E. DEWALD, SR.

SWIVEL PLUG CONNECTOR.

APPLICATION FILED DEC. 26, 1919.

1,347,577. Patented July 27, 1920.

FIG. 1

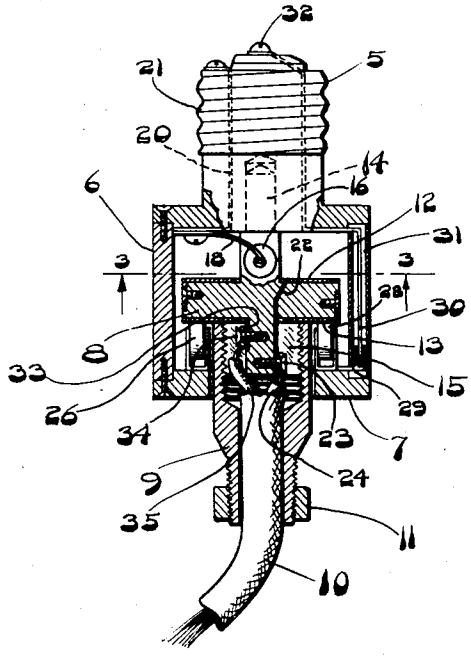


FIG. 2

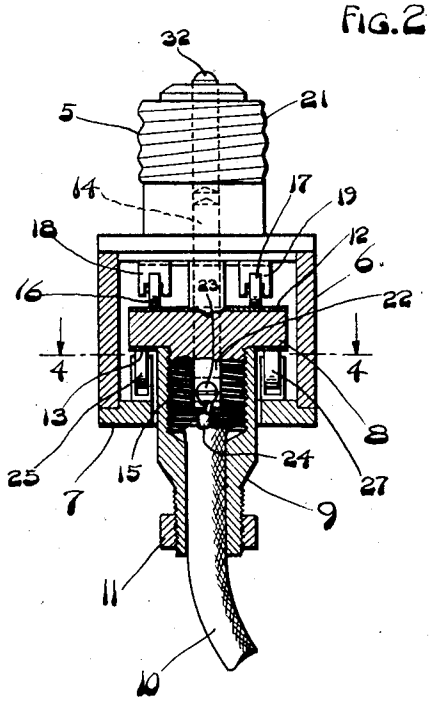


FIG. 3

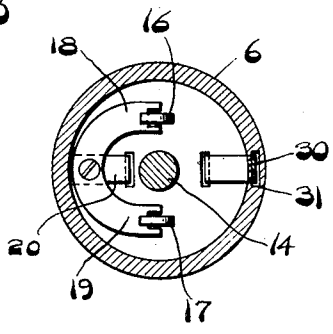
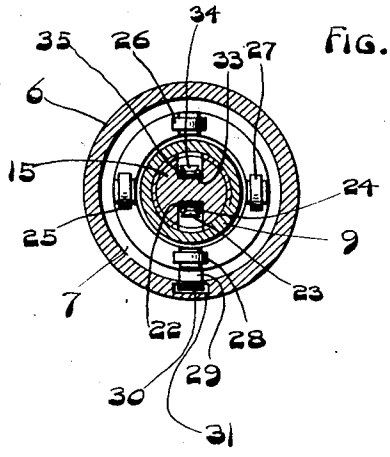


FIG. 4



INVENTOR

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UNITED STATES PATENT OFFICE.

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

SWIVEL-PLUG CONNECTOR.

1,347,577. Specification of Letters Patent. **Patented July 27, 1920.**

Application filed December 26, 1919. Serial No. 347,365.

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 a swivel plug connector of the general type disclosed in Patent No. 1,316,561 granted to me upon September 23, 1919, in which greater compactness of construction together with reduced cost is attained without reduced efficiency of operation.

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, certain parts being shown in section for clearness of illustration.

Fig. 2 is a view similar to Fig. 1, but taken at a right angle thereto.

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

Fig. 4 is a sectional view taken on line 4—4 of Fig. 2.

My improved construction consists of a screw socket plug 5 located at one end of a rubber or fiber casing 6 which is provided at its opposite end with a rubber or fiber disk 7, a rotatively mounted rubber or fiber contact plate-bearing disk 8 being located in the casing and having as an attached part a screwed wire receiving fiber sleeve 9 through which terminal wires 10 pass, a collar 11 is provided on sleeve 9 to tighten it on the wire 10 in a manner not shown. Disk 8 is provided with contact plates 12 and 13 on its opposite sides, and is journaled in the rubber or fiber plug body 5 by means of a pin 14 extending from one face of the disk, the sleeve 9 forming the other bearing of the disk by reason of its being connected with the disk by screw threads on extension 15 thereof.

Plate 12 has two metal contact rollers 16 and 17 bearing thereon, these rollers being pressed against the plate by leaf springs 18 and 19 upon which they are mounted. Springs 18 and 19 are in turn electrically connected with a lead 20 extending from and electrically connected with metal shell 21 of plug 5. Extending through disk 8 from plate 12 is a lead 22 which by means of a screw 23 in extension 15 of the disk, connects the plate with one terminal 24 of wire 10.

Plate 13 bears upon a series of metal contact rollers 25, 26, 27, and 28, springs 18 and 19 acting to perform this function. These rollers are in turn connected by means of a connection 29 with a lead 30 extending through a channel 31 in casing 6 and in turn connected with a central contact point 32 at the end of plug body 5. From plate 13 a lead extends and by means of a screw 34 in extension 15 of the disk, connects the plate with the opposite terminal 35 of wire 10.

It will thus be seen that electrical connection is had from parts 21 and 32 of the plug to terminals 24 and 35 of delivery wire 10 through the paths provided by the elements just described and that the rollers above and below the disk facilitate rotation thereof, thus preventing twisting of the wires of a telephone, iron, portable tool or other electrical device connected therewith.

Having thus described my invention what I claim is:—

1. A plug body, a disk in said body having an axial projection from one face and contact rings on its upper and lower faces, conducting means for rotatably mounting said disk to turn on said lower ring, connection means for said rings including terminals on said axial projection, a terminal inclosing sleeve fitting over said projection and spring contact means on the body cooperating with the upper contact ring to hold the disk against the rotatable connecting means.

2. A swivel plug connector comprising a plug body having screw and contact terminals thereon, a disk rotatively mounted within the plug body, plates on opposite

sides of the disk, rollers within the body adapted to support the disk with one of the plates thereof in contact therewith, spring pressed rollers in engagement with the opposite plate of the disk, the respective sets of rollers having electrical connection with the contact and screw terminals of the body, means on the disk adapted to connect delivery terminals to the plates, and delivery terminals connected with the plates.

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

EDWARD DEWALD, Sr.

Witnesses:

William J. Schultz,

Edward Dewald, Jr.