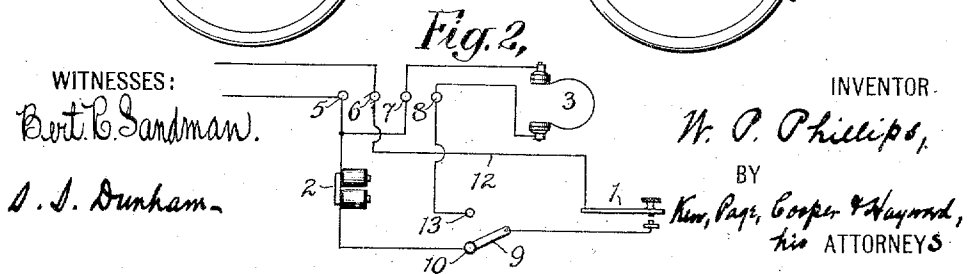
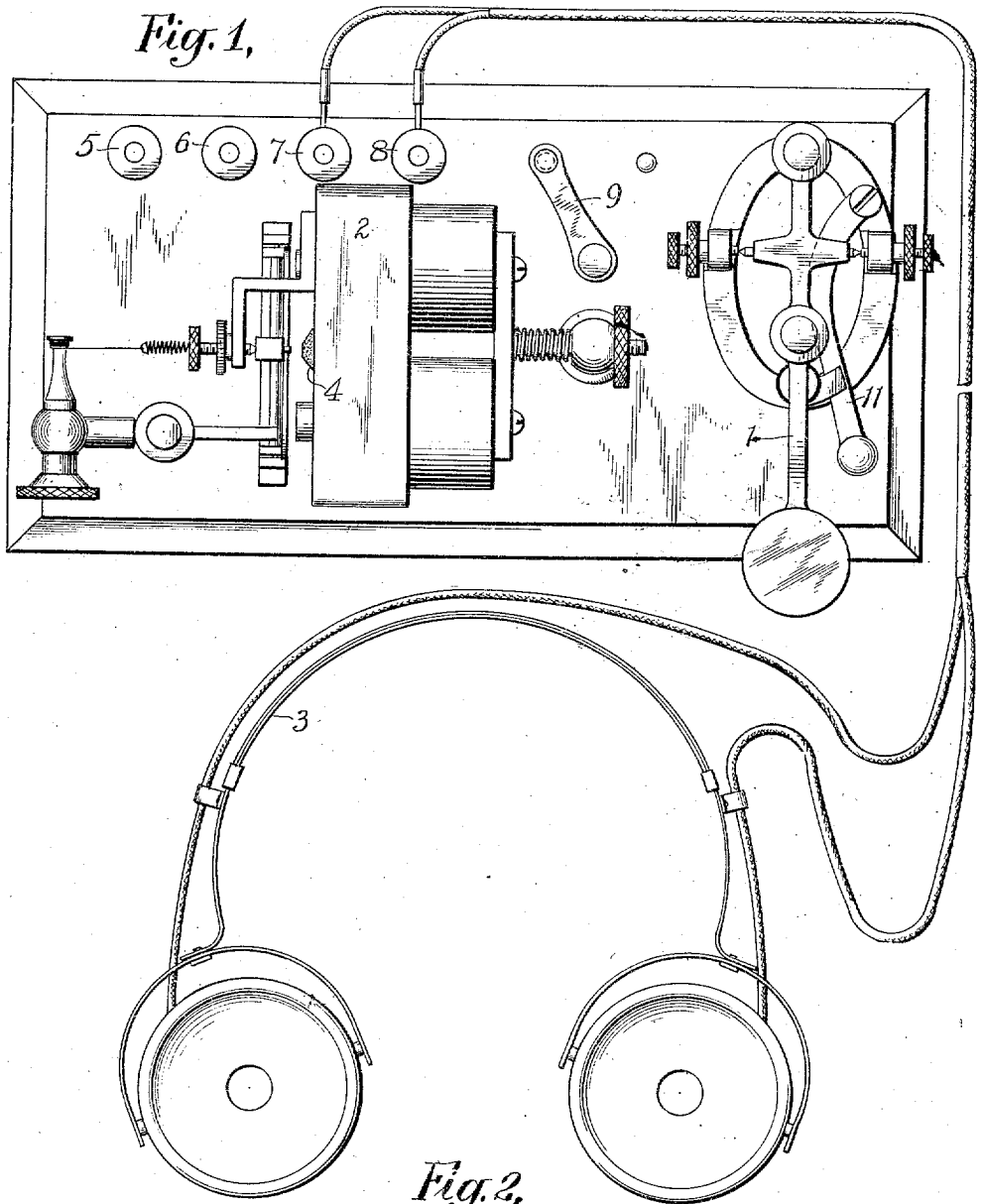


W. P. PHILLIPS.
SECRET TELEGRAPH SYSTEM.
APPLICATION FILED NOV. 8, 1909.

963,062.

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SECRET TELEGRAPH SYSTEM.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WALTER P. PHILLIPS, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Secret Telegraph Systems, of which the following is a full, clear, and exact description.

In the transmission of messages by the common system, in which the messages are received by a sounder, it is possible for any person who is able to read Morse signals by sound to overhear the messages as they are received or transmitted, and important communications, which under the circumstances can not be coded, are thus in effect transmitted with full publicity instead of being sent in secrecy. In fact, improper use has repeatedly been made by unscrupulous persons of information thus obtained, and such a result may happen in any case when for any reason the message cannot be first translated into a private code.

My present invention is designed to avoid this defect, and has for its chief object to provide simple and effective means whereby the messages, although transmitted in ordinary Morse and without being coded, will be utterly unintelligible to a by-stander and yet perfectly intelligible to the sending and receiving operators.

To this and other ends the invention consists in the novel features and combinations of elements hereinafter described, and more particularly pointed out in the appended claims.

A convenient embodiment of the invention is illustrated in the annexed drawing, and referring now thereto, Figure 1 is a plan view of the apparatus constituting a station set, comprising sending and receiving devices. Fig. 2 is a diagram showing the wiring of the system.

The apparatus at each station consists essentially, in addition to the usual key, 1, of a Morse sounder, 2, and a telephonic receiver, 3. The sounder may be of the ordinary kind, on a local circuit, but in the present embodiment I employ what is commonly known as a line sounder, being connected directly to the line without the interposition of a relay. In either case, however, one stop or contact of the sounder, and of the relay also where the same is used, is made dead or silent by substituting a stop of soft

rubber, or other suitable material, as indicated at 4. Four binding posts, 5, 6, 7, 8, are provided, the first two being for connection with the line and the last two for connection with the telephonic receiver 3. The latter may be of any convenient type, such, for example, as is used in wireless telegraphy.

9 is an ordinary two-point switch, mounted preferably on the same base as the key and sounder.

The wiring is shown in Fig. 2, in which it will be seen the sounder and the telephonic receiver are in parallel, and that either may be cut out, while the other is cut in, by the switch 9.

Normally, when the station is neither sending nor receiving, the switch 9 is on point 10, (with the key-switch 11 closed), and it will therefore be seen that the line current, entering say at binding post 6, flows through wire 12, key 1, switch 9, sounder 2, and back to line through binding post 5. It will also be evident that as the circuit is opened and closed at some other station the signals produced by the sounder 2 will be imperfect or mutilated since only the back stroke of the armature will produce a sound, the forward stroke falling noiselessly on the rubber pad or stop 4. Such mutilated signals of course cannot be read by a by-stander. Suppose now that the station is "called." The operator, having quickly and easily learned to recognize his call as received by the "mutilating" sounder, at once throws the switch 9 over to point 13, thus cutting out the sounder and causing the current to flow from binding post 6, wire 12, key 1 and switch 9, through point 13, binding post 8, telephonic receiver 3, and binding post 7 back to the line. The sounder is thus idle, but in the telephonic receiver the operator can hear and read the Morse signals with the greatest ease. In sending, the operator can leave the switch 9 in either position, but preferably puts it on point 13 so as to cut out the sounder.

From the foregoing it will be seen that the messages intended for the station are delivered directly into the receiving operator's ear, and that at every other similarly equipped station the signals are locally mutilated at the sounder so as to be wholly unintelligible to the by-standers, but without being in any way affected so far as the line

is concerned. In this way complete secrecy is assured, no one but the line operators being able to get the full signals.

The embodiment herein specifically shown and described is convenient and thoroughly effective, but it is to be understood that the invention can be embodied in other forms without departure from its proper spirit and scope as defined by the appended claims.

10 What I claim is:

1. In a system of telegraphy of the kind described for the secret transmission of messages, a receiving instrument of the sounder type having a dead or silent armature-stop, 15 whereby signals received thereby will be enunciated in fragmentary or mutilated form, a receiving instrument of the telephonic type, and a switch for connecting either instrument in series with the transmission line 20 at will.

2. In a system of telegraphy of the kind described for the secret transmission of messages, a transmission line, a receiving instrument of the sounder type connected in series with the line, and having a dead or silent armature-stop, a receiving instrument 25 of the telephonic type connected in series with the line and in parallel with the first-named instrument, and a switch for cutting 30 either instrument into or out of the line at will.

3. In a system of telegraphy of the kind described for the secret transmission of messages, a transmission line, a two-point switch, a Morse key having one terminal 35 connected to the line and the other to the switch, a receiving instrument of the sounder type having a dead or silent armature-stop and having one terminal connected to the

line and the other to one of the points of said switch, and a receiving instrument of the telephonic type having one terminal connected to the line and the other terminal to the other point of said switch, whereby either instrument may be connected to the 40 line in series with the key. 45

4. In a system of telegraphy of the kind described for the secret transmission of messages, a station set comprising a Morse key, and receiving instruments in parallel, one of said receiving instruments being of the 50 sounder type but having a dead or silent armature-stop, whereby signals received thereby will be enunciated in mutilated or fragmentary form, the other receiving 55 instrument being of the telephonic type.

5. In a system of telegraphy of the kind described for the secret transmission of messages, a station set comprising a receiving instrument of the sounder type having a 60 dead or silent armature-stop whereby signals received thereby will be enunciated in mutilated or fragmentary form, a receiving instrument of the telephonic type, a Morse key, and a switch for connecting either in- 65 strument in series with the key at will.

6. In a system of telegraphy of the kind described for the secret transmission of messages, a transmission line, a mutilating receiving instrument for receiving Morse sig- 70 nals, and a telephonic receiver in parallel with the former.

In testimony whereof I affix my signature in the presence of two subscribing witnesses.

WALTER POLK PHILLIPS.

Witnesses:

C. W. HEDBERG,
N. B. FLATHER.