E. E. DOUGHERTY.

ATTACHMENT PLUG.

APPLICATION FILED FEB. 14, 1914.

1,110,193. Patented Sept. 8, 1914.

Fig. 1.

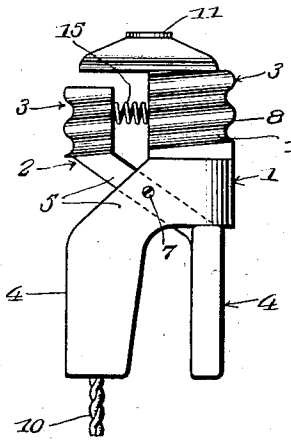


Fig. 2.

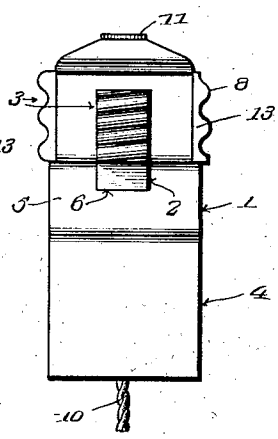
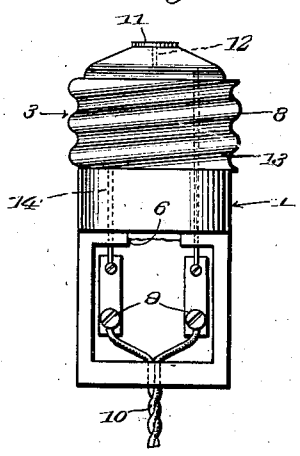


Fig. 3.



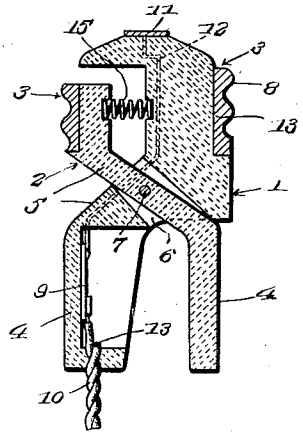


Fig. 4.

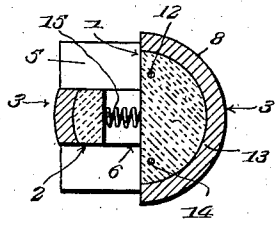


Fig. 5.

Inventor

E. E. Dougherty,

Witnesses

J. H. Crawford.

John J. McCarthy

By Victor J. Evans

Attorney

UNITED STATES PATENT OFFICE.

EUGENE E. DOUGHERTY, OF SAN BERNARDINO, CALIFORNIA.

ATTACHMENT-PLUG.

1,110,193. Specification of Letters Patent. Patented Sept. 8, 1914.

Application filed February 14, 1914. Serial No. 818,755.

To all whom it may concern:

Be it known that I, EUGENE E. DOUGHERTY, a citizen of the United States, residing at San Bernardino, in the county of San Bernardino and State of California, have invented new and useful Improvements in Attachment-Plugs, of which the following is a specification.

This invention relates to improvements in attachment plugs for electric wires and has particular application to a plug of the class described which may be quickly inserted in and withdrawn from the socket.

In carrying out the present invention, it is my purpose to provide a plug of the type set forth which may be inserted within the socket and withdrawn therefrom without the necessity of rotating the plug, as is now usually done, and whereby after the plug has been seated within the socket, such plug may be rotated through a small angle so as to insure a good contact between the terminals of the socket and those of the plug.

It is also my purpose to provide a device of the class described which will embrace the desired features of simplicity, efficiency and durability, which may be manufactured and marketed at a minimum expense and which may be manipulated with ease and convenience.

With the above and other objects in view, the invention consists in the construction, combination and arrangement of parts hereinafter set forth in and falling within the scope of the claims.

In the accompanying drawing; Figure 1 is a view in side elevation of a plug constructed in accordance with the present invention. Fig. 2 is a similar view taken at right angles to Fig. 1. Fig. 3 is a view in side elevation of the plug showing the side opposite that illustrated in Fig. 2. Fig. 4 is a longitudinal sectional view through the plug. Fig. 5 is a cross sectional view therethrough.

Referring now to the accompanying drawing in detail, 1, 2 designate jaws each comprising limbs 3, 4 offset relatively to each other.

5 indicates the central portion of each jaw and such portion of the jaw 1 is slotted as at 6 to receive the similar portion of the jaw 2, these interconnecting portions of the jaws being formed with alining openings designed to receive a pivot pin 7. The jaw 2 is relatively narrow as compared with the thickness of the jaw 1 so that the limb 3 thereof may be passed through the slot 6 in order to facilitate the connecting of the jaws.

The limbs 3, 3 of the jaws 1, 2 are disposed in proximity to each other as illustrated in Fig. 1 and have the outer surfaces thereof rounded to form, in effect, a continuous cylindrical surface and such surface is provided with screw threads 8 adapted to engage the threads in the usual socket, while the limb 4 of the jaw 1 is equipped with binding posts 9, 9 to which are connected the terminals of an electric current carrying cord 10. Secured to the upper end of the limb 3 of the jaw 1 is a contact plate 11 connected by way of a wire 12 with one of the binding posts 9, while secured to the curved side of such limb is a metallic contact plate 13 connected by way of a wire 14 with the remaining binding post 9, the contacts 11 and 13 being designed to engage the respective contacts of the usual socket. The limbs 3, 3 of the jaws are capable of movement toward and away from each other so that the socket end of the plug may be contracted and expanded and a coiled expansion spring 15 is interposed between the confronting faces of the limbs 3, 3 of the jaws and acts to hold the socket end of the plug normally expanded.

From the foregoing description taken in connection with the accompanying drawing, the construction, mode of operation and manner of utilizing my improved attachment plug will be readily apparent. When it is desired to insert the socket end of the plug within the socket, the limbs 4, 4 of the jaws are grasped by the hand and moved toward each other thereby contracting the socket end of the plug against the action of the spring 15 so that such end of the plug may be inserted into the socket. After the socket end of the plug has been placed within the socket the outer end of such plug is released and the spring 15 reacts to expand the end of the plug within the socket thereby binding the outer walls of the limbs 3, 3 with the walls of the socket. Should it be desired to tighten the plug within the socket, the plug may be given a slight turn whereby the threads of the plug in engagement with the threads of the socket will cause the plug to move farther into the socket.

I claim:

1. In an attachment plug, a jaw compris-

ing offset limbs and a central portion having a slot formed therein and a second jaw embodying offset limbs and a central portion pivoted within the slot in the central portion of the first-mentioned jaw whereby the jaws may be moved relatively to each other scissors fashion, the adjacent limbs of the jaws at one end of the plug being adapted to enter the socket, and contacts carried by one of the jaws at the socket engaging extremity thereof.

2. In an attachment plug, a jaw comprising offset limbs and a central portion having a slot formed therein and a second jaw embodying offset limbs and a central portion pivoted within the slot in the central portion of the first-mentioned jaw whereby the jaws may be moved relatively to each other scissors fashion, the adjacent limbs of the jaws at one end of the plug being adapted to enter the socket, contacts carried by one of the jaws at the socket engaging extremity thereof, and means interposed between the socket engaging extremities of said jaws and holding said extremities normally expanded.

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

EUGENE E. DOUGHERTY.

Witnesses:

CHAS. E. VAHEY,

F. M. CURTIN.