Feb. 26, 1924. 1,485,215

E. E. COAR ET AL

EXTENSION CORD CONNECTION

Filed Feb. 24, 1921

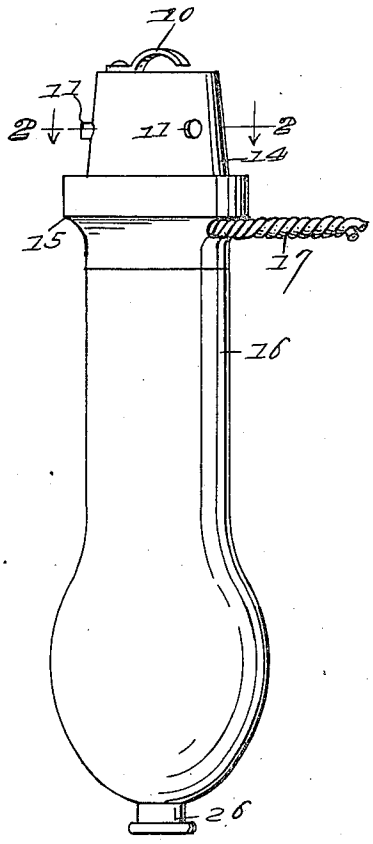

Fig. 1.

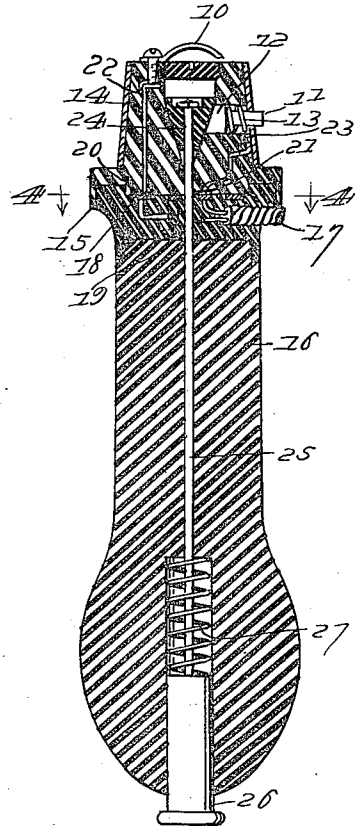

Fig. 3.

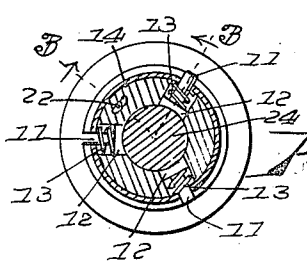

Fig. 2.

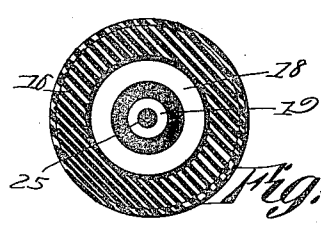

Fig. 4.

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UNITED STATES PATENT OFFICE.

ENOS E. COAR AND CASMIER THILMAN, OF SOUTH BEND, INDIANA.

EXTENSION-CORD CONNECTION.

Application filed February 24, 1921. Serial No. 447,570.

To all whom it may concern:

Be it known that we, ENOS E. COAR and CASMIER THILMAN, citizens of the United States of America, residing at South Bend, in the county of Saint Joseph and State of Indiana, have invented new and useful Improvements in Extension-Cord Connections, of which the following is a specification.

The object of the invention is to provide simple and efficient means for effecting the attachment of extension cords used in connection with electric lamps, irons, washing and cleaning machines, sweepers and the like in lieu of the ordinary forms of screwing plugs which in many instances are open to objection by reason of the relative inaccessibility of the sockets provided for the reception of the plugs as for example in connection with lamps having shades of small dimensions or of such a construction as to necessitate the removal thereof in order to afford the necessary access; and furthermore to provide a connection wherein an effective seating of the contacts may be accomplished without the inconvenience and loss of time incident to the turning of the usual screw plug, and the difficulty sometimes experienced in properly starting the screw particularly when an effort is made to effect the connection hastily; and with these objects in view the invention consists in a construction and combination of parts of which a preferred embodiment is shown in the accompanying drawing, wherein:

Figure 1 is a side view of a connector embodying the invention.

Figure 2 is a transverse section on the plane indicated by the line 2—2 of Figure 1.

Figure 3 is a longitudinal section on the plane indicated by the line 3—3 of Figure 2.

Figure 4 is a detail sectional view on the plane indicated by the line 4—4 of Figure 3.

The contacts respectively represented at 10 and 11 consist of a spring tongue and a plurality of pins having heads 12 and retracting springs 13, said contacts being carried by a plug 14 having a swivel connection through a suitable flange or collar 15 with a stock 16 consisting of a handle or grip to which the cord 17 is attached. The wires carried by the cord are respectively connected with contact rings 18 and 19 engaged by contact plates 20 and 21 carried by the plug and connected by wires 22 and 23 respectively with said contacts 10 and 11.

The tendency of the springs 13 is to retract the contact pins 11, and in order to extend the same to engage the socket a conical spreader 24 is reciprocably mounted in the plug and is connected by a rod 25 with a push button 26 at the remote end of the stock or grip, said push button being actuated by a spring 27.

Thus when it is desired to effect a connection between the extension cord and the socket it is only necessary to press the push button 26 as the plug is inserted in the socket to permit of the retraction of the contact pins 11, and upon release of the push button the spreader 24 will force said pins into engagement with the socket and lock the plug in place. A similar operation of the push button will release the plug and permit of its removal from the socket.

It will be noted that with an apparatus as described the connection may be effected even though the socket may be in a more or less inaccessible position, and by a single movement as distinguished from the turning of the plug to effect the engagement of screw threads as in the ordinary practice and under conditions insuring a proper relation of the contacts.

Having described the invention, what is claimed as new and useful is:—

1. An extension cord connector having a handle, a plug carried at one end of the handle, a fixed contact carried at the end of the plug, radially movable contact elements projecting laterally from the plug, resilient means normally retracting said radial contacts, and a spreader disposed in the plug in the rear of said radial contacts and yieldingly impelled in a direction to normally extend the same, said spreader being provided with manual actuating means to permit retraction of the radial contacts by their resilient means.

2. An extension cord connector having a handle, a plug carried at one end of the handle, a fixed contact carried at the end of the plug, raidally movable contact elements projecting laterally from the plug, resilient means normally retracting said radial contacts, a spreader disposed in the plug in the rear of said radial contacts and provided with a stem disposed axially through and slidably mounted in the handle, a spring in surrounding relation with said stem and seated in the handle, and an exteriorly exposed button engaged with the stem and in contact with the spring to normally dispose

the spreader in contact protruding position, said button being depressible to shift said spreader to permit retraction of the radial contacts by their resilient means.

3. A device for the purpose indicated comprising a handle and a plug carried thereby, a fixed contact mounted on the end of the plug, radial contacts projecting laterally from the plug and provided interiorly of the latter with heads, springs in surrounding relation with said radial contacts and tending normally to dispose them in retracted position, a conical spreader disposed in the plug and bearing against the heads of said radial contacts, a hand button carried at one extremity of the handle and operatively connected with the spreader, and a compression spring housed in the handle and bearing on one extremity of the button to yieldingly dispose said spreader in contact protruding position.

In testimony whereof they affix their signatures.

ENOS E. COAR.
CASMIER THILMAN.