The Army Signal and Telegraph Service

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Army of the Cumberland

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Annals of the Army of the Cumberland

1864

The Signal Corps of our Army is composed of officers and enlisted men, detailed from different regiments, with special reference to their fitness for the duties required of them. The officers are instructed in the use of the signals used before they go into the field, and are forbidden to carry with them any thing that would give the enemy information leading to the discovery of the system in case of capture. The object of the organization is to keep up constant communication between the different parts of the army and the different commanding generals, and to closely scan and discover the movements of the enemy. For this reason, the officers are furnished with powerful telescopes and marine glasses, and are usually located on the tops of high elevations, or other commanding positions.

When General Rosecrans assumed command of the Army of the Cumberland, he adopted the signal system and reorganized the corps. The officers and men were ordered to report to Captain Jesse Merrill, Chief Signal Officer of the Department, and were divided into parties, put in charge of competent directors, and assigned to the different army corps for duty. On the march from Nashville to Murfreesborough, officers were constantly on the alert, collecting and communicating intelligence. During the twenty-four hours previous to the battle of Stone River, communication was kept up from front to rear on the Murfreesborough pike, and on Tuesday, while our army was fighting its way to what was afterwards its line of battle; short lines of communication were maintained.

Soon after the occupation of Murfreesborough, two brigades were sent in the direction of McMinnville and Woodbury, one as far as Readyville, twelve miles, and the other to Cripple Creek, eight miles, from Murfreesborough. Between these two points, and a little north of the pike, is a high mountain, called Pilot Knob, and on its summit had been established a signal-station called "Fort Transit." This point commands the surrounding country in all directions for miles; and many items of interest and importance were

reported by the officers on that station They communicated with the central station in the cupola of the court-house at Murfreesborough; and daily and nightly, on these stations, flags and torches could be seen waving information and orders from one point to the other. As the lines of the army were extended, communication in the same way was opened between the different points. The station on the court-house at Murfreesborough communicates with one at Lavergne, fifteen miles distant, and one near Triune, seventeen miles distant From the latter point a line of stations connects it with Franklin, and from the former communication can be had with Nashville whenever desired.

Major Albert J. Meyer, Signal Officer of the Army, has recently added greatly to the efficiency of his department by sending to Murfreesborough a signal telegraph train. This train consists of six substantially-built wagons, each containing a telegraph instrument, tool-chest, axes, reels, &c. Three of the wagons also contain five miles of wire each; the other three have fifteen empty reels, used in reeling up the wire after being laid out. The telegraph instruments are the most complete for field-purposes ever put in operation, and much superior, both in matter of economy and reliability, to others now in use. The dial-instrument is used and the electricity is generated at the time of operating, and without the use of acid. The instrument is contained in a box, which can be carried by one man, and its mechanism is so simple that it is ready for use the instant the station in the field is selected. Three lines were put in operation at Murfreesborough, running to the corps commanders' head-quarters. The wire used is insulated by gutta-percha, and can be run out on the ground, hung on fences or trees, or put on poles. It is rolled upon reels, in one-mile sections, and, in running it or rolling it up, the horses are kept at a steady and rapid trot. This field telegraph is a recent invention, scarcely more than a year old; but it has been successfully used on the Potomac, and was of inestimable service at the attack on Fredericksburg in December last. The principal object aimed at in its use is to keep open a constant communication of the different commands of an army with each other and with head-quarters, and also to connect the army, or any portion of it, with the signal station, which, from the necessity of its location on some high and commanding point, is almost invariably at some distance from the camp.

The full details of the system are, of course, known only to the initiated; for in its secrecy lies its success. A general idea of its character and management may be given, however, without injury to the service. In the first place, then, elevated positions are chosen, between which communications are made by means of a flag in the daytime and of a torch at night. The alphabet of the code consists of certain definite figures, different combinations of which represent the different letters of the ordinary English alphabet. Of these figures there are but few, a sufficient variety being obtained by different combinations of the same figures. Thus, 11, 14 may mean A, while 14, 11 may mean D; and so on. Each figure of the alphabet is represented by a definite number of dips or wavings of the flag or torch, thus enabling the experienced in the art to read messages at almost incredible distances with surprising rapidity.

To enable the reader more fully to understand the workings of the system, let him accompany the author to the signal-station in the cupola of the court-house at Murfreesborough. Here he will find two windows, one looking towards Fort Transit, nine and a half miles to the east, and the other towards Triune, seventeen miles to the west. By

the side of each is a telescope, firmly fixed and bearing upon the station opposite. Outside of the opening is a platform, upon which the man waving the flag or torch stands. It being desired to open communication, the flag is waved to and fro until seen and answered by the other station, —which is generally but a moment or two, as somebody is always on the watch at the glass. The officer in charge seats himself at the glass, and, having observed the answer to his signal, calls to the man on the platform the figures which he wishes represented or waved. Thus, for example:

3 - 11; 21 - 5; 2 – 31 - 11; 1 – 43 -5; 22 - 31; 14 – 22 -23;
1 – 43 - 5; 11 – 1 - 42; 1 – 42 - 2; 23 - 11; 1 - 11; 555.

The substance of the above message is to inquire if a certain officer has arrived at a certain place, as expected. In what seems scarcely more than a single minute after the last word is sent, the answer comes from Fort Transit, and ia read by the officer at the glass.

For the transmission of messages, different-colored flags are employed, as best suits the state of the atmosphere. There are now in use at Murfreesborough one black with a white centre, one white with a red centre, and one all red. Sometimes one can be plainly seen and recognized when another cannot be seen at all: hence the variety. As already said, there are two stations in the court-house at Murfreesborough, to which are assigned two officers and four men. The stations are kept open all the time, night and day, officers being constantly on the watch at the glass. When the station is " called" by one of the outlying stations, the officer in charge by whom the message is to be received and answered, if below in his office, is notified by the tapping of the court-house bell, two strokes calling him to one station, and three to the other. All messages sent and received are written out and copies of them preserved, which are often called for as evidence in courts-martial, &c. Messages received were formerly delivered at head-quarters by orderlies, but are now sent by the newly-arrived telegraph train.

Major Albert Myer, the Signal Officer of the army, invented the system now in use in all the Union armies since the beginning of the present war, the one previously in use having become valueless because of certain officers of the corps having gone with the South. The rebels, too, have a system, invented or perfected by one Alexander, formerly a lieutenant under Major Meyer, but now understood to be a brigadier-general in the Confederate service. Our army system differs from that of the navy, in that the latter is worked by a series of pre-concerted and set phrases, while by this any thing that can be written can be telegraphed with astonishing rapidity and certainty. A message of twenty words can be sent in five minutes, and answered in as many more. As an illustration of its workings, a single example will suffice. In the latter part of March, Major General Palmer made an expedition to Woodbury, twenty-two miles from Murfreesborough, and in less than thirty minutes after he entered the town General Rosecrans was informed of the fact by means of th« signal corps. The commanding general at once despatched to him certain orders; and in an hour from the time of sending them he was informed by General Palmer that they had been received and the troops disposed in accordance with them. The use of the field telegraph will materially add to the rapidity with which messages can be transmitted, by dispensing with the necessity of couriers between the headquarters of commanders and the signal-station.

The alphabet is not difficult to learn; but constant practice is required to enable the operator to send and receive messages without hesitation. The labor required of the corps is confining, but not severe. For days there may be little to do, and, again, both officers and men may be constantly employed during both the day and night. They sleep when they can, and are expected to be ready at a moment's warning. Messages, in very clear weather, can be read between Triune and Pilot Knob, twenty-seven miles, or between the Knob and Lavergne, twenty-five miles, without being repeated at Murfreesborough; and they have been sent direct from the Knob to Nashville, forty-five miles; but this distance is too great for the glasses now in use, and is not considered entirely reliable. In addition to the ordinary duty of transmitting messages, the officers and men of the corps act as scouts, keeping a constant watch upon the movements of the enemy, as they are able to do from their commanding location, and reporting the results of their observations to head-quarters without delay.

The Signal Corps of the Army of the Cumberland is under the direction of Captain Jesse Merrill, of the 7th Pennsylvania Reserve. He is a native of Pennsylvania, and an attorney by profession. He entered the service as second lieutenant, and served as such in the Army of the Potomac until January, 1862, when, having learned the code, he was detailed to the Army of the Cumberland to introduce it there and instruct the requisite number of officers and men in its mysteries. He is a thorough master of the system, and has rendered it highly effective, as the reader may judge from the foregoing account.

The Murfreesborough station is under the charge of Captain C. E. Case, of the 36th Indiana, and T. J. Kelly, of the 10th Ohio Infantry. The telegraphic train is under command of Lieutenant D. Wonderly, of Philadelphia, assisted by Lieutenants S. F. Reber and D. F. Jarvis. The corps of the department consists of about forty officers, and, inclusive of the telegraphic train, about one hundred and forty enlisted men, all of whom are detailed from their respective regiments for this service; and thus the signal service is rendered at but a trifling additional cost to the country.