

H. HUBBELL.
SEPARABLE ATTACHMENT PLUG.
APPLICATION FILED JUNE 5, 1908.

943,681.

Patented Dec. 21, 1909.

Fig. 1.

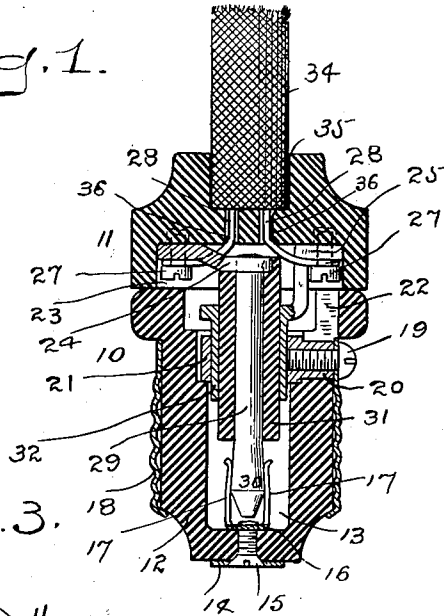


Fig. 3.

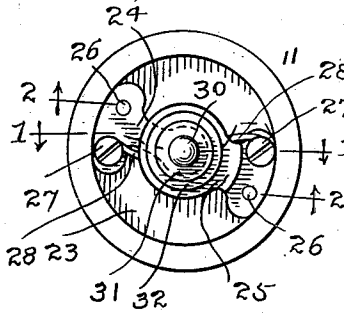


Fig. 4.

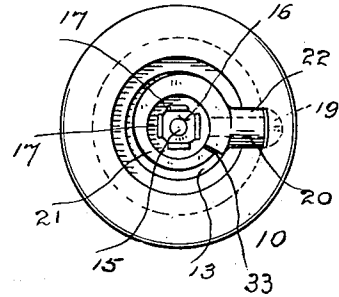


Fig. 2.

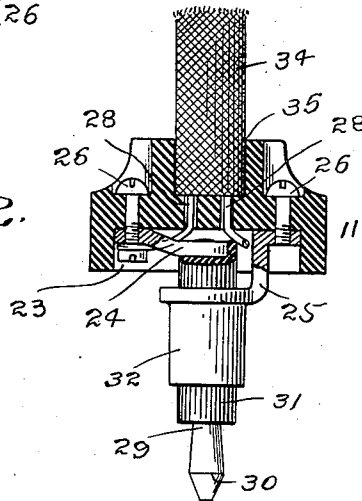
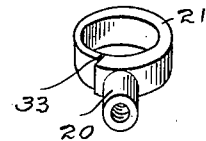


Fig. 5.



Witnesses:
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UNITED STATES PATENT OFFICE.

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SEPARABLE ATTACHMENT-PLUG.

943,681.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HARVEY HUBBELL, a citizen of the United States, residing at Bridgeport, county of Fairfield, State of Connecticut, have invented a new and useful Separable Attachment-Plug, of which the following is a specification.

This invention relates to separable attachment plugs and has for its objects to simplify and cheapen the construction, to reduce the size and weight of the plug approximately one-half by shortening it and reducing the number of parts, and especially to provide a construction in which all the contact parts shall be inclosed within a screw shell, for example within an Edison screw shell. This I accomplish by means of a live central stem or post which is itself a contact and which serves also as a support for the other contact, both contacts in the engaged position being wholly within the base and being inclosed within the screw shell. I also provide a recess in the cap in which the end of the cable is abutted or seated, the wires extending forward and being attached to the binding posts. This enables me by drawing the wires inward tightly to firmly anchor the cable in the cap instead of passing it through the cap in the usual manner.

With these and other objects in view I have devised the simple and novel separable attachment plug of which the following description in connection with the accompanying drawing is a specification, reference characters being used to indicate the several parts.

Figure 1 is a longitudinal section of the plug complete with the base and cap in the engaged position, the line of the section being indicated by 1—1 in Fig. 3 and the view being in the direction of the arrows; Fig. 2 a view of the cap detached, partly in elevation and partly in section on the line 2—2 in Fig. 3, looking in the direction of the arrows; Fig. 3 an inverted plan view of the cap; Fig. 4 a plan view of the base; and Fig. 5 is a perspective of a spring contact ring detached.

10 denotes the base and 11 the cap. The base comprises an insulating body, indicated by 12, which is provided with a central longitudinal recess, indicated by 13. On the outer side of the base at the bottom is a center contact 14 held in place by a screw 15 which passes through the wall of

the body and engages and retains in place a plate 16 which carries a plurality of contact springs 17, four in the present instance. Upon the outer side of the body is a screw shell 18, as an Edison screw shell, retained in place by a screw 19 which also engages a hub 20 carrying a contact ring 21 which lies in the central recess. This contact ring may or may not be a spring ring, as will be more fully explained.

22 denotes a slot leading inward from the top of the body and communicating with the central recess which receives hub 20 in assembling.

The cap is shown as provided in its under side with a recess 23 in which are secured brackets 24 and 25. These brackets are secured in place by screws 26 and each carries a binding screw 27 to which the wires 28 are attached. Bracket 24 carries a stem or post 29 which in the engaged position extends downward into recess 13 in the base and is provided with a head 30 which engages contact springs 17, the head being shown as enlarged so as to insure a firm engagement with the contact springs which are curved inward slightly to retain the head, as clearly shown in Fig. 1. Outside of the stem and secured thereto is an insulating bushing 31. As shown in the drawing, bracket 24 may be recessed into the upper end of the insulating sleeve so as to insure perfect insulation from the other wire.

32 denotes a contact sleeve carried by bracket 25 and lying outside of the insulating bushing. This sleeve passes within contact ring 21 in the connected position, as clearly shown in Fig. 1. Either sleeve 32 or contact ring 21, or both, may be made resilient so as to closely engage the other part. In the present instance I have shown the contact ring as provided with a transverse cut 33 which permits the ring to expand slightly when the sleeve is passed through it in assembling the parts, the ring gripping the sleeve firmly and providing perfect electrical contact.

34 denotes an electric cable, the end of which is seated in a recess 35 in the top of the cap. The wires 28 are stripped, extend forward from the abutting end of the cable, pass through holes 36 in the cap and are connected to binding screws 27.

The operation will be readily understood from the drawing, Fig. 1 showing the base and cap connected as in use and Figs. 2, 3

and 4 showing them detached. In making a connection, the head 30 of stem or post 29 engages contact springs 17, and contact ring 21 which is electrically connected with the screw shell engages sleeve 32. Suppose the left wire in Fig. 1 to be the positive or incoming wire and the right wire to be the negative or outgoing wire. The current passes to the left binding screw and through bracket 24, the stem and contact springs 17 to the center contact. The return current comes in the usual manner to the screw shell and passes through hub 20, contact ring 21, sleeve 32, bracket 25 and the right binding screw to the negative or outgoing wire.

Having thus described my invention I claim:

In a device of the character described, an

insulating cap having in its upper side a recess, a cable having its end seated on the bottom of said recess and having wires extending therefrom and passing through the cap, brackets secured to the under side of said cap to which the wires are connected, said wires being drawn tightly to hold the cable end seated as described, a stem carried by one of said brackets, an insulating sleeve surrounding said stem and a contact sleeve carried by the other bracket exterior to the insulating sleeve.

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

HARVEY HUBBELL.

Witnesses:

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