

C. E. MOWRER.
WIRE TERMINAL PLUG.
APPLICATION FILED APR. 10, 1912.

1,049,132.

Patented Dec. 31, 1912.

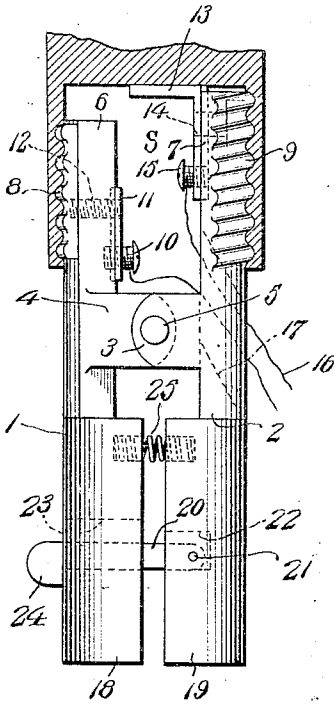


Fig. 1.

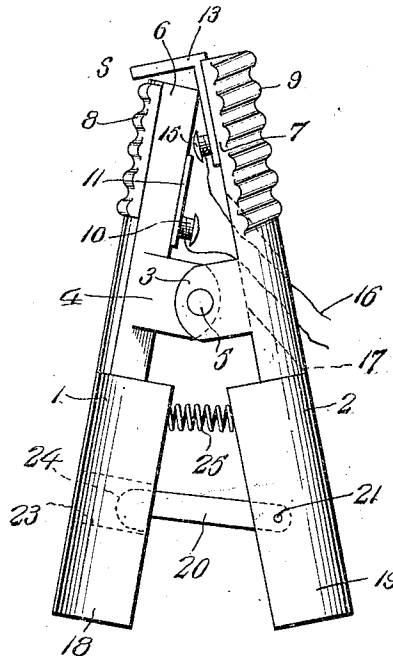


Fig. 3.

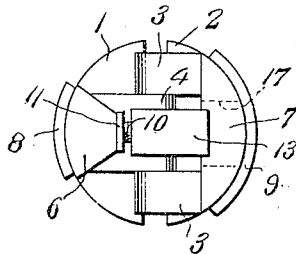


Fig. 2.

Witnesses

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WIRE-TERMINAL PLUG.

1,049,132.

Specification of Letters Patent.

Patented Dec. 31, 1912.

Application filed April 10, 1912. Serial No. 339,822.

To all whom it may concern:

Be it known that I, CLAUDE E. MOWRER, a citizen of the United States of America, residing at Ypsilanti, in the county of Washtenaw and State of Michigan, have invented new and useful Improvements in Wire-Terminal Plugs, of which the following is a specification.

This invention relates to improvements in electric wire terminal plugs and has particular application to that class of plugs which are detachably associated with the socket.

In carrying out the present invention, it is my purpose to provide a plug which may be inserted into its socket without the necessity of rotating the same thereby obviating the inconvenience heretofore incident to plugs of this type owing to the globes or shades which usually surround the socket.

It is also my purpose to provide a plug which may be attached to the usual threaded socket and which will embody relatively movable members having socket-engaging extremities capable of movement toward one another to enter the socket and designed to be moved away from one another or expanded to lock the plug into the socket by means of the threads of such socket.

Furthermore, I aim to provide a plug which will embody relatively movable members and a locking device, the latter serving to lock the plug within the socket and against accidental displacement from such socket.

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 appended claims.

In the accompanying drawing there has been illustrated one practical embodiment of my invention and in this drawing; Figure 1 is a side elevation of a plug constructed in accordance with the present invention, the same being shown inserted within a socket and locked therein, the socket being in section. Fig. 2 is a top plan view of the plug, and Fig. 3 is a side elevation of the plug, the socket-engaging extremity of the plug being contracted to permit the application of the plug to the socket.

Similar reference characters designate like parts throughout the several views.

Referring now to the accompanying drawing in detail, the plug, in the present

instance, includes a pair of elongated members 1 and 2 each of semicircular contour in cross section so as to give the plug a circular outline in cross section and pivoted to each other at an appropriate distance from one end of the plug, the member 2 being provided with inwardly extending ears 3, 3 and the member 1 with a lateral boss 4 designed to enter the space between the ears and provided with an opening alining with openings in the ears to receive a pivot pin 5 by means of which the members may be moved relatively to each other to contract one end and expand the socket-engaging end of the plug.

The socket-engaging extremity of the plug is indicated at S and such extremity may be expanded or contracted owing to the pivotal connection between the members 1 and 2, as is obvious. This socket-engaging extremity of the plug embodies the proximate ends 6 and 7 of the members 1 and 2 respectively, and the outer side of the extremity 6 of the member 1 is provided with a threaded segmental strip 8, while the outer side of the extremity 7 of the member 2 is provided with a similar relatively wide strip 9, both of said strips cooperating to hold the plug within the socket, the strip 8 forming one side of the circuit and being connected to a terminal binding post 10 arranged upon the inner side of the extremity 6 of the member 1 and electrically connected to the strip 8 of such member by means of a current carrying strip 11 and a screw 12 which latter is arranged transversely of the extremity 6 of the member 1 and serves to secure the strips 8 and 11 to the extremity of such member, the strip 8 engaging the wall of the shell of the socket to close the circuit, as usual. Fastened to the inner surface of the extremity 7 of the member 2 is an inverted L-shaped contact strip 13 secured to such member by a screw 14 and provided with a terminal binding post 15, this last-named strip forming the other side of the circuit and engaging the central contact of the socket, as usual. To the binding posts 10 and 15 are secured the terminals of the wires 16, 16 and these wires are passed through a diagonal slot 17 formed in the member 2 of the plug in proximity to the pivotal connection of such member with the member 1, the wires leading to a suitable electrically energized device. The opposite or free extremities of the

members 1 and 2 of the plug terminate in manipulating handles 18 and 19 respectively by means of which the socket-engaging ends 6 and 7 of the plug may be moved toward and away from each other so as to contract or expand the socket-engaging extremity of such plug whereby the plug may be inserted in the socket and secured therein. A suitable locking device coöperates with the handle members 18 and 19 of the plug to lock such plug within the socket and against accidental displacement therefrom, and in the present instance, this locking device consists of a bar 20 pivoted as at 21 within a relatively wide recess 22 formed in the handle member 19 and extending through a relatively wide slot 23 formed in the handle member 18, the outer or free extremity of the bar 20 terminating in a lug 24 adapted to engage the outer surface of the member 18 to lock the members 1 and 2 against movement, the slot 23 and recess 22 being of such dimensions as to permit free movement of the bar 20 about its pivot 21 so that the lug 24 may be disengaged from the outer surface of the member 18 and the members 1 and 2 swung about their pivotal connections for the purposes aforesaid. Upon the release of the locking lug 24 from engagement with the member 18, the handle members 18 and 19 of the members 1 and 2 are adapted to move automatically away from each other to contract the socket-engaging extremity of the plug and for this purpose, in the present embodiment of my invention, I insert a coiled expansion spring 25 within aligning recesses 26, 26 formed in the proximate sides of the handle members 18 and 19, such spring serving to force the handle members apart upon the release of the locking device so as to facilitate the application of the plug to the socket and the removal of such plug from the socket.

In practice, the bar 20 is swung about its pivotal connection 21 to release the handle members 18 and 19 from the influence of the locking lug 24 and upon the release of the locking device, the spring 25 acts to force the handle members away from each other thereby swinging the members 1 and 2 about their pivotal connection and moving the socket-engaging ends 6 and 7 of the members toward each other, thereby contracting the socket-engaging extremity of the plug whereby said plug may be inserted in the socket A as shown in Fig. 1 of the drawing. Subsequent to this action, the handle members 18 and 19 are drawn together consequently separating the ends 6 and 7 of the members 1 and 2 and expanding the socket-engaging extremity of the plug whereby the strips 8 and 9 will engage the threads in the socket A, the locking device carried by the handle members acting to lock the plug

within the socket. In event that the plug should not make good electrical contact with the socket, the plug may be given a slight turn to snugly engage the contact 13 with the central contact of the socket. To remove the plug from the socket, the locking device is released thereby separating the handle members and contracting the socket-engaging extremity of the plug as aforesaid.

From the above description taken in connection with the accompanying drawing, it will be seen that I have provided a plug which may be attached to a socket without the necessity and inconvenience of rotating the plug within the socket and owing to the lengths of the members 1 and 2 it will be seen that the plug may be easily and quickly applied to the socket, and while I have herein shown and described the preferred embodiment of my invention by way of illustration, it is to be understood that I do not confine myself to the exact details of construction herein described and delineated, as modification and variation may be made without departing from the spirit of my invention or without exceeding the scope of the claims.

I claim:

1. A wire terminal plug comprising a pair of pivotally connected members forming a socket-engaging extremity for the plug and provided with handles and adapted to be moved about their pivotal connection to contract and expand the socket-engaging extremity of the plug so that the plug may be inserted within the socket and locked therein, a locking device carried by the handle members; and means for contracting the socket-engaging extremity of the plug upon the release of said handles.

2. A wire terminal plug comprising a pair of members pivotally connected to each other and spaced apart and forming a socket engaging extremity for the plug, and provided with handles and adapted to be moved about their pivotal connection to contract and expand the socket engaging extremity of the plug, a locking device carried by the handle members for locking the socket engaging extremity of the plug in expanded position, and a spring for contracting the socket engaging extremity of the plug upon the release of said handles.

3. A wire terminal plug comprising a pair of pivotally connected members forming a socket engaging extremity for the plug, handles formed on said members and adapted to move the latter about their pivotal connection to contract and expand the socket engaging extremity of the plug, a locking device carried by the handle members, and a spring located between the handle members and adapted to contract the socket engaging extremity of the plug upon the release of said handles.

4. A wire terminal plug comprising a pair
of members pivotally connected to each other
and spaced apart and forming a socket en-
gaging extremity for the plug and provided
5 with handles adapted to be moved about
their pivotal connection to contract and ex-
pand the socket engaging extremity of the
plug, a locking device for locking the mem-
bers against movement when the socket en-
10 gaging extremity of the plug is expanded,

and means for contracting the socket en-
gaging extremity of the plug upon the re-
lease of the locking device.

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

CLAUDE E. MOWRER.

Witnesses:

L. R. KILIAN,

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