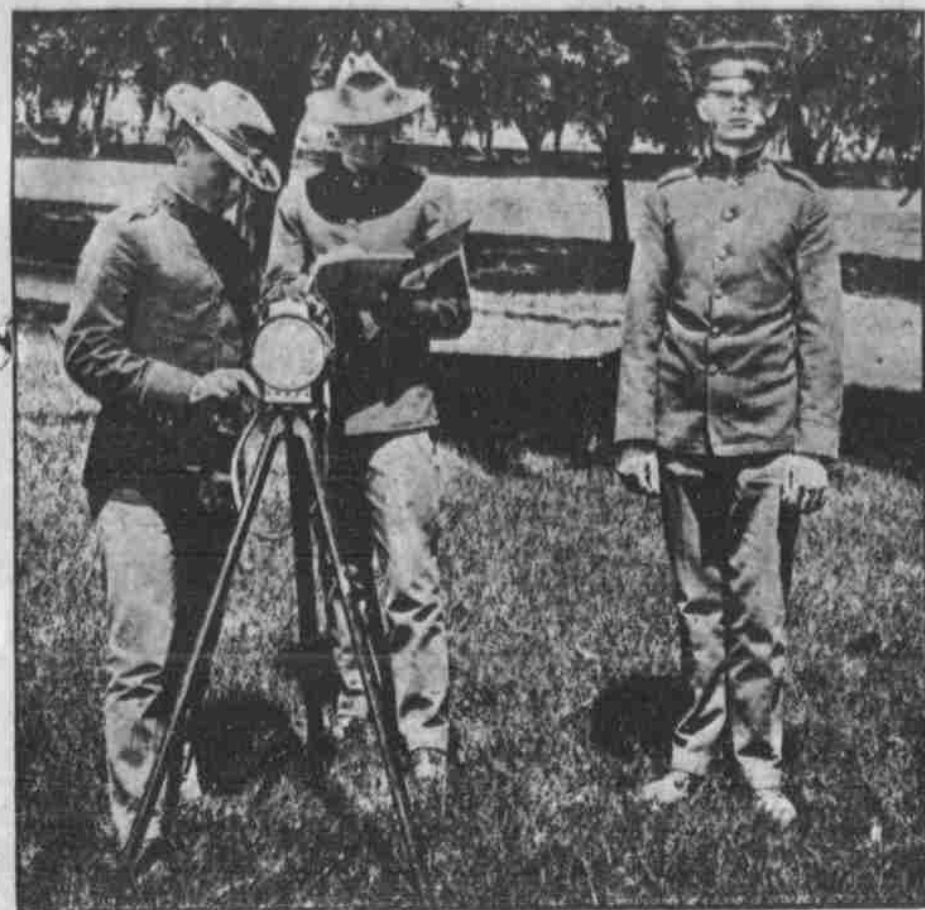


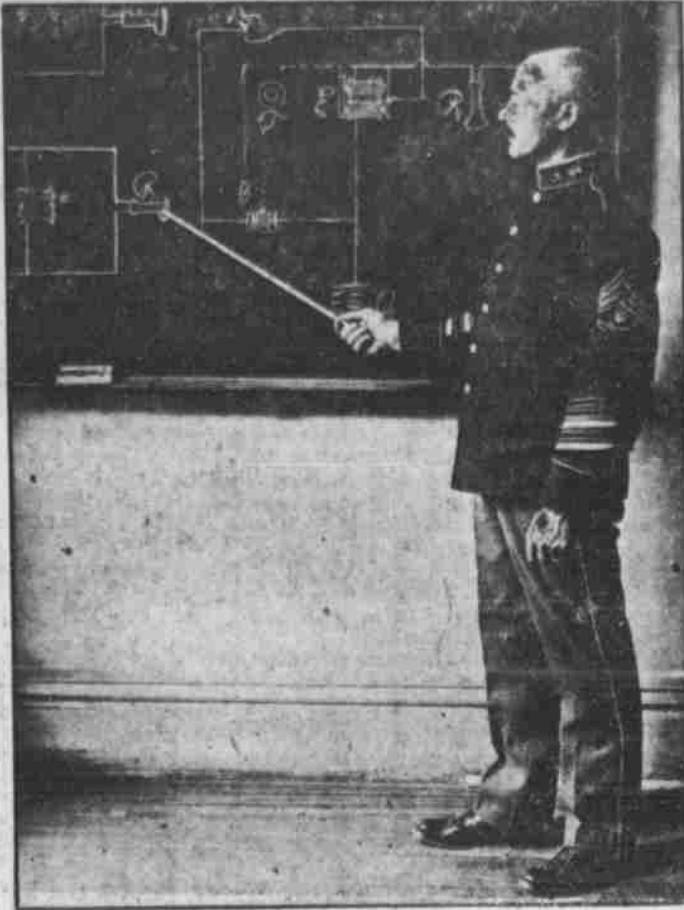
Great Technical School Maintained by Uncle Sam at Fort Omaha



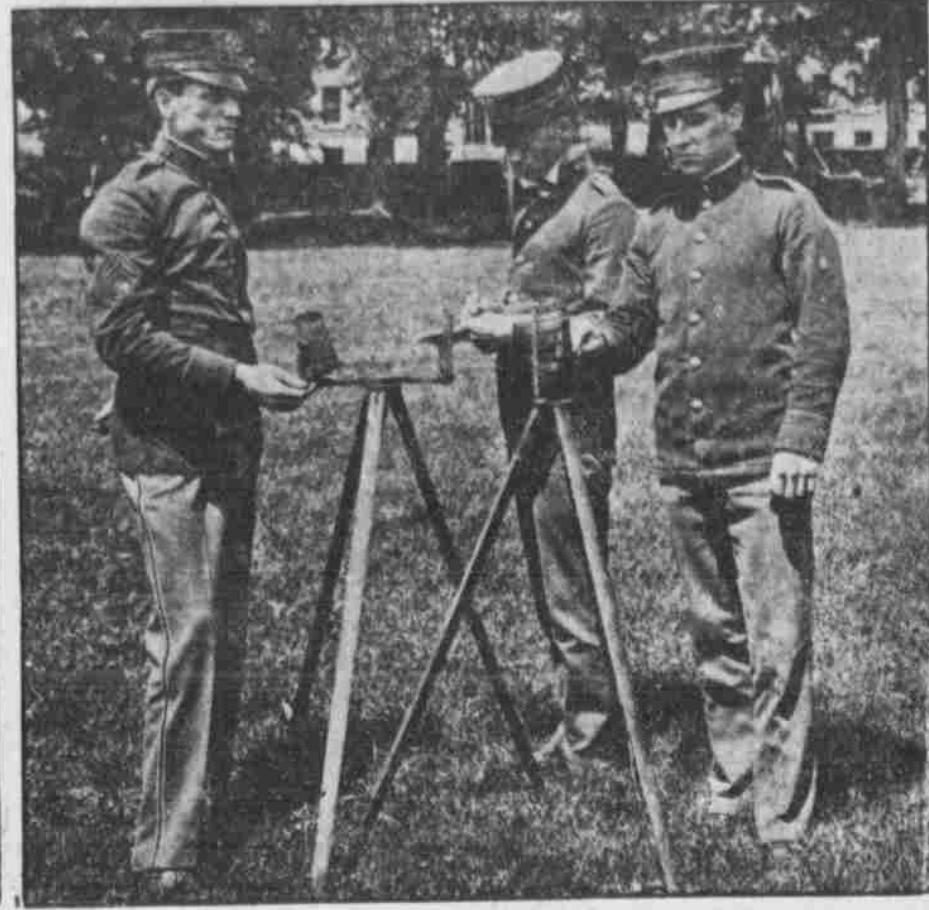
FLASHLIGHT SIGNAL APPARATUS.



THE WIGWAG SQUAD.



SERGEANT GIVING INSTRUCTIONS.



HELIOGRAPH APPARATUS AT WORK.

THE United States signal corps as at present constituted consists of about 1,000 men. They are stationed in the Philippines, Alaska, the United States and Cuba and are employed in telegraphy, telephone, wireless telegraphy, heliography, visual signaling, photography, ballooning, automobile, aerial line, submarine and submarine telegraphy, topographic work, stenography and typewriting work, and the mechanical work necessary to these several employments. These men must all be trained to the work at some of the signal schools of the army, the chief of which is the signal station at Fort Omaha. The amount of technical knowledge to be acquired by these men is enormous. They must be taught in time of peace for the active work of war.

The training on making of an efficient signal corps man from the raw recruit material to the finished product involves an infinite amount of patience on the part of the instructor, and added to his technical education must be the training and discipline in a soldier. His course is not only extensive and is connected with study actual practice.

Start of the Recruit.

When the recruit is first enlisted he is questioned and rated as to his present qualifications. These queries are embodied in a blank form upon which he is to state his special qualifications, previous experience, knowledge of arithmetic, algebra, geometry, higher branches of mathematics, knowledge of electrical batteries, primary, secondary and storage, electric lines, power, light, telegraph, telephone and induction, in general, words he can send or receive by minute, with pen or typewriter; his understanding of cable work, use of siphon recorder, duplex and quadruplex instruments, repeaters, open current sets, buzzers, in telephony, of switchboards, central and local energy, metallic and ground, instruments, tests for faults and ability to make repairs. In cable work, of splicing and general experience on cable ships; what experience with wireless telegraphy, experience with ballooning; visual signaling by flag, number of words or letters per minute; heliograph and receiver; sending and receiving by lantern signals, words and letters per minute; experience in Ardois signalling. Automobile, ability to operate and make repairs. Horse back riding, knowledge and care of horses. Knowledge and experience in the use of engines, dynamo, repairs, machine tools and machine and bench work and other special qualifications, married or single and emergency address.

While it is not expected that the recruit is proficient in even possessed of a smattering of all these branches, yet it is very essential that he must be informed of some of them, as these qualifications will sooner or later enter into his general education as a signal corps man.

The accepted recruit must have shown some peculiar fitness for the service. Once at the barracks he is put through a course of training in those branches in which he is deficient. The pay of \$13.50 per month is not very alluring, but there is always a certainty of advancement and the prospect of an ultimate salary of \$75 per month as a sergeant first class, which, with his clothing, board and medical attendance, is equivalent to \$150 per month.

Make Him a Soldier First.

The first education of the recruit is to mould him into a soldier and teach him the value and necessity of discipline, guard duty, the use and care of the various arms of the service in order that he may be qualified to do battle or withstand attack from a foe. In war and in the field the signal corps is the visible line of communication from the firing line to the directing general's headquarters. His position is one of constant danger and in addition to his intellectual and technical qualifications must be those of courage, discretion and discipline. He occupies a peculiar and extremely important relation to the army.

The Fort Omaha signal school is in many respects a college of technology. Since its formal establishment as a signal school a year or more ago it has sent its men out into the actual signal service field. Some of these men have become teachers or sergeants, classed according to their qualifications and proficiency. The military training is in most respects the same as is observed in the general military service, in order that the recruit may become a part of the fighting machine of the army when the emergency for his fighting qualities arise.

First Step of Instruction.

Telegraphy and telephony in their various branches naturally became the first stage of instruction for the recruit. First comes the lesson in the construction of telegraph lines and the relations of batteries to the general telegraph system. This includes the placing of temporary and permanent poles for carrying the wires, insulation and the like and all the practical laborious details of construction. However, in actual field service it becomes necessary to lay lines rapidly and poles are discarded. The lines are laid along fences or on the ground or attached to trees, as the necessity or opportunity permits and requires.



IN THE CLASS ROOM.

great rapidly, ordinarily as fast as a horse can walk. Each man carries with him a coil of five miles of three-strand insulated wire. Should the contemplated emergency line run parallel with any length of wire fence, this fence wire is used, through connecting the different fence wire strands with a loop at the starting point and connecting the terminals with a similar loop, which is again connected with the military line. The fence posts make excellent ground connections, and when it is discovered that a fence wire is broken or the ends do not meet when stapled in the posts, the broken or disconnected ends are connected by links of wire, that the current may not be interrupted; though it occasionally happens that the dry fence posts themselves make good conductors behind the detached ends of the wires, though the current may not be as strong as the continued wire. This emergency or three-strand wire costs but \$5 per mile and can be abandoned, if necessary, without any consequential loss.

Features of the Work.

There is another more permanent and stronger emergency wire of seven or nine-strand insulated wire, which is used in a similar way, and hence cannot be injured or broken by being run over by heavy wagons, though at road crossings it is customary to bury this heavier wire. The strands in both the light and heavy cables are of piano steel wire and are exceptionally strong. Other linesmen follow along these emergency lines while being laid to take out the kinks and knots that may accidentally be formed and to repair breaks. They are provided with poles and tools to attach the wire to the fences, limbs of trees, or make the necessary loops over gateways or roads.

The line detail is equipped with buzzers for testing the lines, and are thus enabled to test the line at any point or communicate with headquarters. These buzzers are equally applicable for telegraph and telephone work and may be attached to communication lines when the emergency requires. In military telegraphy the Morse alphabet is used and instruction is given on that basis.

Thoroughly Equipped School.

At Fort Omaha is one of the most completely equipped telegraph schools in the United States, if not in the world. The recruit is taught to both send and receive and is taken through progressively rapid

stages. The telegraph room is equipped with the best telegraph appliances obtainable in the world, with every modern appliance of perfect telegraphy. Many of these devices are the invention of officers of the signal corps and are exclusive to the signal service. One of the most efficient officers connected with the service is Captain Leonard D. Wildman, who has been at Fort Omaha for the last year and who has just been transferred to Fort Leavenworth. Captain Wildman is the inventor of some of the most valuable telegraphic appliances, signal apparatus for serial, submarine, submarine and wireless telegraphy, which he has given to the government without royalty or other compensation than his regular salary as a captain of the signal corps. The telegraph room is also equipped with a number of typewriting machines and the recruit is taught to receive on the typewriter and general typewriting work. Competent instructors, invariably expert members of the corps, and much blackboard work is involved in the course of study. Cable telegraphy is also taught and the three cable ships of the United States cable service are supplied with students from the Fort Omaha school.

Telephony in all its varied forms is also taught, from the simplest rudiments to the establishment of an intricate exchange; line construction and all the technical details of line construction and telephone mechanism. Wireless telegraphy is included in the course of instruction, both sending and receiving and construction.

Wigwag and Other Work.

Another interesting part of the recruit's education is that of visual signaling, which includes flag work, more popularly known as "wig-wagging," heliograph or sun signaling, lantern signalling, rocket signalling, Ardois or bomb signalling, all of which are based upon the Morse code.

Visual signaling is adapted for short distances of four or five miles. In cloudy weather the heliograph is unavailable and recourse must be had to a chain of flag signals. The signal corps flag work is essentially different from that used by the navy, though it is hoped that in time the two systems may become more uniform. At night the acetylene lantern is used, flashes being thrown according to the Morse code. In extreme cloudy weather the bomb or sound system of signalling becomes necessary. These bombs are discharged from a specially designed bomb pistol and can be fired with whatever rapidity is desired, thus

making the dot and dash sound which is readily detected by the signal corps man.

These varied forms of instruction are designed so that the signal corps man may know what to do at the proper time and under what circumstances. The education given is to establish a rock bottom basis of efficiency and common sense and the when, where and why of its application to conditions and emergencies. The education of the recruit must embrace a working knowledge of mechanics and photography which is also taught at Fort Omaha.

Wireless Telegraphy and Ballooning.

In the matter of wireless telegraphy there is a requisite of special talent. The recruit must be taught a working knowledge of the fifteen or twenty known systems of wireless telegraphy in order that he may know which system he is encountering. Different systems are practiced by different nations. However the United States has a special system of its own, devised by an officer now in the signal service, and which has become in general use in the army and navy, and has proven of the utmost efficiency. A portable wireless plant has been devised by this officer, which has proved its merit by repeated demonstration under the most exacting conditions.

Ballooning is another of the important studies in the signal service, collected at Omaha. Only the theoretical part of the work is now being carried out at Fort Omaha, as the full equipment for practical instruction is not yet available at the post. Large balloons are now in storage at the fort, and a spacious balloon house, hydrogen gas generating plant is shortly to be constructed and the practical work of ballooning will be undertaken early in the coming fall at this point. These buildings will be erected during the present season. Another new addition to the post of Fort Omaha will be a wireless telegraph tower and station, to be built this season.

Best in the World.

Tremendous strides have been made in signal corps work since the civil war, when the old wig-wagging, though by no means yet obsolete, with crude telegraphy was the only system of army signalling in those days. Very great improvements have been made since the Spanish-American and Philippine wars in signal apparatus, and improvements are constantly being made, so that the United States is equipped with the best signal service in the world. The present total strength of the signal corps is about 1,000. Of this number 250 are constantly at Fort Omaha under in-

struction. While the corps is divided into companies, the personnel of these company organizations is constantly shifting, the efficient men being sent into active field service to fill vacancies occasioned by expiration of enlistments, the term being three years. Many of the men re-enlist, while others upon the expiration of their terms of service find speedy and profitable employment as telegraphers and electricians in civil life.

The education obtained in the signal service is far better than that acquired in any of the telegraph schools, from the fact that the work is almost wholly practical from the start. The time it takes to make a proficient signal corps man depends largely upon the man himself. He is ordinarily ready for field service in from six months to a year, though his education continues during his entire service.

Life at Fort Omaha.

Fort Omaha is an excellent example of the eagerness and liberality with which the government seeks to make the signal service attractive. The fort is equipped with a splendid gymnasium, in which there is a fine billiard hall, bowling alley, reference library, restaurant and store, at which can be purchased almost anything but liquor. In the event that the men are short of ready cash a system of credit to a third of the amount of their pay is given, collectible on pay day, payments being made monthly. No charge is made for the use of the billiard table or bowling alley. Athletic exercises are encouraged and the gymnasium is equipped with all appliances for this purpose. Fort Omaha signal corps has a fine base ball team and fine base ball ground. In the gymnasium is a spacious dance hall and balls are frequent, the post paying for the music. Every means of healthful recreation is heartily encouraged by the officers of the corps. The men are given frequent leaves to go to town and furloughs are easily obtainable for any necessary period.

The food supplies comprise the very best

that the markets of the country afford. The mess houses are equipped with every modern appliance for cooking and sufficient and trained cooks from the Fort Riley School of Cookery prepare the meals. The post bakery is conducted by a graduate baker of the Fort Riley school and an abundance of the best of bread is provided for the garrison and the proceeds go into the mess and post funds. Cigars, furnishing goods and miscellaneous supplies of every character are sold from the post exchange for but a trifle above cost and the profits go to the better equipment of the exchange and gymnasium.

A post garden supplies an abundance of fresh vegetables, and in fact no community in the state of Nebraska is better clothed, housed, and fed than the signal corps at Fort Omaha.

Supply Depot for Corps.

Fort Omaha is the general supply depot for all signal service apparatus for the entire country, Cuba, Alaska and the Philippines. A vast quantity of these valuable and intricate equipments are now in store at the fort. Over 4,000 packages of materials have been sent out to various stations from Fort Omaha since its establishment as a signal supply depot.

"The signal corps service is the most attractive of the army," said an officer of the corps. "I regret that more young men do not avail themselves of its advantages for a technical and practical modern education. They are given an opportunity of seeing a great part of the world. The work is not any harder than in any ordinary course of schooling in college. I am free to admit that I would like to see the incidental drudgery of garrison life, such as polishing the grounds, eliminated and taken over by men especially employed for such work by the quartermaster's department. Such a plan would materially benefit the service and would fit the men better for their work and studies. A man cannot well handle a delicately adjusted telegraph key after pushing a lawn mower or chopping wood for an hour or two. I would further like to see the corps increased to 2,500 men instead of remaining at its present number.

"The morale of the signal corps is excep-

tionally good; better, I think, than any other branch of the service, for it requires a higher grade of intelligence. I believe that the efficiency of the corps would be increased by giving the recruit one year's training here at Fort Omaha, then a year at Fort Leavenworth and then a year at Fort Riley schools of application and practice, and then put him into the actual work of field service. I believe also that the canteen system should be restored at the posts. It would have a beneficial effect on the morals of the men. It would be the means of keeping them in the garrison more generally and away from the dives and grogeries that thrive in the vicinity of the posts.

"We want good, bright, young men in the signal service. It has been my observation that the men take pride in the work. We have an illustration right here in the fine telephone system just installed. The men did all the work, set the poles, dressed and painted them and strung the wires, and are now installing a first-class telephone exchange. In addition to our school work, Fort Omaha is the greatest signal appliance repair depot in the country, if not in the world. We do an immense amount of repair work, and we are sending it out all over the country and across the sea.

"I wish our Omaha people would visit Fort Omaha. They do not know what a great, intricate and instructive institution it is. We want the public to see what we are doing. We want the signal service work given publicly, because it is one of the greatest and most important systems in our entire government machinery, as well as the most instructive, and is in all respects essentially modern."

Quaint Features of Life

Rooster Saves Child's Life.

Last summer we had a large Lehigh rooster which we called Chang, says a correspondent of the Chicago Tribune, Chang was a vicious old bird and decidedly unfriendly toward most people, with the exception of our little 2-year-old son, Billy. Between the two a great friendship existed, Chang following Billy around the yard, eating from his hand and even playing with him in rooster fashion. One morning a terrified scream from my wife brought me hurriedly from out of the house to witness a sight which froze me with horror.

Sitting on the ground happily playing, and all unconscious of his peril, was little Billy, while behind him, not three feet away, with loathsome folds coiled and ready to strike, lay a vicious rattlesnake. Agonized and desperate, as a last hope I was about to make a dash at the reptile, when we heard a terrific squawk, and old Chang, every feather on end, his eyes red with fury, swooped across the yard and pounced upon the rattler with beak and claws.

To snatch our boy out of danger and then kill the snake was the work of a moment, but poor faithful old Chang received the deadly stroke aimed at his little playmate and paid the penalty for his bravery with his life.

The Sea Serpent.

One of the incoming ocean steamers had an unusual experience off the coast of Ireland. The crew and passengers sighted an immense sea serpent, evidently intentionally in feeling and character, as its colors were green, red, white and blue, and it not only signalled the vessel with its tail, but also nodded its head in a most friendly fashion. And even the most rabid of truth-tellers will hardly accuse the entire crew and passenger list of a highly respectable ocean steamer of nature faking.

Knocking the Trading Stamp.

The state of Washington has a new law which hits the "trading stamp" hard, though it is to be fought in the courts as unconstitutional. It requires that all establishments giving away trading stamps shall place a cash value on them and stand ready to redeem them at any time. Thus, for example, printed in ink across the face of a cigar store trading stamp there appears: "Cash value at any premium station in Washington 1 cent, but average merchandise value, according to our premium list, 2 1/2 cents."

"Let Me Down Easy."

There was all kinds of excitement at a negro funeral near Boston, Me., when Samuel Johnson, a negro resident, threw his voice into the grave as the casket was being lowered and said: "Let me down easy." The mourners thought it was the corpse that spoke and with a scream they fled. The pallbearers were so frightened they dropped the casket. When the relatives recovered their composure they accused Johnson of exercising his "talents" and forthwith had him arrested. He was given a hearing on the charge of disorderly conduct and malicious mischief and was held in jail. The ventriloquist is from Wilmington. He says he will never again give a performance in a cemetery.

Fish Swallowed the Snuff Box.

"While fishing in a small stream this side of Franklin several days ago," said Joe Miller of that town, quoted by the Nashville Tennessean, "I caught ten big catfish. I cut one of the fish open and found a snuff box inside. The fish had evidently had it in its stomach for some time, as the fish had begun to rot and swell. How he ever managed to get the box down his throat will always remain a mystery to me. His mouth was hardly large enough to take in a good-sized hook."

Scene at the Old Settlers' Celebration Recently Held at Fort Kearney



GRAND ARMY VETERANS GATHERED AROUND THE REMAINS OF THE OLD FLAGPOLE AT FORT KEARNEY.