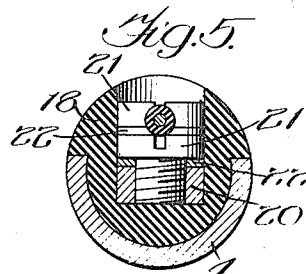
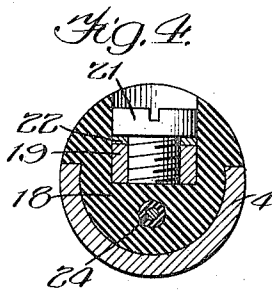
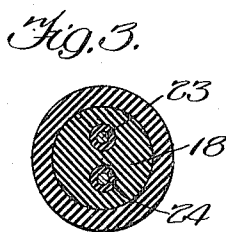
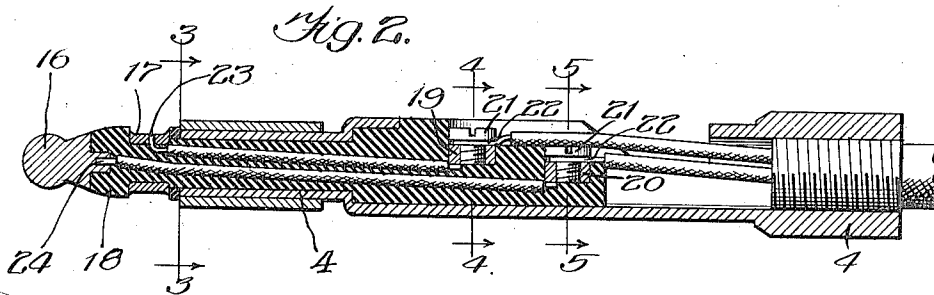
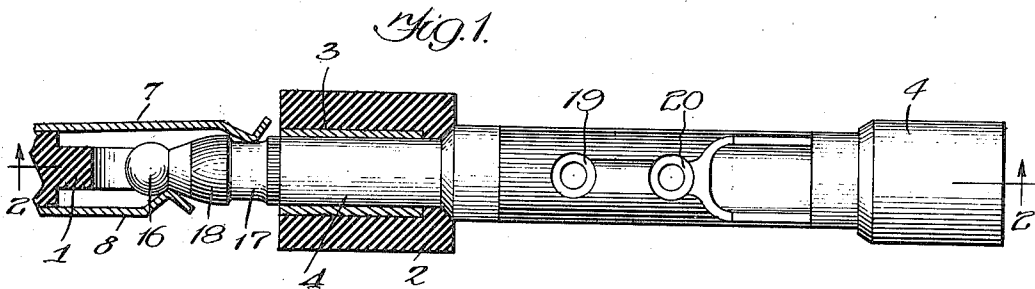


F. B. COOK.
CONNECTING PLUG.
APPLICATION FILED JUNE 12, 1916.

1,233,031.

Patented July 10, 1917.



Inventor:
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UNITED STATES PATENT OFFICE.

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CONNECTING-PLUG.

1,233,031.

Specification of Letters Patent.

Patented July 10, 1917.

Original application filed January 15, 1915, Serial No. 2,422. Divided and this application filed June 12, 1916. Serial No. 103,102.

To all whom it may concern:

Be it known that I, FRANK B. COOK, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Connecting-Plugs, 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.

My invention relates to electric switches employing complemental parts in the form of spring jacks and conducting plugs. The claims in the present application relate to plugs, this application being a division of my original application Serial No. 2,422, filed January 15, 1915.

My invention includes a connecting plug having a metallic tubular member and a metallic portion at the front of the tubular member, there being filling of insulation in the tubular member through which a conductor leading to the other metallic portion passes. This filling is desirably inserted under pressure and in order that said conductor may not be forced into short circuiting contact by the filler such conductor is covered with insulation prior to its insertion within the tubular member.

I will explain my invention more fully by reference to the accompanying drawing showing the preferred embodiment thereof and in which Figure 1 is a view with the plug portion of the switch in elevation and a part of the jack, which coöperates with the plug, in section; Fig. 2 is a sectional view; Fig. 3 is a sectional view on line 3 3 of Fig. 2; Fig. 4 is a sectional view on line 4 4 of Fig. 2; and Fig. 5 is a sectional view on line 5 5 of Fig. 2.

Like parts are indicated by similar characters of reference throughout the different figures.

A strip 1 of insulation of a length corresponding to the number of spring jacks to be mounted is provided with a front rail 2 in which the thimbles 3 or other third jack contacts are disposed, the bores of the thimbles snugly receiving the forward continuation of the plug, or third, contact portion 4. The talking contact springs 7 and 8 are mounted upon the top and bottom sides of the strip 1. The plug illustrated includes.

in addition to the heel contact 4, the tip 16 and a ring 17, preferably scalloped, which are adapted respectively for engagement with the switch springs 7 and 8 of a jack when a plug having these parts is fully inserted. These plug contact portions are so related with respect to each other and with respect to the strip rail 2 and thimbles 3 that said thimbles are incapable of having simultaneous connection with any two plug contacts.

The contact portion 4 is generally tubular but is desirably cut away at an intermediate portion to afford access to its interior at points where connections are to be made with the contacting or other strands of the cord circuit of which the plug forms a part. The forward end of the bore of the tubular conductor 4 is filled with insulation 18 which is continued rearwardly of the points of attachment of the aforesaid cord strands where the filling of insulating material may support short threaded nuts 19 and 20 into which binding screws 21 may be threaded to clamp the cord conductors 22 in place, the third conducting cord being electrically connected with the heel contact 4 in a well known manner. The terminal nuts 19 and 20 are respectively connected with the ring 17 and tip 16 by means of conductors 23 and 24 which are soldered or otherwise have connection with the ring and tip. The molding insulating material is forced into a space in the tubular element 4 in which the conductors 23 and 24 are previously disposed and in order to prevent the flowing insulating material from bringing these conductors into direct contact with each other or with other metallic portions of the plug that should be insulated therefrom I employ insulation about the conductors 23, 24 that is present upon the conductors before their insertion in the plug, which is preferably in the form of enamel but which may be of other form if desired, and while these insulated conductors are preferably separately formed from the plug contacts to which they extend I do not wish to be limited to this characteristic since the insulation there-of prevents undesirable contact of these conductors in the event of injury or deterioration.

While I have shown a plug having three

complemental contact portions I do not wish to be limited to the number of contact portions employed.

5 Having thus described my invention I claim as new and desire to secure by Letters Patent the following:—

1. A conducting plug including two forward contact portions; a tubular contact portion to the rear of the other contact portions; conductors in electrical connection with said forward contact portions and passing through the bore of said tubular contact portion; and a filling of insulation within the bore of the contact portion through which filling the conductors pass, said conductors being insulated previous to their insertion within the plug to prevent the filling of insulation from forcing the conductors into engagement with the tubular contact portion.
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2. A conducting plug including a forward contact portion; a tubular contact portion to the rear of the other contact portion; a conductor in electrical connection with said forward contact portion and passing through the bore of said tubular portion; and a filling of insulation within the bore of the contact portion through which filling the conductor passes, this conductor being insulated previous to its insertion within the plug to prevent the filling of insulation from forcing the conductor into engagement with the tubular contact.
25 30

In witness whereof, I hereunto subscribe my name this twenty-fifth day of January, A. D. 1916.
35

FRANK B. COOK.

Witnesses:

G. L. CRAGG,
ETTA L. WHITE.