERS

The directors of the various schools will be assisted by such num-

ber of senior instructors and instructors assigned to the several departments of those schools by the commandant as may be required.

When practicable instructors will be senior in rank to student officers but whether senior or junior, instructors while in the execution of their duty will be accorded the respect due to their position.

The personnel of the schools and college will be exempt from all ordinary staff duties and garrison routine, from court-martial duty (except in case of necessity), from such drills and ceremonies as are not included in the course of instruction, and, in general, from all duties which would interfere with the performance of their functions in connection with the schools and college.

Details for instruction as student officers will, except as above specified, cover one year, from the 15th of August to the 14th of the following August, inclusive, and officers detailed for instruction will report in person to the commandant not later than the 15th of August of each year.

FOREIGN STUDENT OFFICERS

Foreign officers attending the schools or college will be supplied with all the facilities and enjoy all the privileges accorded to other student officers, but they will not be marked or graded in any way.

INSTRUCTION

The course of instruction at the schools, except as otherwise provided in this order, will be included in one term beginning on the 1st of September (unless that date fall on Saturday or Sunday, in which case the term will begin on the following Monday) and ending on the 30th of June following. Staff rides or visits to battle fields for student officers who have just been graduated at The Army Staff College may be conducted between the date of graduation and the 14th of August and during this period, except that part consumed in the staff ride or visit to a battle field, these officers may be detailed by direction of the Secretary of War for duty at field maneuvers or camps of instruction. Such instructors as may be necessary will be detailed to accompany the class on its staff ride or visit to a battle field.

Exercises in instruction will be held daily, except Saturdays, Sundays, holidays, and the period from December 24 to January 1, both inclusive. Saturday forenoons may be used when necessary to maintain the regular yearly schedule in the different departments.

All instruction will be strictly in conformity with principles laid down and customs observed in official publications of the War Department and authorized textbooks.

To facilitate practice of topographical reconnaissance and the conduct of field exercises on unfamiliar ground, the commandant may, in his discretion, by use of facilities at hand and available at

military posts, take the personnel of the schools and college into temporary camps.

The allotment of time for instruction in each department of the schools and college, and for equitation and physical exercise during the winter months and in inclement weather; the assignment of values to the different subjects in the course of instruction and the methods of conducting and marking practical work and examinations, subject to the limitations of the foregoing paragraphs, will be regulated by the academic board with the approval of the commandant, and will be published by the latter for the information of all concerned; but no material changes in the total amount of time allotted any department, or in the courses of instruction, or in the character of practical work, or in the methods of instruction and marking in practical work and examinations will be made without the approval of the Secretary of War.

GRADUATION

A student officer who passes successfully through the entire course of instruction in The Army School of the Line, The Army Signal School, The Army Field Engineer School, or The Army Staff College will receive a diploma setting forth his proficiency, and also a certificate of proficiency covering all subjects completed by him during the course, and his name will be borne thereafter upon the Army Register as a graduate thereof. Diplomas will be signed by the commandant and by the academic board. Officers who have been unable to complete the entire course will receive certificates of proficiency in such subjects as they have completed satisfactorily.

At the end of the term the academic board will report upon the qualifications of each student officer for The Army School of the Line, The Army Staff College, The Army Signal School and The Army Field Engineer School, and will state the professional employments for which he appears to be well or especially well qualified. These reports, together with a report of the marks and standing of each student officer in The Army School of the Line will be forwarded by the commandant with such remarks in the case of each student officer as he deems proper to The Adjutant General of the Army for file with the personal record of the officer concerned. The commandant will also send a copy of each student officer's school record to his regimental commander, or, in the case of a staff officer, to the chief of his corps or department.

MISCELLANEOUS

Upon graduation of the classes the commandant will also make a special report to The Adjutant General of the Army showing how each graduate should be borne upon the register in pursuance of these regulations.

After the standing of the student officers in The Army School of the Line and The Army Field Engineer School has been determined, the academic board will convene to recommend officers for detail for instruction in The Army Staff College for the following year. These recommendations will be forwarded by the commandant, with his own action thereon, to The Adjutant General of the Army. Entrance to The Army Staff College from The Army School of the Line and The Army Field Engineer School will be accorded student officers in order of their graduation as far down the class (arranged according to merit) as they shall be recommended by the academic board, approved by the commandant, subject to the restrictions of paragraph 34, and their arrangement into sections for compulsory or elective courses shall be made as provided in paragraph 34, General Orders, No. 128, War Department, 1911, as amended. Said recommendation and approval, however, will not be withheld from any officer and given to one below him in order of graduation, except on account of moral deficiencies or defects in habits or disposition sufficiently serious to render him markedly unsuitable for staff service. Whenever the recommendation of the academic board or the approval of the commandant is thus withheld, the reason for such action will be stated clearly in each case, giving details of such misconduct or defects as are relied upon to justify the withholding of said recommendation or approval.

Any graduate of The Army School of the Line, with the approved recommendation of the academic board, may take the course in The Army Signal School. Applications from officers of The Army School of the Line to take the course in The Army Signal School will be submitted to the commandant not later than May 1, each year.

Upon completion of the course of instruction in The Army School of the Line and The Army Field Engineer School the commandant may retain at the post, with a view to their detail for instruction in The Army Staff College and The Army Signal School, such officers as may have received corresponding recommendations by the academic board approved by the commandant, awaiting the issue of orders by the War Department in their cases.

Unless otherwise instructed the commandant will, upon the completion of the courses of instruction, relieve all student officers of the Regular Army (except those designated for instruction in The Army Staff College and The Army Signal School for the following year) from duty at Fort Leavenworth, and order, by authority of the Secretary of War, those whose stations are in the United States or Alaska to join their proper stations, and those whose stations are in the Philippine Islands or Hawaii to arrange for transportation with the Quartermaster General and report at San Francisco, California, in time to take the first Army transport which sails thereafter. All student officers of the Organized Militia will be relieved and authorized, by order of the Secretary of War, to proceed to their respective homes.

The commandant may also, at their own request or upon ex-

piration of detail, relieve from duty members of the staff of the schools and college and issue the necessary orders in each case as authorized above.

Upon the recommendation of the academic board the commandant may with the approval of the Secretary of War, retain graduates of The Army Staff College on duty at the schools and college and assign them to duties specified in paragraph 77, General Orders, No. 128, dated War Department, September 19, 1911, but no graduate of The Army Staff College will be so retained on such duty for a longer period than two years without the special authority of the Secretary of War in each case. Under the same conditions and limitations graduates of The Army Signal School and The Army Field Engineer School may be retained for assignment to duty therein.

The commandant shall furnish to The Adjutant General of the Army, and to all headquarters, commanding officers, and others interested in or affected by such changes, copies of all orders issued by him, pursuant to authority contained in these regulations changing the official status of officers.

A Graduate School of War

By Robert Welles Ritchie

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NOT many years ago an officer of our army, who carried a satisfactory string of service ribbons on the left breast of his fatigue-jacket and on his shoulders' insignia considerable higher than the double bars of captaincy, experienced an interesting conversion. Of the elder school was this officer—the old, Indian-fighting, up-and-at-'em type, whose creed was a clean carbine, an easy saddle, and a competent quartermaster. Soldiers were made in the field, not in the class-room; fighters could take nothing of profit from a book, according to his doctrine, bred of experience in Cuba, China, and the Philippines. He snorted disdainfully at the enthusiasm of younger officers for a school of instruction in the higher arts of war; grudgingly he forwarded to the Adjutant General of the army each year the names of young fools of his command who desired to absent themselves from the regiment for the purpose of "book-grubbing." But each young officer returned to his post a missionary of a new idea, and the Old Man, mingling saving grace of curiosity with his conservatism, whiffled through his nose less loudly. At last he applied for permission to take the special three months' course for officers of higher command in the Army Service Schools at Fort Leavenworth, Kansas.

Then commenced the interesting processes of conversion in the hardened professional conscience of Colonel Shellback. He found himself all at once thrust into an atmosphere of tremendous effort, of perfervid zeal. Men of his own rank, as well as of lesser dignity, were going to school under instructors their junior in years and grade, were applying themselves in laboratory and under student lamp twelve, fourteen, sixteen hours a day. Instructors, themselves of necessity students of the arts they taught, worked harder than the men who sat before their lecture platforms. Old Colonel S. made, first off, a striking discovery: the habit of study slips far away from a man on the gloaming side of fifty. But the education of the seasoned campaigner, thus fairly grounded in humility, progressed satisfactorily within the limitations of the special course allowed him, and he was only too glad to acknowledge—not without a twinge of sadness—that three months, instead of the year or two-year regimen pursued by younger men, was a limit set for such as he in wisdom. He went back to his regiment, convinced of the success of that institution whose object, according to the terse phrase of "General Orders No. 128," is "the better preparation of the mobile army for war." Since his return to his command—and one hastens to assure that Colonel Shellback's is a composite photograph—every bulletin, every book and treatise on the specialized theory of war issued from the press of the Service Schools at Fort Leavenworth has been made

mandatory reading for his junior officers by orders of one of the Service Schools' most ardent supporters.

It was the Colonel's peculiar privilege to attend for three months what is beyond doubt the most unique and least-known graduate school in the United States. Unique in that it draws its students from a class of men that have been from fifteen to twenty years in the pursuit of their profession and with the school that gave them license to practice a memory of boyhood; little known because of the civilian world's complete ignorance of all matters pertaining to the two services. Yet since the foundation of the schools in 1881 nearly a thousand officers of the army have been entered upon the "Army Register" as graduates, the institution has grown from a single School of Application for Infantry and Cavalry, as designated by General William Tecumseh Sherman, its founder, to a group of five colleges with power to command the respectful interest of European war specialists. By the widening influence of the Army Service Schools the Colonel Shellbacks of the staff and line are being brought to appreciation of the fact that the most competent to command, whether a patrol or a division, is he whose familiarity with theory matches his experience in the practical, however wide. In a word, the Army Service Schools are making the personnel of the army's commissioned force truly professional. "The better preparation of the mobile army for war"—that is the comprehensive motto of the American army's graduate college. The general staff is thoroughly aware of the circumstance that no science is moving forward to more infinite complexities than does the grim business of war, none developing new problems with greater swiftness. It looks to the Service Schools to keep the nation's defensive arm abreast of advancing knowledge.

Great has been the change in the character of the Service Schools and the capacity of their plant since Fort Leavenworth's post headquarters housed the first class in 1881. Then Colonel Elwell S. Otis, commandant of the post, found himself at the head of a teaching staff comprising five officers highest in rank of the infantry and cavalry detachments stationed at the post. Student officers from like branches of the service throughout the country were attached to the units stationed at Fort Leavenworth and were expected to perform all their duties as company officers in addition to those of instruction. Rank of student officers was not to exceed that of lieutenant. "Correct reading aloud, with care and precision"—this is quoted from the prospectus of instruction for the first class—"Writing a plain hand, easy to read, designed for the use of the party receiving": two essentials of an officer's higher education in the days when a raid by restless Indians constituted almost the sole military problem against the horizon. But with years came expansion. After the Spanish War, which, with the ensuing Philippine campaigns, caused a cessation of work at the Leavenworth schools for four years, came the reorganization, whereby the old Infantry and Cavalry School became, first the

General Service and Staff College and, in 1911, the present collection of five schools with a roll of seventy-five student officers, thirty instructors, and a curriculum embracing such subjects as the mobilization of national resources and the laying and repairing of ocean cable. On the heights above a crescent bend of the Missouri River, three miles north of the city of Leavenworth, stands the academic building, its clock-tower a landmark for the far hills behind Kansas City. Under the wide roof of Grant, Sherman, and Sheridan halls are electric laboratories, printing, book-binding, and map-making plants, a library of thirty thousand volumes. Comfortable brick houses and bachelor flats, scattered under the oaks and elms on the high lands over the river, provide quarters, one hundred and fourteen in all, for the student officers and instructors and their families; these apart from the homes of the officers on duty at the post. Barring the stiff presence of certain cannon *emeriti* deployed about the flagpole, the prospect from the steps of Grant Hall might be that of some hallowed campus in New England.

The basic school of the five at Leavenworth, and the one considered of most value, is the Army School of the Line, designed to give in a year's course a general military education of the higher order to the student officer who is willing to apply himself to the stern exactions of the curriculum. Attendance upon this, as well as the four other schools of special character, is purely voluntary; only men of enthusiasm and virile regard for the advancement of their professional standing can survive the test of a year in the School of the Line; shirkers who think to evade the monotony of post life by being detached for study in the graduate school at Leavenworth soon discover their grievous misjudgment. Competition dictates the selection of candidates for attendance upon the School of the Line, and competition of the keenest sort attends their every moment of application. One officer of grade not lower than captain and of not less than five years' commissioned service is chosen from every regiment of infantry, cavalry, and field artillery not on duty in the Philippines; the choice lying in the hands of the commanding officer of each regiment, subject to confirmation by the Secretary of War. Further restriction is imposed by the requirement that the number of field artillery officers for any one class be limited to five; this because of the practical and specialized field instruction provided by the Field Artillery School at Fort Sill, Oklahoma. The rigors of competition for appointment, coupled with individual hard luck in being detailed for service in the Philippines at a favoring moment, sometimes brings to the School of the Line men who have grown gray in the waiting.

Tradition, growing out of the system at the Service Schools, has imposed upon all who enter the Line School a responsibility quite beyond the academic purview. Because a Staff College is designed to carry the instruction of the School of the Line through a second year of even higher specialization, and attendance is restricted to a per-

centage of those standing highest in the work of the broader course, every student officer in the School of the Line strains after the coveted honor of promotion to the higher school with all the resources at his command. Forty per cent. of the Line graduates are candidates for the Staff. For the reason that selection is put thus on a competitive basis, rather than because of the intrinsic value of Staff College instruction, "making the Staff" becomes a grim shibboleth among underclassmen. Achieving the distinction of the Staff is a matter more weighty than Phi Beta Kappa honors in a university; competition has been forced to a maximum quite disproportionate to the practical benefits of the second year's instruction. "The School of the Line is of more value to the army than any of the four other Service Schools," says Brigadier General H. A. Greene, the present Commandant of the Schools. "Out of it the average student officer gets enough to make him a much better officer than he was when he came to Leavenworth, while with the Staff College there is a much smaller percentage of profit of the smaller class." Student officers in the Line are prone to attach a false value to the Staff College because of the competitive-selection feature. "But"—this with a pregnant smile—"neither the false notion nor the competition—especially the competition—does anybody harm." Not by any means negligible, however, is the reward of winning to the Staff; its graduates are eligible to attend the War College in Washington, D. C., which is the ultimate academic board of military training. Moreover, they are exempt from examination for promotion to higher rank for a period of six years after graduation.

The Army Signal School and the Army Field Engineer School, technical groups in the general scheme of the Leavenworth graduate college, have more limited courses and smaller classes than the basic School of the Line. In both instances admission to the school is by appointment of the chief officers of these two services in the regular army. The valuable laboratory of the Signal School, stocked as it is with instruments of demonstration in the magic of electricity, has been thrown open to a class of one hundred and thirty-five enlisted men of the Signal Corps, as well as to the fifteen or more commissioned students of the rank of lieutenant, or higher, assigned to study there. This departure from the rule of a school for officers only is taken because of the necessity of technical training for the rank and file of the army's sadly inadequate "eyes and ears." As with the Signal School, the fifth unit in the Service Schools is open to a wider student body. The Army Field Service School for Medical Officers, which has as an adjunct a correspondence school for medical officers of the National Guard as well as of the regular army's medical corps, offers instruction in the care of troops in the field, sanitary equipment, and supply and tactical problems of hospital practice in battle. Each year six medical officers from the organized militia, approved by the Secretary of War, join the selected officers of the army's sanitary arm

at Leavenworth to share the benefits of the Army Field Service School's instruction.

The civilian visitor to the Service Schools, who shares the common and reverential awe of the lay brother of peace in the presence of the Templars of the Shoulder-strap, is not long in the atmosphere before he drops a persistent delusion and gains an impression of such impact as almost to amount to a shock. That delusion thrown overboard is one generally held by the lay mind—that our vaunted Academy at West Point graduates finished and competent army officers. The percussive fact gleaned is that men twenty years away from books, from the ordered habit of study supposed to be exclusively the province of formative youth, can bring their unaccustomed adult minds to the discipline more severe, perhaps, than that exacted by any university.

"West Point education is purely preliminary"; this from one of the officers of the Service Schools who through his executive eyes can measure the significance of their relation to efficiency in the army scheme. "Four years at the Academy lay an excellent foundation for subsequent education in the profession of arms—and build character; yes, that is half the value of Academy training. A boy graduates into service physically, mentally, and morally well prepared to learn the art of war; but he knows little of things military, is not equipped for command. We believe the new second lieutenant has just commenced to master his profession; the major part of his scholastic and all of his practical work is still ahead of him." So the West Point graduate, you will learn at Leavenworth, really begins to go to school after he joins his regiment. The primary course he gets in the garrison school at his post, where from November to April each year a course prescribed by the War Department is expounded by his superior officers. A high percentage of efficiency in certain subjects in the garrison school exempts him from examination in these subjects for promotion. For three years, often interrupted by active service in the Philippines, the fledgling officer goes to garrison school; then he is prepared for his captaincy—when a vacancy falls—and that rank opens opportunity to enter the School of the Line or the three allied schools at Fort Leavenworth. At thirty-five or forty he completes his professional training, begun fifteen or twenty years before at the school on the Hudson, or in high school or college.

Even though the scholastic habit acquired at West Point is preserved in some degree by the quondam exercises of the garrison school, the student officers at the Service Schools are, for the most part, men in middle life who have been for many years away from the smell of the lamp—in the jungles of Mindanao, on special duty in Cuba, marooned in the mesquite desert along the Rio Grande. Men they are whose interests have all been driven along lines of the practical, whether of post routine or bushwhacking the elusive Moro. Yet here is the marvel of it: they come to the Service Schools voluntarily and out of sheer professional zeal; they hurl themselves at the highly technical and knotty problems with the dogged enthusiasm of the col-

lege "grind"; they whip their minds to acquisition of new facts twelve to sixteen hours a day, from September 1 to the close of the term in June. "How do they do it?" the incredulous civilian observer murmurs, knowing in his heart that Caesar at sight would be an impossible task for his atrophied and world-sodden intellect. "Self-discipline," answers the director of the Signal School. "Self-discipline is so strong in the men who set their hearts on coming here that they can school themselves to the habit of study. A boy of eighteen entering the Academy knows nothing of life or of the capacity of his own mind for effort. But the man of thirty-five or forty has learned to direct his mind to effort as one governs a machine, if he has learned anything; he gets top capacity out of it."

Undoubtedly another secret of this success at turning the adult mind back into forgotten channels of acquisitiveness lies in that spirit of combative competition fostered by the School of the Line. They will tell you out at Leavenworth of strong men "boning for tenths," or, in translation, fighting for a tenth part of a point in a possible hundred. Instructors are so conscientious that, in appraising the worth of a test paper or problem submitted, they often utilize two decimal places in their marking. A tenth of one unit lost might mean for a student officer failure to "make the Staff," goal of ambition and prize of a year's battling—a year's boning for tenths. The average size of the Line class is forty-five students; less than half of them may matriculate into the Staff College; every man of the forty-five is determined that he shall be among the chosen; for nine months, day and night, fight for preferment is merciless. So jealous are these middle-aged prize scholars on the subject of their averages that a few years ago the director of the School of the Line had to rule inviolable privacy for the records of examination papers and other tests; for the triumphs of individual students had become the subjects of tea-table contention and barracks gossip. Mrs. Captain Absolute struck Mrs. Captain Courageous off her invitation list because Captain Courageous was boasting he had beaten Captain Absolute in the examination on American campaigns. Under the present system only the general gradings—A, B, C, D, and E—become public; nor does any man know until the end of the year how close was the issue with his rivals.

Consider in this circumstance of war-to-the-death the delicate position of the instructor, his responsibility. The staff of instruction is drawn exclusively from the graduate list of the schools; each man has been through the grind, knows the brain tension and heartache of the game. A map problem is set for solution, following a series of "conferences," or seminar discussions of some tactical profundity; each student officer has four hours in which to write his answer to the problem; such an answer may cover ten or forty pages of legal cap, and upon its correctness may hang his record for the year. Not only must the circumspect instructor devote two or more hours to each submitted answer, but he must be prepared to argue the fine

points of his decision—for tactics is not an exact science—with the boner for tenths. Indeed, the limit of capacity for the School of the Line is set by the endurance of the instructors, for they work harder than any of the students.

The stranger in the academic building at Fort Leavenworth sees the intense spirit of application at its most graphic phase over a war game. Game it is called, but the antithesis of sport is this serious business of working to scale the disposition of hypothetical units of flesh and blood. On a half-dozen tables contour maps drawn to large scale are disposed; at each sits an umpire from the Staff College—one who has worked this same problem himself and knows its solution. Officers of the Line are divided, a group to each table, into Red and Blue commanders of regiments or brigades. Bits of red and blue cardboard represent their respective forces; a red chain of beads is a line of skirmishers; a blue-headed pin, a scouting-patrol. The problem sets forth that a Blue brigade, retreating on Leavenworth after an incursion into Missouri, is seeking to seize and hold against pursuing Reds the bridge head at the Missouri River until escape can be made good; will the Red brigade succeed in cutting off the invaders? With the units of cardboard arranged on the map according to the stipulations of the problem at the opening of the engagement, the umpire at each table sends one set of commanders from the room while the others make their dispositions. Noting the line of the Reds, say, he dismisses these tacticians and, first sweeping from the map all their troops save those which, the contour lines show, would be visible to any part of the Blue forces, he summons the Blue commanders. They then make their play in the intricate game of groping and feeling out, check and counter-check.

Heads, some of them gray, are bent over the silly jumble of beads, pins, and cardboard. Cheeks still dyed by the Samar sun are anxiously honed in thought. The eyes you see are not searching a flat plane, scored by wavering contour lines, but scan the crests of green hills for the thin spindrift of volley-firing, probe the golden jungles of standing corn to discover advance patrols. "Captain A," says the umpire, "it is now four-seventeen o'clock. This company of yours on Hill Twelve here has been under cross-fire for ten minutes. Its losses have been heavy, and the men are showing signs of breaking." Then Captain A, with a nervous glance at his wrist-watch, gives the order which will bring an inch of cardboard on quicktime up from the reserve to strengthen the panicky defenders of Hill Twelve. Indecision cannot be his; the loss of a minute may be irreparable; a wrong order may not be retrieved. For the time being Captain A is the one man to whom outraged Missouri looks to avenge the raid by an enemy. But aside from the tactical realities of the game, the Captain senses the eyes of his fellows about the table upon him, knows that those contending with him will be quick to seize upon his smallest error. Here now must he summon every faculty to defend his reputation as a soldier—to win over the other

man by even so much as a tenth in the race for the coveted Staff College. Does he but hew by a fraction of strategy closer than his Blue rival to the "approved solution," the nature of which neither may know until the map maneuver is finished, Captain A will have won.

Because of their highly technical character, the layman finds himself baffled in an attempt to estimate, even roughly, the difficulties besetting the problems set for students of the Service Schools. One reads in the Signal School schedule, "Practical Exercise No. 25: Manipulation of Mercury Arc Rectifier," or in the Staff College summary of courses, "Grand Tactics—Manchurian War"; and even the kindly explanations of the Secretary of the Schools, acting as guide and expounder of mysteries, leave the visitor numbed and groping. Occasionally, however, dazzling simplicity seems to clothe some element of the curriculum, and just when the civilian mind has begun smugly to wrap itself about an understandable fact a distinct jar intervenes and confidence goes glimmering. One of the recently established courses in the Staff College, for example, is the Department of Staff Supply. Captain W. K. Naylor, instructor in charge, explains that the investigation conducted by students under him has to do with the mobilization of national resources, railroad and overseas transportation, the capacity and availability of our merchant marine, etc. Perfectly comprehensible! Doubtless an entertaining and comparatively simple course, say you. "One of our problems," explains Captain Naylor, "presupposes a declaration of war by the President, a call for volunteers, and the mobilizing of a brigade at an available point handy to rail and water transportation in the Northwest. Each student officer becomes for the purposes of the problem a quartermaster in charge of the establishment of the mobilization camp. Now that would appear a comparatively simple problem?" You blunder into the instructor's snare; you opine that all the quartermaster had to do was to see to it that the various units got off their trains and found their camp. Yes, decidedly simple! With a smile the Captain hands you the solution of the problem: thirty-three printed pages, with three accompanying maps. Reading, you will discover that the task of establishing a brigade cantonment involves such widely variant details as the price of 2½-inch wrought-iron pipe, advertisements for labor in the nearest local paper, and condemnation proceedings against required land.

In the thirty-four years of their existence the Service Schools have demonstrated changing ideals in the education of an officer, as in the profession of arms itself. Of the original Infantry and Cavalry School, General Sherman wrote, in 1881: "The school should form a model post, like Gibraltar, with duty done as though in actual war, and instruction by books be made secondary to drill, guard duty, and the usual forms of a well-regulated garrison." Elihu Root, then Secretary of War, made this observation in his annual report for 1901: "It is a common observation, and a true one, that practical

qualities in a soldier are more important than a knowledge of theory. It is also true that, other things being equal, the officer who keeps his mind alert by intellectual exercises, and who systematically studies the reasons of action and the materials and conditions and difficulties with which he may have to deal, will be the stronger practical man and the better soldier." At Fort Leavenworth they say Elihu Root, a civilian, struck nearer the truth than General Sherman, the soldier. Military events of the years 1914-15 have given incontrovertible proof of the soundness of the War Secretary's contention.