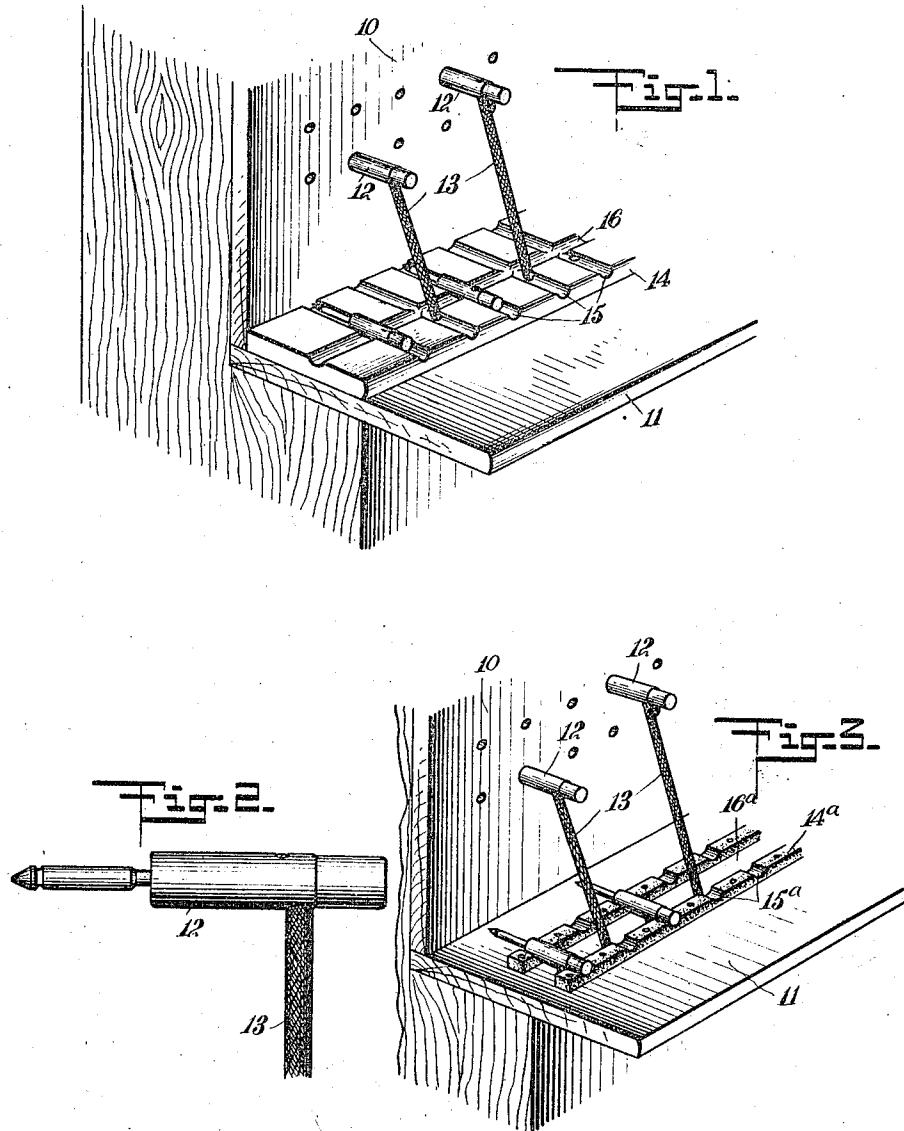


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 SWITCH PLUG.
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950,281.

Patented Feb. 22, 1910.



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SWITCH-PLUG.

950,281.

Specification of Letters Patent.

Patented Feb. 22, 1910.

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To all whom it may concern:

Be it known that I, PETER CHARLES EWING, a subject of the King of Great Britain, and a resident of Little Rock, in the county of Pulaski and State of Arkansas, have invented a new and Improved Switch-Plug, of which the following is a full, clear, and exact description.

This invention relates to certain improvements in switch plugs, and more particularly to that type of switch plug commonly used in telephone switchboards.

In the common type of plug, it is customary to have the cord and plug directly in alignment, that is, the cord enters and is secured to the rear end of the plug. The plugs normally stand upright when not in use, and when inserted in the jacks they are turned so as to lie substantially horizontal with the cords bending at approximately an angle of ninety degrees at the rear end of the plug. This bending of the cord each time a plug is used, tends to injure the cord by breaking the metallic conductors in said cord. Furthermore, it tends to break and ruin the insulation of the cord and its separate conductors, causing a part of or the entire cord to be discarded, when except for such breaking of conductors and insulation the cord would be in good condition.

In my improved construction, I permanently connect the cord to the plug, so that the cord extends from the plug at approximately an angle of ninety degrees. The plug remains in a horizontal position when in use and also when out of use, and the movement of the plug from one position to the other, does not cause bending of the cord at its point of connection with the plug. Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures, and in which—

Figure 1 is a perspective view of a portion of a telephone switchboard provided with plugs and cords constructed and connected in accordance with my invention; Fig. 2 is a side elevation of a plug and a portion of the cord connected thereto; and Fig. 3 is a perspective view of another switchboard showing a somewhat different form of support for the plugs when the latter are in inoperative position.

In utilizing my invention, I do not make any change whatever in the jacks of the

switchboard nor in the wiring system. I provide any suitable form of jackboard 10 having at the lower edge thereof the table or support 11 for holding the plugs when the latter are in inoperative position. The plugs 12 may be of any approved type and are connected to cords 13 containing the conductors. Instead of extending the cord into the rear end of the plug and directly securing it 65 therein, I provide the plug with an opening in the side thereof closely adjacent the rear end and extend the cord through this opening, so that the cord normally extends at an angle of substantially ninety degrees to the 70 general direction of the plug. The plug when in use is disposed substantially in a horizontal position within the jack, as in the ordinary switchboard, but by connecting the cord to the plug as above indicated, the plug 75 is also caused to assume a substantially horizontal position when not in use, that is, when in inoperative position. The cords extend down through the table or platform 11, and I provide special means for supporting the 80 plugs in their horizontal position upon this table or platform.

In the form shown in Fig. 1, I provide a supporting member 14 having transverse grooves 15 in the upper surface thereof and 85 each adapted to receive a plug. Intermediate the ends of each groove is an opening for the cord, so that as soon as the plug is released the cord will draw down through the opening and bring the plug into the 90 groove with the top of the plug toward the jack. To facilitate the picking up of the plugs, I provide the support 14, with a longitudinal groove 16 just in advance of the openings through which the cords extend. This 95 groove serves to receive the thumb and finger in picking up the plug, and the groove is so positioned that the plug may be grasped in the most convenient manner for inserting the latter in one of the jacks. 100

In the form shown in Fig. 3, I provide a support 14^a, formed of two separate members spaced apart and secured to the upper surface of the platform or table 11. The space 16^a between the two members serves as a 105 longitudinal groove to facilitate the picking up of the plugs, and each member is provided with a series of transverse grooves 15^a, which receive and support the plug in substantially the same manner as do the grooves 110 15 of the form shown in Fig. 1. The two members shown in Fig. 3 may be readily ap-

plied to any ordinary switchboard without necessitating any change whatever in the latter, and an ordinary switchboard may thus be utilized in my invention by simply changing the connections between the plugs and the cords.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

10 1. In combination, a switch plug, a jack adapted to receive the plug in a substantially horizontal position, and a support for holding the plug substantially horizontal in an inoperative position, said support having a transverse groove to receive the plug, and a longitudinally-extending groove to facilitate the picking up of the plug.

2. In combination, a switch plug having an opening in the side thereof, a cord extending through said opening at approxi-

mately an angle of ninety degrees to the plug and permanently connected to said plug, a jack adapted to receive the plug in a substantially horizontal position, and a support for holding the plug substantially horizontal when in inoperative position, said support having a transverse groove therein to receive the plug, a longitudinally-extending groove crossing said transverse groove, and an opening through the support within the transverse groove and through which the cord extends.

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

PETER CHARLES EWING.

Witnesses:

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B. THRUSTON.