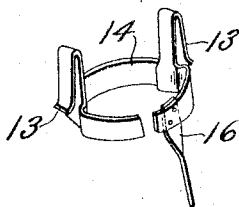
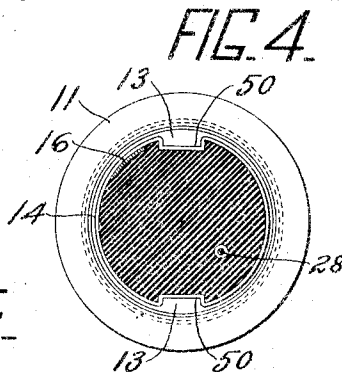
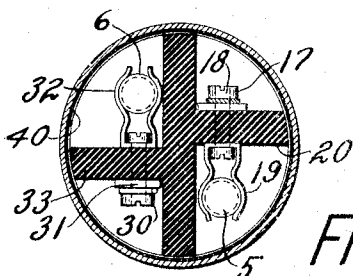
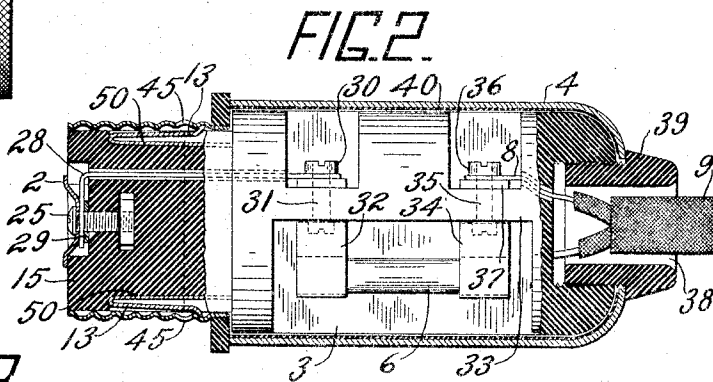
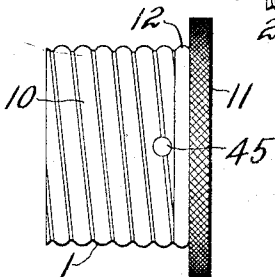


1,043,802.



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UNITED STATES PATENT OFFICE.

CLARENCE CARSON, OF DAYTON, OHIO, ASSIGNOR TO THE NATIONAL CASH REGISTER COMPANY, OF DAYTON, OHIO, A CORPORATION OF OHIO (INCORPORATED IN 1906.)

FUSE-ATTACHMENT PLUG.

1,043,802.

Specification of Letters Patent.

Patented Nov. 12, 1912.

Application filed October 5, 1910. Serial No. 585,373.

To all whom it may concern:

Be it known that I, CLARENCE CARSON, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Fuse-Attachment Plugs, of which I declare the following to be a full, clear, and exact description.

This invention relates to attachment plugs for making electrical connections and the principal object is to provide a swiveled attachment whereby the plug may be attached to a lamp socket without twisting the connecting wires.

Another object of the invention is to provide a swivel attachment for the attachment plug whereby the same may be easily attached or detached from the plug.

Another object of this invention is to provide fuses carried by the plug so that the fuses may readily be detached in case of their being burned out.

With these and incidental objects in view, the invention consists in certain novel features of construction and combinations of parts, the essential elements of which are set forth in appended claim, and a preferred form of embodiment of which is hereinafter described with reference to the drawings which accompany and form part of the specification.

Figure 1 is a side elevation partly in section of the improved attachment plug with the casing for same shown in dotted lines. Fig. 2 is a view somewhat similar to Fig. 1 but looking in the opposite direction with the casing shown in section. Fig. 3 is a section taken on line 3—3 of Fig. 1 and looking in the direction of the arrow. Fig. 4 is a section taken on line 4—4 of Fig. 1 and looking in the direction of the arrow. Fig. 5 is a perspective view of the contact strip having the spring fingers for preventing the removal of one of the contact terminals from the plug. Fig. 6 is a side elevation of the swiveled contact terminal.

The contact terminals 1 and 2 are mounted upon an insulating plug 3 substantially inclosed in a casing 4, and these terminals 1 and 2 are connected to fuses 5 and 6 respectively, which fuses are connected to wires 7 and 8 inclosed in a cable 9 leading from the attachment plug. The connections between the contact terminals 1 and 2 and the fuses 5 and 6 and also the connections be-

tween the fuses and the wires 7 and 8 will hereinafter be more specifically described.

The contact terminal 1 (see Figs. 1, 2 and 6) is formed of a screw threaded brass sleeve 10, the inner end of which is attached to an insulating ring 11. The sleeve 10 near its inner end is provided with annular rib 12 into which the ends of the spring fingers 13 project, these fingers extend from a brass collar 14 that surrounds the inner end of a reduced portion 15 of the insulating block 3, as shown in Fig. 2. The fingers 13 extend in grooves 50 formed in the side of the reduced portion 15, as shown in Figs. 2 and 4, and are bent backwardly so that the outer edge of the spring fingers 13 are flush with the surface of the circular portion of the reduced part 15 of the insulating block 3. The extreme ends of these fingers 13 are bent outwardly so that when the contact terminal 1 is slipped over the reduced portion 15 of the block 3 the ends of the spring fingers 13 will engage with the annular rib 12 and hold said contact terminal in position upon the portion 15 of the block 3. The collar 14 is split, as shown in Fig. 5, so that said collar may be properly positioned upon the reduced portion 15 of the block 3. From this it will be seen that the contact terminal 1 after being attached may be rotated by the insulating ring 10 so that the same may be screwed into lamp socket (not shown) as is well known in the art but cannot be detached from the portion 15 except by means hereinafter described. The fingers 13 are constantly in engagement with the inside of the sleeve 10 of the contact terminal 1 and the collar 14 carrying the spring fingers 13 has extending therefrom (see Figs. 1 and 5) a brass strip 16 the free end of which is held by a nut 17 which is attached to a conducting screw 18, the head of which holds a spring clip 19 against a rib 20 of the insulating block 3. Spring clip 19 supports one end of the fuse 5 while the other end of said fuse is supported by a clip 21 similar to the clip 19 and which is held upon the rib 20 of the block 3 by a conducting screw 22, the outer end of which has attached thereto a nut 23. The inner end of the wire 7 passes between the nut 23 and a brass plate 24 surrounding the screw 22. From this it will be seen that the connections as described form one side of a line from the wire 7 to the contact terminal 1, and the connections be-

tween the terminal 2 and the wire 8 forming the other side of the line will now be described.

Referring to Fig. 2 it will be seen that the contact terminal 2 has extending there-
 5 through a screw 25 which passes through the reduced portion 15 of the block 3 and has secured to its inner end a nut 26 which passes through an opening 27 in the reduced
 10 portion 15 and thereby securely hold the contact terminal 2 and screw 25 in their proper positions. One end of a connecting strip 28 in the form of a wire is passed around the shank of the screw 25 and be-
 15 tween the inside face of the contact terminal 2 and a brass plate 29 and is securely held in position by the screw 25. The wire 28 passes through a suitable opening in the portion 15 of the block 3 and the other end
 20 of this wire 28 is held in position by a nut 30 which passes around the free end of a screw 31, the head of said screw passing through a clip 32 securely to hold said clip in place upon a rib 33 projecting from the
 25 insulating block 3. This spring clip 32 supports one end of the fuse 6 while the other end of the fuse is supported by a similar clip 34 which is held in place upon the rib 33 by a screw 35, the outer end of said screw having nut 36 thereon which holds the inner
 30 end of the wire 8 securely in place between said nut 36 and a brass plate 37 which surrounds the screw 35.

The end of the insulating block 3 opposite
 35 from the end carrying the reduced portion 15 is rounded and is internally screw threaded. An externally threaded bushing 38 is screwed into the rounded end of the insulating block 3 and is provided with an enlarged
 40 knurled head 39 by which it is rotated when attaching or detaching it to the insulating block 3. The casing 4 is "U" shaped in longitudinal section as seen in Figs. 1 and 2 and is provided with a large opening at one
 45 end and a smaller opening at the other end. The casing 4 is held in position surrounding the block 3 by the edge of the smaller opening of said casing being securely held between the rounded end of the insulating
 50 block 3 and the inner side of the enlarged head 39 of the bushing 38, as fully shown in Fig. 2. This casing may be made of any

suitable material and if it be of conducting material, a suitable strip of insulating material 40 covers the inside surface of the casing. The bushing 38 may be formed of any suitable insulating material.

As shown in Figs. 1, 2 and 6, the sleeve 10 of the contact terminal 1 is provided with recesses 45 upon diametrically opposite sides thereof. These recesses are to permit the depressing of the spring fingers 13, by insertion of suitable tools so that the contact terminal 1 may be removed from the portion 15 of the block 3.

From the above description it will readily be seen that if the contact terminals 1 and 2 become defective they may be easily removed without removing any of the other parts of the attachment plug and also by mounting the fuses upon the attachment plug the fuses may be easily removed by unscrewing the bushing 38 and moving the casing 4 along the cable 9 until the fuses are accessible.

While the form of mechanism shown herewith and described is admirably adapted to fulfil the objects primarily stated, it is to be understood that it is not intended to confine the invention to the one form of embodiment herein shown and described, as it is susceptible of embodiment in various forms all coming within the scope of the claim which follows.

Claim:

An attachment plug having contact terminals, one of said terminals being ring shaped and rotatably mounted upon the plug, fuses also mounted upon the plug, and contact strips connecting the terminals and fuses, one of said strips having spring fingers for preventing the removal of the rotatable contact terminal from the plug but permitting the rotation of same thereon, said rotatable contact terminal having recesses in its sides to permit the operation of the spring fingers to allow the removal of the said terminal.

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

CLARENCE CARSON.

Witnesses:

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 CARL W. BROWN