April 3, 1928. 1,665,018

P. S. BLACK

ELECTRIC SWIVEL SOCKET

Filed April 25, 1927

Fig. 1.

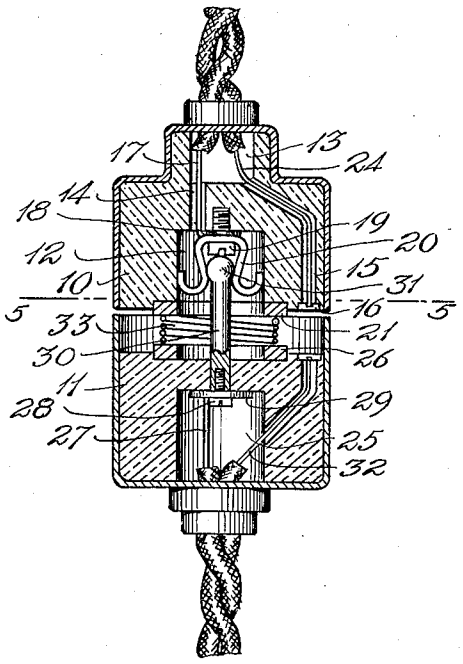


Fig. 2.

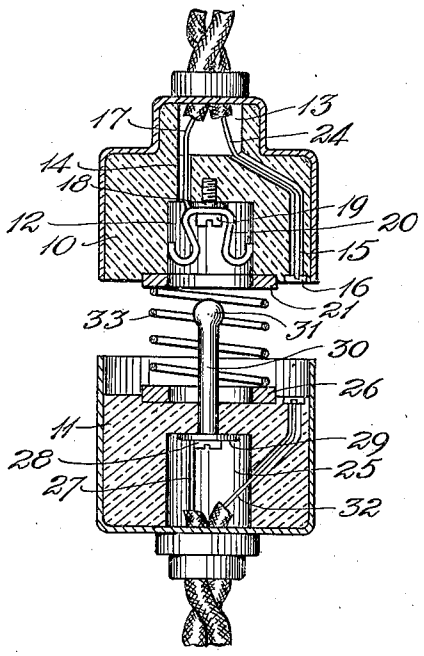


Fig. 3.

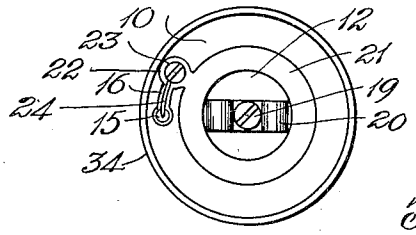


Fig. 4.

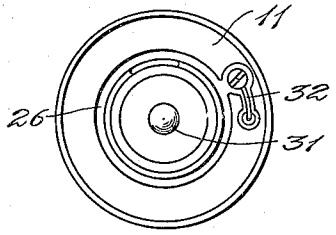
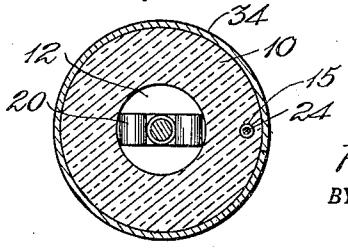


Fig. 5.



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UNITED STATES PATENT OFFICE.

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ELECTRIC SWIVEL SOCKET.

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This invention relates to electrical wiring and has special reference to a swiveling connector for the ends of two wire circuits.

One important object of the invention is to improve the general construction of devices of this character.

A second important object of the invention is to provide an improved form of push connection so arranged that one part of the connection may turn freely with respect to the other while maintaining proper circuit connections at all times.

A third important object of the invention is to provide a novel device of this description wherein spring pressure is used to obtain proper electrical contact between the terminals of both wires.

With the above and other objects in view as will be hereinafter apparent, the invention consists in general of certain novel details of construction and combinations of parts hereinafter fully described, illustrated in the accompanying drawings and specifically claimed.

In the accompanying drawings like characters of reference indicate like parts in the several views, and:

Figure 1 is a longitudinal median section through the device with the two parts separated.

Figure 2 is a similar view showing the two parts connected.

Figure 3 is an end view of one of the parts.

Figure 4 is an end view of the other part.

Figure 5 is a section on the line 5—5 of Figure 1.

In carrying out the present embodiment of the invention there is provided an upper body member 10 and a lower body member 11 each of insulated material. The upper body member 10 has on its lower end a centrally disposed recess 12 and at its upper end a similar recess 13 communicating with the recess 12 by means of a passage 14. Extending through the body member 10 from the recess 13 is a passage 15 which terminates on the end face of the body in a slot 16. One of the conductor wires 17 enters the recess 13 from the line and passes through the opening 14 into the recess 12, being there secured by a washer 18 and screw 19. This screw also supports a spring contact member of general U-shape and having oppositely disposed spring arms 20 which are housed entirely within the recess 12. Mounted on the lower face of the body 10 is a contact ring 21 having an offset portion 22 so that a screw 23 may be used to secure the ring to the face of the body, the same screw being used to secure the end of the other wire 24 which passes from the recess 13 through the opening 15 and slot 16 to the screw 23.

Similarly, the lower body 11 is provided with a recess 25 in its lower end and on its upper end carries a contact ring 26. One wire 27 extends into the recess 25 and is secured therein by a screw 28 against a plate 29 which also supports a contact member formed by a pin 30 adapted, when the parts are brought together, to extend through the opening in the ring 21 and into the recess 12 so that its enlarged head 31 is gripped by the arms 20 and yet is free to revolve therein. The other wire 32 is connected to the ring 26 in the same manner that the wire 16 is connected to the ring 21 and the ring 26 has secured thereto one end of a light spring 33 which, when the parts are assembled, bears at its other end against the contact ring 21. Thus when the parts are assembled as in Figure 2 free swiveling may take place and the wires 32 and 34 will be electrically connected as will also be the wires 17 and 27. Obviously, the spring 33, being light, will not force the head 31 outward from the jaws or arms 20, this head and the arms holding the parts together. A casing or shell 34 preferably covers and protects the respective body member.

There has thus been provided a simple and efficient device of the kind described and for the purpose specified.

It is obvious that minor changes may be made in the form and construction of the invention without departing from the material spirit thereof. It is not, therefore, desired to confine the invention to the exact form herein shown and described, but it is desired to include all such as properly come within the scope claimed.

Having thus described the invention, what is claimed as new, is:

1. In an electric connector, a pair of body members of insulating material each having a central recess, contact rings arranged opposite each other on the confronting faces of said body members, a spring member having one end fixed to one body member and engaging the contact ring carried thereby, said spring being positioned to engage the other contact ring upon assembly, and a pair of axially disposed contacts one of which is

disposed within the recess of one body member and the other of which is carried by the other member and projects through said contact rings to engage the first axially disposed contact.

2. In an electric connector, a pair of body members of insulating material each having a central recess, contact rings arranged opposite each other on the confronting faces of said body members, a spring member having one end fixed to one body member and engaging the contact ring carried thereby, said spring being positioned to engage the other contact ring upon assembly, and a pair of axially disposed contacts one of which is disposed within the recess of one body member and the other of which is carried by the other member and projects through said contact rings to engage the first axially disposed contact, the first of said axially disposed contacts consisting of a U-shaped member having a pair of opposed spring arms and the remaining axially disposed member having an enlarged terminal end.

In testimony whereof I affix my signature.

PERCY S. BLACK.