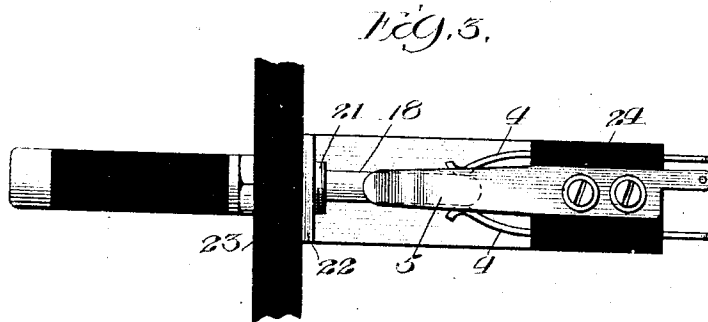
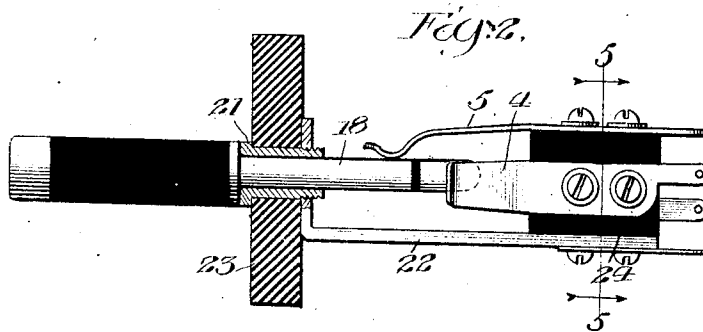
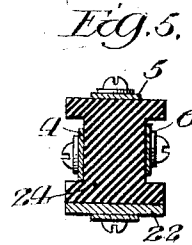
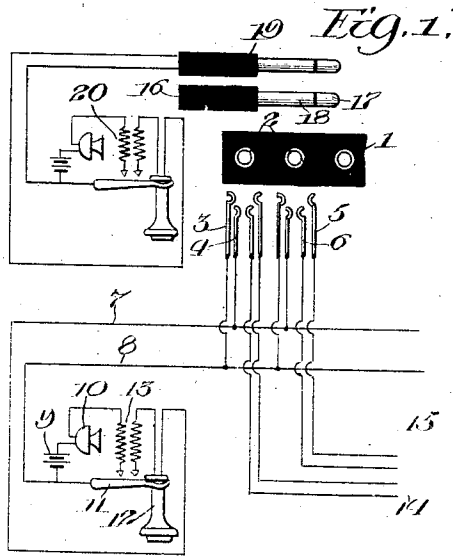


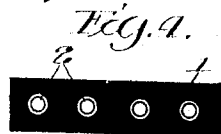
E. E. DILDINE & J. A. RUGH.
 CORDLESS JACK BOX.
 APPLICATION FILED APR. 12, 1910.

1,039,656.

Patented Sept. 24, 1912.



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UNITED STATES PATENT OFFICE.

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CORDLESS JACK-BOX.

BEST AVAILABLE COPY

1,039,656.

Specification of Letters Patent.

Patented Sept. 24, 1912.

Application filed April 12, 1910. Serial No. 555,095.

To all whom it may concern:

Be it known that we, ELLIS EUGENE DILDINE and JAMES A. RUGH, citizens of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented a certain new and useful Improvement in Cordless Jack-Boxes, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

Our invention relates to cordless jack boxes and has for its object the provisions of improved means for interconnecting various circuits.

The devices in the form shown herein comprise a plurality of jacks adapted for association with plugs to interconnect a plurality of circuits associated with a jack by the insertion of a plug.

We do not of course limit ourselves to the embodiment of devices such as are illustrated herein, these being used merely for the purpose of showing one of the many embodiments of the invention.

We will describe our invention more in detail by referring to the accompanying drawing, illustrating one embodiment thereof in which—

Figure 1 diagrammatically represents the plug and jack of our invention; Figs. 2 and 3 show different views of the full size jack and plug; Fig. 4 represents a top view of a complete device; and Fig. 5 is a cross-sectional view on lines 5—5 of Fig. 2.

In the drawing we show the jack boxes 1 as more clearly set forth in Fig. 4 having a plurality of jacks 2, 2, which are mounted therein and which are each associated with two circuits, the interconnecting devices in the jack itself being such that when the plug is inserted in a jack, the two circuits associated therewith will be connected together irrespective of any apparatus connected to the plug itself.

In a diagrammatical way we illustrate in Fig. 1 the jack box 1 having the jacks 2, each jack having associated therewith four springs, the springs 3, 4, and the springs 5, 6. The springs 3, 4, of all of the jacks are connected in metallic circuit by means of the wires 7 and 8 with a central station telephone set comprising the batteries 9, a transmitter 10, switch hook 11, receiver 12 and the induction coil 13.

The springs 5, 6 of each jack are connected to incoming line circuits, for instance the left hand jack 2 of Fig. 1 has its springs connected to line circuit 14, comprising a pair of wires as shown, the right hand jack 60 of Fig. 1 having its springs 5 and 6 connected to the line circuit 15. In this way each jack is associated with an incoming line circuit. We use a metallic plug 16, as shown more clearly in Figs. 1, 2 and 3, which 65 plug when inserted in either jack 2 serves by means of the tip contact 17 to interconnect springs 4 and 6 and by means of the sleeve contact 18 to connect springs 3 and 5. It will thus be seen that should the plug 16 70 be inserted in the left hand jack 2 of Fig. 1, line circuit 14 would be connected to the central station telephone set whereas if the plug, be inserted in the right hand jack 2, line circuit 15 would be connected with the 75 central station telephone set. In this way a single plug is used with a plurality of jacks, one for each incoming circuit and the single plug by mere insertion in either jack connects the associated line circuit with the 80 central station signal sending and receiving devices. An advantage of this arrangement will be apparent in Fig. 1, in that we can use a plug 19 having a local battery telephone set 20 associated therewith which can 85 be inserted in either jack and thus connect to either line circuit. This is of advantage should the central station telephone set be out of service or should it be desired to have two people converse with either incoming 90 line circuit. In Figs. 2 and 3 we have shown the jacks used, as they are constructed in practice, in which the thimble 21 secures the angle plate 22 to the front plate 23 by having screw-threaded engagement therewith 95 as shown.

The angle plate 22 corresponds in the illustration of Fig. 1 to the spring 3 as the sleeve contact 18 interconnects the spring 5 and the angle plate 22. This plate holds 100 all of the parts which in this instance comprise a piece of insulating material 24, such as fiber upon which the various springs 5, 4 and 6 are mounted.

While we have herein shown and particularly described the preferred embodiment of our invention, we do not limit ourselves to the precise construction and arrangement as herein set forth, but

Having thus described our invention, what 110

we claim as new and desire to secure by Letters Patent is:

1. An apparatus of the character described having a plurality of interconnecting devices each having contact making means connected to an independent incoming line circuit, and each having contact making means all of which second means are connected to a central station set, and a single plug having a plurality of concentric annular contact elements adapted for insertion in any device aforesaid and adapted by its insertion to connect the central station set to the particular line circuit with which said device is associated, said annular contact element forming a serial part of the completed circuit.

2. An apparatus of the character described having a plurality of interconnecting devices each having contact making means connected to an independent incoming line circuit, and each having contact making means all of which second means are connected to a central station telephone set, and a single plug having a plurality of concentric annular contact elements adapted for insertion in any device aforesaid and adapted by its insertion to connect the central station telephone set to the particular line circuit with which said device is associated, said annular contact element forming a serial part of the completed circuit.

3. An apparatus of the character described comprising a plurality of interconnecting devices each having contact making means associated with a central telephone set, a like plurality of independent line circuits terminating in contact making means, one line circuit associated with each device by virtue of its associated contact making means and a single plug having a plurality of concentric annular contact elements adapted for insertion in any device to there-

by connect its associated line circuit with the central telephone set, said annular contact element forming a serial part of the completed circuit.

4. A device of the character described comprising a plurality of jacks each having a plurality of contact making means, an independent line circuit connected with certain contact making means of each jack, the remaining contact making means associated with each jack connecting same to a central telephone set, and a single plug having a plurality of concentric annular contact elements adapted, when inserted in any jack to connect the line circuit associated with said jack to the central telephone set, said annular contact element forming a serial part of the completed circuit.

5. A device of the character described comprising a plurality of jacks each having a plurality of contact making means, an independent line circuit connected with certain contact making means of each jack, the remaining contact making means associated with each jack connecting same to a central telephone set, and a single plug having a plurality of concentric annular contact elements adapted, when inserted in any jack to connect the line circuit associated with said jack to the central telephone set, said plug having metallic portions for making the interconnections aforesaid, said metallic portions serially forming part of the completed circuit.

In witness whereof, we hereunto subscribe our names this 23rd day of March, A. D. 1910.

E. E. DILDINE.
JAMES A. RUGH.

Witnesses:

J. E. COOLEY,
OLIVER WHALEY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."