

Organization of Twenty-Three Men Equipped Adequately to Perform Any Service Which Might Be Demanded of It-Men With Technical Training Are Included in Its Membership-Coming Division Encampment on Crow Creek Forest Reserve, Wyo., For Two Weeks in August.



ance of signal corps troops is generally one that is but little understood by those outside the military service. Of the infantry, cavalry and artillery the average citizen is much better informed

MODERN WARFARE.

In the recent war between Russie and Japan, it is recorded that at one time during the assault on the Rus-sian forces at Port Arthur the Japtime during the assault on the Rus-sian forces at Port Arthur the Jap-anese forces occupied a position ex-tending over 25 miles from left to right and from the fighting line to the reserves troops were scattered over country of greatly diversified terrain for hearly as great a distance. Modern warfare partakes greatly of the scientific principles involved in a game of chess, the manoeuvering of the various units of a fighting force measuring the victory and the vic-tor. Modern warfare moves much more rapidly than in comparatively remote periods. It is so in all lines and the advancement has been mark-ed no more than in the conduct of war. The problem ever confronting a commander of a fighting force re-solves itself into the question of how, where and when to move a given unit to accomplish a given purpose. The element of time therefore becomes one of the first consideration. To harness the clock is the duty of the signal corps and the advance in the utiliza-tion of electrical energy has played a part of the utmost importance in the development of this branch of the service.

OCCASIONALLY EFFECTIVE.

service

A PLAN FOR PEACE.

an organization composed of 23 men which, in regard to the

class of work required of it what unique as a military or

when viewed by the lay

whose knowledge of military af-

when soldiers are on parade

scenes of a battle. Ordinarily does not know that there are other en called upon to perform service

airs is unusualy restricted to what he

what he may read in magazines and ewspapers. Ordinarily the civilian

minks that all soldiers must use rifles, eannons or take part in the spec-

taking equal rank in importance, but which has little of the glamor of actual There are soldiers who have little but draw maps, others to had freight on trains and ships in the of quartermaster and commissty departments, others to build roads ad bridges. Then there are the men he seldom fire a shot during an en-

in war, but who keep up the commu-

elections by means of telegraph lines

stations and in other ways perform services that seldom find their way into accounts of a war, but without which a victory would have been almost 18 DOING FIELD WORK The Signal Corps of the National Guard of Utah is preparing for just uch work and is adequately equipped to serve wherever needed. Among the

to serve wherever needed. Among the innovations recently undertaken in this organization is the establishment of a telegraph school where its members are taught to man telegraph wires, con-struct and maintain lines and enter the field of elementary telegraph engineer-ing. Telephony is also given much at-tention and elaborate equipment is on hand for this work. In the recent government inspection conducted by the war department to ascertain the effi-dency of various state military organ-

elency of various state military organ-izations, this Utah organization was present with a showing of 100 per cent. Enlisted men in the organization, after having studied telegraph only two months, transmitted telegraphic mes-sages to the apparent subjection of

months, the apparent satisfaction of the inspecting officer. Its equipment is valued at more than \$4,000 and ac-tive work in the field is being undertak-

a partly in preparations for the big imp to be held in Wyoming in August nd also to be prepared to render such ervice as might be required of it in

ime of need.

ne lines, heliograph stations, flag

Concerned in no remote degree in he program for universal peace, is the novement in the war department to in-crease the available number of trained men for use in war should it come. This is especially true as it concerns and foress. It is admitted to be utter-bered question that the strenges and foress. It is admitted to be utter-beyond question that the stronger encoded forces of a nation the more likely is war. There is no decided wement in the direction of increasing the size of the standing army, but ev-ery effort is being lent to an increase in the strength of the reserve in numbers and efficiency. Under the operation of the act usually referred to as the Dick bill, an act to promote the effi-dency of the militia, the government is leaving ho stone unturned to accom-eish its numose

dish its purpose. RADICAL CHANGES.

In the time of Grant, Sherman and In the time of Grant, Sherman and Sheridan, signal troops were used quite effectively at times. The neces-sary phrase "at times" is worthy of consideration. In order to be sure that a message would be delivered, Grant was wont to intrust its delivery to one of his staff officers, or a num-ber of them. When it was not so important, he entrusted it to his sig-nal troops. The progress of affairs in general, including the art of war, has made necessary the reverse of this An army of the military service that The buzzer, of which few people know the nature, comes in to take up an important work. This apparatus is operated with a current of high induction through a single wire and a ground, that is one heavily protected wire connects stations, while the earth is used for the return current. The whre used is light, but tough and strong and may be payed out from a reel carried by a mounted man at a trot. It is thus seen that a line may be made necessary the reverse of this proposition. The signal troops must at all time be dependable and cap-able of surmounting almost impos-tible seturation constructed with great dispatch and it may be concealed in brush, rocks and even in ditches and swamps, the insluation being almost waterproof. The buzzer itself is a small and comsible obstacles. in operation at Fort Leavenworth. Kan., a school where signalling is given much attention. The import-

necessary that he be kept in tauch with every unit of his command at all times. For this purpose he may use such lines of communication as may be found in the country where he finds himself, telegraph and telephone lines. Where he does not for these lines. Where he does not find them, he must construct them, and that quite hastily, for the theater of war in

he must construct them, and that quite hastily, for the theater of war in modern times is one in which the scenes may shift quickly. MUST BE TRAINED MEN. The signal detachment must be composed of trained men, many of them must be telegraphers, many must be able to install and operate telephone systems, others to use flags, lanterns and heliographs for opening up communication. All are import-ant in their own particular function. TELEGRAPH IS RESTRICTED. The necessary parts of a telegraph line are too well known to need com-ment. Operators, wire, batteries and instruments are almost the only re-quisites. Where favorable conditions prevail and where a commander may expect to remain for any considerable length of time in one vicinity, this method of communication may be nuilized. The telegraph, for the trans-mission of orders for actual rapid movements of troops, however, is of source of much trouble and the neces-ity for good insulation of lines fre-quently prevents the concentent of them and the opportunity afforded an enemy to des voy them is always a threatening a.d. disconcerting ele-The necessary parts of a telegraph line are too well known to need com-ment. Operators, wire, batteries and instruments are almost the only re-quisites. Where favorable conditions prevail and where a commander may expect to remain for any considerable length of time in one vicinity, this method of communication may be utilized. The telegraph, for the trans-mission of orders for actual rapid movements of troops, however, is of restricted use. Wire tapping is a source of much trouble and the neces-sity for good insulation of lines fre-quently prevents the concealment of them and the opportunity afforded an enemy to des toy them is always a threatening a...d disconcerting ele-ment to consider. THE USEFUL BUZZER

THE USEFUL BUZZER.

central exchange boards accommodat-ing ten telephones are so made that they may be mounted on a tripod and operated from a tent or the open, giving intercommunication between the ten stations in the manner afford-ed by a comprecial system od by a commercial system, HELIOGRAPHING.

HELIOGRAPHING. Interesting for many reasons is the heliograph, which is not, however, so modern as is the electrical apparatus in use. The heliograph, in effect, is composed of two plate mirrors about six inches square and a shutter for revealing and obscuring the flash. The flash is obtained from the reflec-tion of the sun's rays. In the center of one mirror is focused the station with which it is desired to communi-cate and in the center of the other mirror the sun's rays are concentrat ed and then reflected to the center of the other mirror, which directs the flash to the distant station. At a dis-tance of 25 miles and up to greater distances the flash is circular in form and of great diameter. Its briliance is so intense that it must be read through smoked or darkened glasses. The smoked or darkened glasses. The abutter is so constructed that the flash may be "chopped" up into short and long flashes and formed into letand long flashes and formed into let-ters composed of combinations of the figures 1 (one) and 2 (iwo). The letter A is represented by 22, or two short flashes followed by two more in quick succession. The letter B is represented by 2112 and the other let-ters and figures by other combina-tions. Messages may be handled al-most as fast in this means as by tele-graph though the instrument may be

constructed that repairs may le with little trouble. Portable

one man. Their parts **are so** constructed that repairs may with little trouble. Portable exchange boards accommodat-tolephones are so made that y be mounted on a tripod and to the right is read as one and a move-ment to the left is read as two and the same signals used as are employed in the use of the heliograph. The flags are either white or red, with square centers of the same color, red against white and vice versa. The use of either depends upon the background afford-ing the geater contrast. The size of the flags varies from four feet square to eight feet squaro and the manipulation in sending a message is one requiring In sending a message is one requiring much practise to keep the flag un-furled.

EXTENDED LINES.

EXTENDED LINES, In modern warfare, as has been al-ready indicated, bodies of troops are no longer massed in great numbers in either offensive or defensive actions, but are separated into units at some distance from each other, giving a wide front and affording a poor target as compared to formations used less than 100 years ago. A thin line of skirmish-ers backed up by supports and reserves with artillery covering an advance or retreat from long range and cavalry scouting about the theater of war se-curring information as to the nature of strange country, the location of the chemy and making maps for the use of the commanding general are now the principal characteristics of an action. These lines may extend for many miles, portions of the forces being employed may be scattered about the country fin protected neeks, behind hills, in trenches and concealed in wooded coun-try. It is necessary that whenever a movement in a desired direction is con-templated, the troops must be advised

eral being the head, the infantry the legs, the cavalry the eyes and the ar-tillery the arms and the muscles with which to cruish. All would be useless without the nerves, and the signal troops have been called upon to per-form this function. form this function.

EQUIPMENT OF N. C. U.

Bringing the subject matter to a lo-cal viewpoint, the signal corps of the National Guard of Utah comes to the front, This organization of 23 men is equipped adequately to perform any service which might be demanded of it. It has buywers felowrath comment It has buzzers, telegraph equipment, wire reels, a field telephone exchange and station instruments, heliographs, acctylette flash lanterns, flags and all neacception flash lanterns, flags and all ac-cessory apparatus. Its officers are sup-plied by the general government with text books for the proper study of the use and repair of equipment. As devel-opment progresses in the schools con-ducted in different parts of the United States, bulketins are issued and freely circulated so that the national guard organizations are kept up-to-date in matters affecting the profession.

HOME TELEGRAPH SCHOOL.

A part of the instruction of the Utah attingent that is of great importance its telegraph school, conducted by J. is its telegraph school, conducted by J. A. Spiker, assistant superintendent of the Western Union Telegraph company, Under his direction the corps members are rapidly attaining a standard of high efficiency in the handling of mes-sages and the construction and main-tenance of fines. Included in the mem-bership of the corps are several tech-mical men, including electrical en-stineers, electricians, draftsmen, tele-phone engineers, photographers and practical mechanics. The instruction of the members touches all of the above professions in an elementary way and of the memoers touches at of the above professions in an elementary way and affords any ambitious young man an opportunity to learn paying profes-sions in addition to the experience gained in military affairs.

THIS YEAR'S ENCAMPMENT.

THIS YEAR'S ENCAMPMENT. The interest of the members of this centered in the coming provisional di-vision encampment on the Crow Creek forest reserve in Wyoming near Chey-enne. It is to this camp ground that the Utah troops and those of all other states in the department of the Colo-rado will go this year, regulars and militiamen being brought together for a two weeks' stay. During this time actual war conditions are to be simu-hated and maneuvers embracing almost every phase of war will be employed to teach the art of combat. During in strange country and at all times it will fall to the duty of the signal troops to keep the commander of the forces to which they may be attached, informed of everything happening within sight or hearing and to trans-mit the orders of the commanding of-ficer. In preparation for this, actual field work has been begun.

MEEN AT WORK.

MPN AT WORK. The protographs reproduced here-with were taken during last week's practise. In the one showing five men at work the man with the field glasses is sending a message with the helio-graph which is mounted on the tripod near him. The shutter, on a separate tripod, obscures his mirrors, only one of which is seen in the picture. The man nearest him is reading the mes-sage to him as he sends it. In the rear behind the telescope is the officer in charge of the station. He is reading a message through a high power tele-scope and darkened glasses, the man near him recording it. A sergeant is seen holding the station flag. In the other photograph the sergeant is send-ing a message with the signal flag. and find the maximum from the telephone comparison of the telephone comparison of the second divergence of the second div

for many years, both in the regular establishment and in the National establishment and in the National Guard, has suffered from neglect is now particularly in the eye of the war department. This is the signal corps. Nearly every state has in its national guard organization a de-fachment of signal troops. The in-struction has been along lines profistruction has been along lines great-ly at the option of the signal officers in immediate control of the detachments. This is a plan that is under-going radical changes. The general government has for many years had in operation at Fort Leavenworth.



will guarantee against any diminuation of the supply, nowith-Manding the yearly inroads of the sportsman's hook is the object sought to be attained by the state department of fish and game. And to this end a trout hatchery was established years ago, but the old building has proved woefully inadequate for the purpose in hand, although it has in its time, done wonders.

The present hatchery is situated about half a mile due east of Murray, on Spring creck. It comprises a large shea containing a dozen or more hatching troughs, consisting of metallic lined troughs about four inches deep by 14 inches wide by 30 feet long, and from the spawn, or eggs, the fish begins his life in these troughs, where he gains his daily sustenance until he is probably two inches long, when he is dumped into a large bucket and distributed over the many fresh water streams and Ponds of the state. The building is Capable of hatching out about 4,500,000



RESIDENCE OF SUPERINTENDENT

capable of hatching out about 4,500,000 the of hatching out about 4,500,000 the state of the state, and this year is septembered to the state of the state, and this year is the state of the state, and this year is the state of the state, and this year is the state of the state of the state, and this year is the state of the state of the state, and this year is the state of the state of the state of the state, and this year is the state of the state, and this year is the state of th

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ike a mere three-pounder. but he wa

AFTER HIS FINSHIP.

There was nothing else to do-and i here had been you couldn't have done -but to get right into the water and a right after his fighship-fight him of ge right after his fishship-fight him on his own grounds. So, cautionaly keep-ing a tight line on Mr. Fish, receing him gently towards you all the time, you atep down into the stream and he-gin to look around for a place to wade where you won't sink in over your hoots, gently coaxing the fish to bear down stream a bit until you can get foot near that bar yonder, arrived at-which vantage ground you can inveigle him from his lair above and drop him into the basket at your feet! Nobly platned-how executed?

CHALLENGE ACCEPTED.

8.1

and rushes out into the stream. He heeds neither brush nor branible but dives readly across the water toward the bank, and as suddenly yeers around and shoats back into the deep again. In stream be daris, trailing your line after him almost as far as it will reach, but not quite; luckly he stops just in ine and your agility is taxed to keep that hook tight in his mouth. Back and forth he dashes, now and anon mashing back and sides and instantan-onsly lunging away again to the blue depths below. All at once, after a mighty struggle, he comes to the sur-fee, thed and hop, bis gills working be is your fielt. You still have a good hold an him and the struggle is nearly over to one side with your rod so that the current will bring him right down to your feel head pointed upward, and have the dashe of hold him tau until the supreme masterful moment, when after 25 minutes of good hard roth as when ended to gather the big fellow in, when ended! With one final swidt and a last good byc, your inter-point lexities gond! hree-pound beauty is gone!

MEN WERE DECEIVERS EVER.

The bands of the clock were marking the hour of 12, midnight. She had been waiting two hours for him. Her anger, from a gentle simmering, gradually increased in temperature, until the boiling point was reached. She was ready for him, and as he entered the

ready for him, and as he entered the room she opened her mouth to pour out the accumulated conferns of the reservoir of her wrath. But before she could ket out a word, he said: "Look here, lovey, d'ye think mar-riage is a lottery?" Bhe was so taken back that she could only nurmar that she didn't know. "It ain't!" he said. The other fellows at the club have been arguing that it is—that's why I'm late. But I said: "How can marriage be a lottery, when a fellow has only to look round him to pick out the first prize—same as I did? No lottery about that?" "She brought him his slippers, and five minutes later she was opening a hex of sardines for him with his best mater?

red-how essented? CHALLENGE ACCEPTED. response to your reeling invita-the front accepts the challenge

like a mere three-pounded, but he was big enough anyhow: how the battle royal began; how the trout, stung by the pain of the sharp little barbs, made a lunge for liberty which started your reel to buzzing to desist only when his troutship had lodged in the deepest hole in the stream, and in us-der all that brush. d) that brush.

CROMAR LANDS ONE