

No. 649,371.

Patented May 8, 1900.

W. I. STOCKDON.
GROUND PLUG FOR ELECTRICAL SWITCHBOARDS.

(Application filed Feb. 16, 1900.)

(No Model.)

FIG. 1.

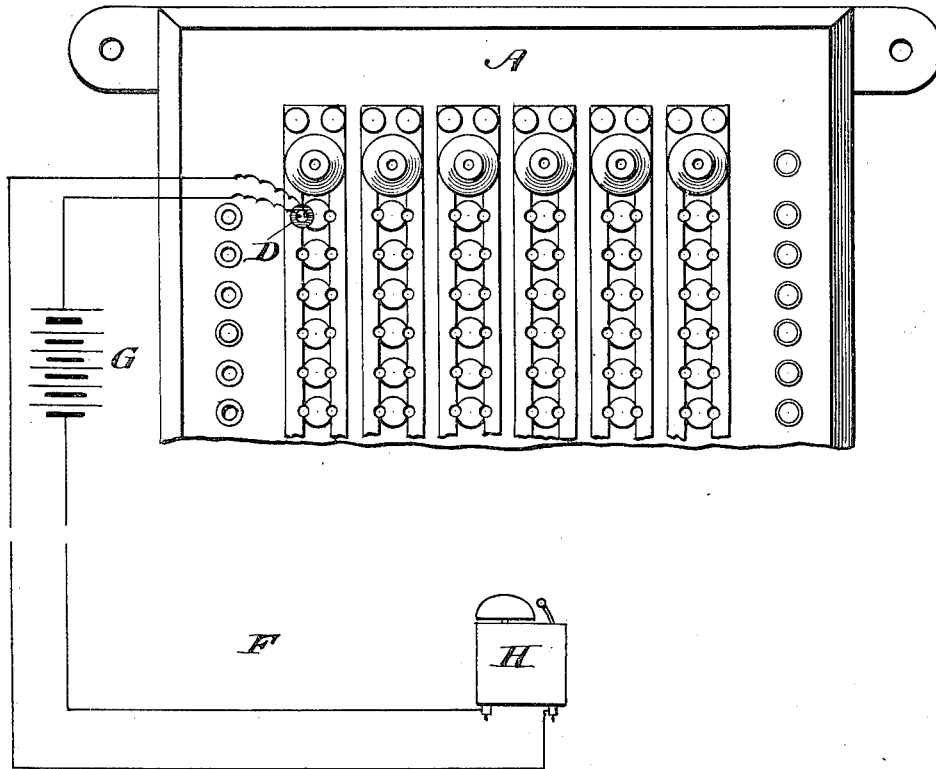
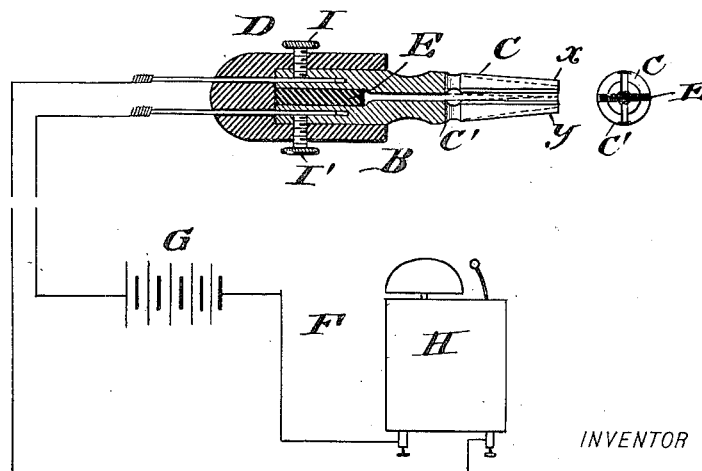


FIG. 2.



WITNESSES:

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WALLACE IRVING STOCKDON, OF ORANGE, VIRGINIA.

GROUND-PLUG FOR ELECTRICAL SWITCHBOARDS.

SPECIFICATION forming part of Letters Patent No. 649,371, dated May 8, 1900.

Application filed February 16, 1900. Serial No. 5,548. (No model.)

To all whom it may concern:

Be it known that I, WALLACE IRVING STOCKDON, of Orange, in the county of Orange and State of Virginia, have invented a new and useful Improvement in Ground-Plugs for Electrical Switchboards, of which the following is a specification.

My invention is an improvement in ground-plugs for electrical switchboards, and has for an object to provide a plug which when properly applied to a switchboard to ground the main circuit will operate an audible signal independently of the main electrical circuit and will continue to sound as long as the plug is in place, so the operator will be notified when through with a line and be sure to remove the plug, the object being to insure the removal of the plug and so obviate the grounding of a wire except when desired.

The invention consists in certain novel constructions and combinations of parts, as will be hereinafter described and claimed.

In the drawings, Figure 1 is a face view of a switchboard provided with my improvements; and Fig. 2 is a detail view, partly in section, of the ground-plug and its local circuit, battery, and sounder.

The switchboard A may be of any desired construction, that shown being the one now commonly used in telegraphing apparatus, and may be connected with the main circuit and be adapted in any suitable way to receive the ground-plugs B. These plugs B, so far as grounding the line is concerned, operate similarly to the plugs now in use, the novel feature of such plugs being in the provision of a sounder operated by a local circuit entirely independent of the main circuit and in the means whereby such result is accomplished. The purpose of grounding the line is the usual one to cut out the station or stations on the side of the sending-station opposite that to which it is desired to send the message, and the purpose of sounding the signal while the plug is in the board is to constantly remind the operator of the grounding of the line, so he will not forget to remove the plug when he has concluded sending the message.

In carrying out my invention I make the plug in sections insulated from each other and having such insulated sections forming

the terminals of a local circuit which contains a battery and a sounder, the terminals being arranged to be brought into contact when inserted in the switchboard and to operate when so inserted to ground the main circuit in the usual way and also to close the local circuit, so its sounder will operate while the plug is retained in the switchboard. It is to be noted that the local circuit is not operated by the current from the main circuit, but has its own battery or other equivalent source of electrical supply, so it will not in any way affect the operation of the main circuit.

In the construction shown the plug B is formed with the sections C C' received at their butt-ends in the head D and spaced apart throughout. The butt-ends of the sections C C' are insulated in any suitable manner—it may be, by forming the spacing-block E and the head D of suitable insulating material—while the point ends x and y of the plug-sections C and C' are arranged to be pressed into contact when the plug is inserted in the switchboard, as will be understood from the dotted lines in Fig. 2, and thus close the local circuit F, which includes the sections C and C' and the battery G and sounder H. It will thus be seen that the sections C C' form circuit-closing sections which are normally insulated from each other and are arranged to be brought into electrical union or contact when the plug is in position in the switchboard-socket.

Manifestly the battery and the sounder may be of any desired construction.

In the operation when the plug is inserted in the switchboard to ground the main circuit the ends x and y of the sections C C' will be pressed together, closing the local circuit, causing its sounder to operate. The plug thus completes a local circuit of its own. It should be noted that the plug completes this local circuit through itself and forms a complete signaling-circuit entirely independent of the main line-circuit.

The butt-ends of the sections C C' and their insulating-block E fit in the head D and are suitably secured, it may be, by the screws I and I', as shown.

Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. A ground-plug for electrical switch-boards comprising the plug having circuit-closing sections normally insulated from each other and arranged to form electrical union or contact when the plug is in position in the switchboard-socket, and a local circuit of which said sections form the terminals, such circuit containing a battery and sounder and being arranged for operation independently of the current of the main circuit substantially as set forth.

2. A ground-plug substantially as described comprising the sections normally separated at their point ends and arranged to be pressed into contact at such end when in position in the switchboard-socket, insulation for the butt-ends of said sections whereby they are electrically detached, and a circuit containing a battery and a sounder of which circuit the

plug-sections are the terminals substantially as set forth.

3. The ground-plug herein described comprising the sections normally separated at their point ends and arranged at such ends to be pressed into contact, the insulating-block between the butt-ends of said sections, and the head receiving such ends of the sections, means whereby the sections are secured in the head and the local circuit having a battery and sounder and whose terminals are the plug-sections, the local circuit being arranged to be closed through the plug-sections substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WALLACE IRVING STOCKDON.

Witnesses:

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BENJ. F. CARMAN.