

and compass, to their stations. Meanwhile the officers were riding over the country, looking out for the safest and most reasonable spots for the various stations, deciding at the same time, the best means of communication for each particular point. Divisional headquarters, or "D.H.Q." as it is called, was the top of a hill six miles back of the advanced lines. Here a regular signal office was arranged, for naturally most of the messages would sift through this—the brain of the whole scheme. At hastily constructed tables, message forms were arranged, and registers and files set to receive and tabulate the communications sent to, and received from, the various units. Surrounding this nucleus, groups of three or four men were hastily setting up apparatus. Others were "picking up" outlying stations with telescopes and binoculars, so that their own instruments could be aligned on them.

At one point a wire fence ran close to the Signal Office, and it was soon decided to turn it into one of the main arteries. A lineman, equipped with tools and cable, started down the fence, in case the wire was not continuous as far as the farm two miles away which was to be the next station. At the signal office, a man walked to the fence, unpacking a leather case at his belt.



A Field Phone.

In a minute he had a 'phone headgear adjusted, and had attached a wire to

a strand of the fence, at the same time pushing a ground rod into the earth. At the other end a similar thing happened, and soon the buzzers started to scream a chain of dots and dashes. A line of communication had been established.

For the rest of the day the old fence would palpitate with energy as messages were spoken or 'buzzed' along it. The field telephone is really a mixture of 'phone and telegraph. One can talk into it in the ordinary way, or words can be sent in the Morse Code



The Heliograph.

by means of a key. Although it is strange at first sight, the most useful part is the buzzer, since it can be used over a line much too poor to speak over, and an expert signaller can tap out a message just as quickly as it can be spoken correctly.

At another point near the central station, men were setting up a heliograph, an instrument for reflecting the sun's rays, by means of an aligning device, on to the distant station. Soon an answering flash—almost blinding in intensity—came from a hillside miles away, and messages were sent rapidly back and forth. The flash from a helio can be read for twenty or thirty miles