E. DEWALD, SR.

SWIVEL PLUG CONNECTOR.

APPLICATION FILED APR. 9, 1919.

1,316,561. Patented Sept. 23, 1919.

FIG. 1

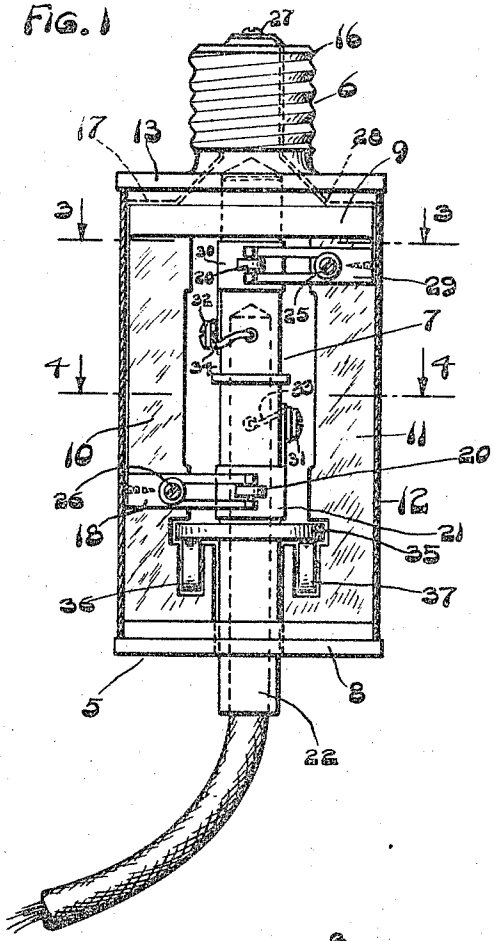


FIG. 2

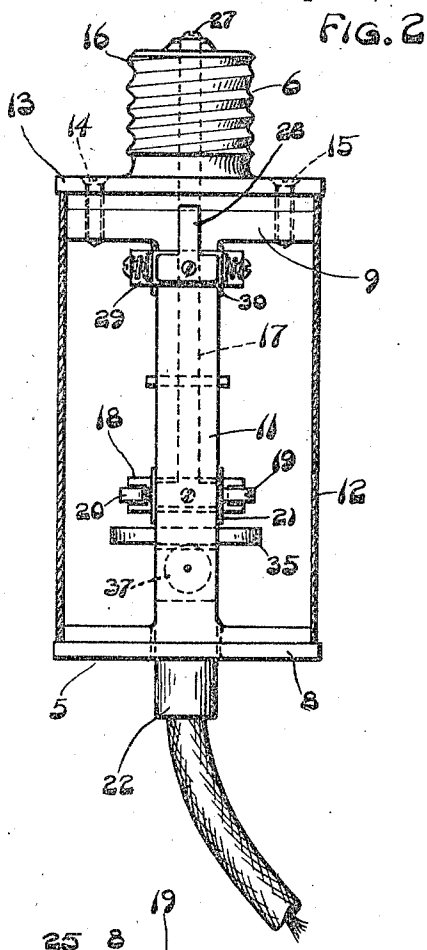


FIG. 3

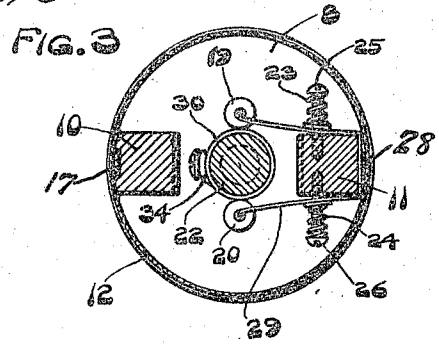
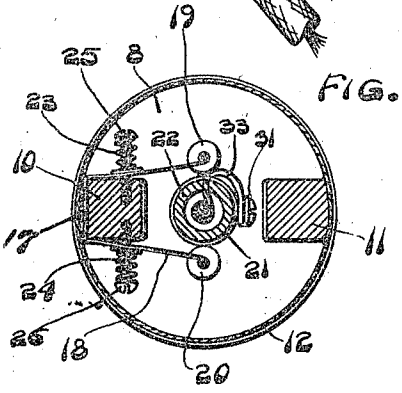


FIG. 4



INVENTOR

Edward Dewald Sr

UNITED STATES PATENT OFFICE.

EDWARD DEWALD, SR., OF CINCINNATI, OHIO, ASSIGNOR OF ONE-HALF TO EDWARD DEWALD, JR., OF CINCINNATI, OHIO.

SWIVEL-PLUG CONNECTOR.

1,316,561. Specification of Letters Patent. Patented Sept. 23, 1919.

Application filed April 9, 1919. Serial No. 288,794.

To all whom it may concern:

Be it known that I, EDWARD DEWALD, Sr., a citizen of the United States, residing in Cincinnati, in the county of Hamilton and State of Ohio, have invented new and useful Improvements in Swivel-Plug Connectors, of which the following is a specification.

An object of my invention is to produce an improved swivel plug connector for the electric cables extending from electrical devices such as telephone, irons, drills, riveters, etc., which will prevent twisting of the cables while the device to which it is attached is in use, and which will also preserve perfect electrical connection with the source of supply regardless of the position its rotating element takes.

This and other objects are attained in the swivel plug connector described in the following specification and illustrated in the accompanying drawing in which:—

Figure 1 is a side elevation of my improved connector.

Fig. 2 is also a side elevation of my improved connector but taken at a right angle to the view shown in Fig. 1, the outside casing or cover in both views being shown broken away.

Fig. 3 is a transverse sectional view taken on the line 3—3 of Fig. 1.

Fig. 4 is a transverse sectional view taken on the line 4—4 of Fig. 1.

My improved construction consists of a frame 5, having a screw socket plug 6 at its upper end and a rotatable member 7 journaled therein. The frame may be made of rubber, fiber, glass, porcelain or other suitable insulating material, a circular bottom 8 and a circular top 9 which are connected by two sides 10 and 11, constituting the frame. Held in position over this frame is a casing 12 of insulating material, a cover 13, which carries the plug 6, being provided for holding the casing in position by means of screws 14 and 15. The usual metal screw 16 is provided on the plug 6, being connected at its lower edge with a conductor strip 17 which extends down the edge of side 10 to a contact spring 18 which embraces side 10 and which carries contact rollers 19 and 20. These rollers bear against an electric contact ring 21 upon a hollow spindle 22 which is journaled in the frame 5. In order to retain the arms of this spring in forcible contact with the ring I have provided springs 23 and 24 which are located upon adjustable screws 25 and 26 in the side 10 of the frame.

At the end of plug 6 I have located the usual contact plate 27 which is connected by a conductor strip 28 to a contact spring 29 located at the top of the side 11 of the frame. This contact spring is identical with spring 18, and the elements thereof bear the same reference numerals in both instances. The rollers of spring 29 bear upon contact ring 30 located near the upper end of hollow spindle 22, screws 31 and 32 securing wires 33 and 34 of the device to be connected to the swivel plug, these wires passing through the hollow spindle as shown.

At its lower end a ring 35 is located on the spindle. Beneath this ring and journaled in the sides 10 and 11 are two rollers 36 and 37. The purpose of this construction is to facilitate turning movement of the spindle with a minimum amount of friction, the rollers of the contact springs also acting for the same purpose.

Having thus described my invention what I claim is:—

1. In a swivel plug connector the combination of a frame consisting of sides, a top, and a bottom, a hollow wire carrying spindle rotatively mounted in the top and bottom of the frame between the sides, contact springs extending from opposite sides of the frame and in electrical connection with the rotatively mounted spindle, and a plug located at one end of the frame and electrically connected with the springs.

2. A swivel plug connector comprising a frame consisting of sides, a top, and a bottom, a hollow wire carrying spindle rotatively mounted in the top and bottom of the frame between the sides, contact springs extending from opposite sides of the frame and in electrical connection with the rotatively mounted spindle, means for adjusting the tension of the springs, and a plug located at one end of the frame and electrically connected with the springs.

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

EDWARD DEWALD, SR.

Witnesses:

EDWARD DEWALD, JR.,

WILLIAM JOHN SCHULTZ.