

# Microphones in Trench Warfare

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**T**HERE is hardly a spot on earth today where modern science receives as many professional tryouts as in our war trenches. New methods, new schemes, new inventions are being tried out forever, and like many another game it settles down to a game of wits where that side having the most brains and the most ingenuity is likely to win out in the end.

he obtained by what is popularly called the *dictagraph*. But the question immediately comes up, how are the dictagraphs to be placed in the enemy's trenches? Of course, while it is rather a ticklish business, it is not impossible and our illustration shows how it could be readily accomplished.

We first need our sensitive microphones

will not be discovered. It should be remembered that grass or vegetation growing over the microphones as well as over the fine cable will practically conceal both entirely from view. The same is true of dust and sand, etc., which all aid in hiding the microphone. Naturally a microphone of this kind must be rugged and the arrangement should be such that no matter



Listening to the Doings in the Enemy's Trenches By Means of Supersensitive Microphones is a Recent Idea. It Shows a New Way How to Get Advance Information, as, for Instance, Just When the Enemy Intends to Attack, Etc., Etc.

When two forces are deadlocked against each other and when it becomes practically impossible to pass over the intervening "No Man's Land" with assailing forces, it is of primary importance to know what is going on in the other fellow's trenches. It being impossible to raise the head above the parapet due to continuous bullet streams, the men in the trenches are more or less on edge continuously, as they do not know what is going to happen next. Consequently most of the reconnoitering is done during the night, and to counteract this the enemy uses the so-called *star-shells* which illuminate the landscape for miles around for a period of a few seconds. During this time there is always an opportunity to catch advancing forces or patrols and thus annihilate them.

The thing that a commander is most interested in, is to know just when the enemy is going to leave his trenches to make an attack. If he could know exactly at what time such an attack is to be made, this information would often be of priceless value. Of course, it goes without saying that the enemy is not likely to give away such information if he can help it. Advance posts in advanced trenches, called in field parlance "listening posts," are of course quite satisfactory, but they do not get advance information, and they are simply there to stop an advancing force or to tell the men behind the lines as soon as the attack has started. This listening post is usually a shell hole somewhere between the trenches in "No Man's Land" well fortified with sand bags, and well in advance of the front trenches. It is usually manned by two men, and a machine gun or sometimes rifles only. It has occurred to us that advance information could readily

properly camouflaged so they will have a rather innocent appearance. In other words, they could be made up as cobblestones, pieces of log, or any other object that would not arouse the suspicion of the enemy. It would then be the duty of some of the men to take these thus camouflaged sensitive microphones up to the very edge of the enemy's trench, concealing the microphones behind his parapet and sand bags.

Needless to say in doing so, it is necessary for the party who lays the microphones to clear the barbed wire entanglements, and this is ticklish business. Inasmuch as these wire entanglements are often provided with cowbells and other ingenious tell-tales which immediately inform the enemy that someone is near, the trick can be accomplished nevertheless. For instance, the microphone may be thrown by hand like a bomb, taking good aim that it does not actually land into the trenches; thin wire trailing from behind the microphone and which should have the same color as the ground, will not be readily detected by the enemy. In this case, the wire would of course lay on top of the barbed wire entanglements, but being very fine it probably would not be observed from the enemy's trench.

Naturally all this work must be done during a dark night, it being impossible to crawl out of the trenches in "No Man's Land" during the day-time without courting certain death. It also goes without saying that the enemy will surely discover some of the microphones in time and shoot them to pieces.

However, it should be possible to place enough of them in such a manner that at least a few will stay in place where they

how the microphone is thrown, it should operate to its full sensitiveness. This, however, presents no unsurmountable technical difficulty, any electrical engineer being capable of designing a microphone of this kind.

Now suppose we have a few dozen of these microphones concealed near the enemy's trench. The wires from them lead to our own trenches, where an operator is to be in charge of the receiving end, listening for any information coming over his wire; chance remarks by the enemy are surely to be made from time to time. But not alone is information such as this of high import, but our commanders need very much more certain information as for instance, when the men in the first trench line are to be relieved.

In trench warfare, the men of course cannot stay in the trenches all of the time, and they are usually relieved during the night-time, which means more or less confusion, "choked" trenches, etc. If our attack can be timed at such a period, it is naturally more easy to win a trench than when the regular forces are in charge. The noise and the talk of the relieving party should usually be loud enough to give such information away over the sensitive microphone.

Of course, a scheme of this kind can readily be improved upon in many ways, and we leave this to our able Signal Corps attendants at the front.

## ITALY USES RADIO-TELEPHONES

So successful have wireless telephones proved on Italian warships that the government plans to install them on merchant and passenger vessels.