April 23, 1935. F. C. KOLLATH 1,999,020

CONNECTER CAP

Original Filed July 30, 1928

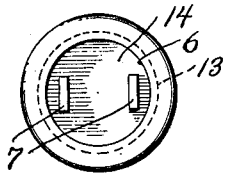


Fig. 2.

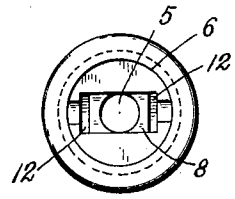


Fig. 4.

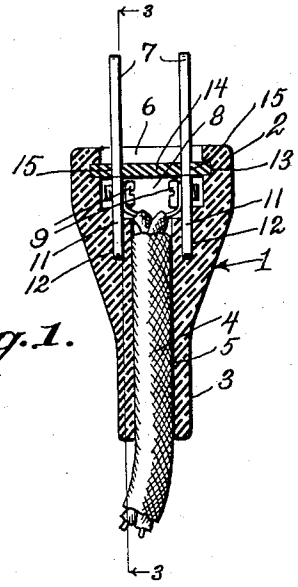


Fig. 1.

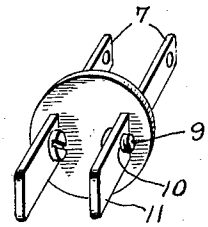


Fig. 5.

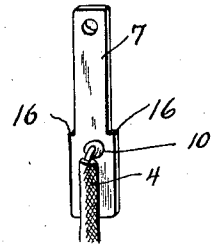


Fig. 6.

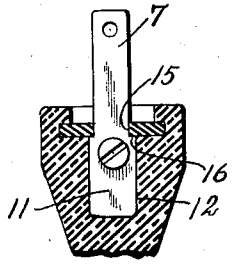


Fig. 3.

Inventor:
Francis C. Kollath.

By
Chester E. Warner.
Attorney.

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1,999,020

CONNECTER CAP

Francis C. Kollath, Chicago, Ill., assignor, by mesne assignments, to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware

Application July 30, 1928, Serial No. 296,309
Renewed June 6, 1932

12 Claims. (Cl. 173—361)

My invention relates to connecter caps, and more especially to that type of caps used in connection with extension cords for making separable connection with attachment plugs or receptacles.

Connecter caps are usually made of molded insulation which is easily damaged and often broken by being dropped on cement floors or by other rough usage.

It is one of the objects of my invention to provide a connecter cap which will be shock absorbing and not easily broken.

Another object is to provide a connecter cap with covered binding terminals, and in which all of the parts are held securely together without the use of screws or rivets or any securing means other than the interlocking and the inherent properties of the material of the major parts of the device.

A further object is to provide an article of manufacture of few parts, easy to assemble, cheap to manufacture, and which will not easily get out of order.

Further objects will appear from the detailed specification to follow and from the appended claims.

Realizing that my invention may be varied in its physical embodiment without departing from the spirit of the invention, I desire it to be understood that the specific construction herein shown is to be taken as illustrative and not in a limited sense.

In the accompanying drawing in which an embodiment of my invention is shown:

Fig. 1 is a vertical axial section thru the device, the terminal pins or contactors being shown in full lines.

Fig. 2 is a top view of the device as illustrated in Fig. 1.

Fig. 3 is a fragmentary section taken on line 3—3 of Fig. 1.

Fig. 4 is a top end view of the handle with the connecter pins and securing means removed.

Fig. 5 is a perspective view of the pins and associated parts assembled and removed from the handle for wiring.

Fig. 6 is a perspective view of one of the pins and illustrates the method of securing the wires when the binding screws are not used.

Referring now to the drawing in detail the connecter cap as illustrated comprises a handle 1 made of a soft, flexible, elastic, rubber like material, preferably molded and having an enlarged portion 2 in which the connecter pins are supported, and a restricted portion 3 thru which the conductor wires 4 are inserted and supported in the longitudinal passage 5.

The passage 5 opens directly into the chamber 6 in the enlarged portion 2 and in which the connecter pins 7 are supported in parallel spaced relation. The passage 5 is enlarged at 8 adjacent the chamber 6 to receive the binding terminals 9 to which the ends of the conductor wires are attached, the holes 10 in the pins 7 being threaded to receive the screws.

The enlarged ends 11 of the pins are supported in the spaced depressions or cavities 12 which are designed to fit the pins very snugly when they are inserted therein.

Adjacent to the floor of the chamber 6 is a circumferential groove 13 in which is supported the insulating disk 14. The disk 14 is provided with spaced openings 15 thru which the pins 7 extend, the openings being in alignment and cooperating with the cavities 12 to hold the pins in parallel spaced relation. Shoulders 16 are provided on the pins 7 to prevent longitudinal movement.

It is sometimes desirable to dispense with the binding screws 9 in which case the wires are inserted in the holes 10 and soldered therein as shown in Fig. 6.

In order to wire the device the elastic walls of the chamber 6 are stretched sufficiently to allow the disk 14 and the pins 7 supported therein, to be removed, the conductors 4 are inserted thru the passage 5 and secured to the binding screws or soldered in the holes 10. The assembled pins and disk are then inserted in the handle as shown in Fig. 1 where they are held securely in position by the tension of the rubber like material of the handle.

While the pins shown are made from flat material it is evident that various shapes and numbers might be used within the scope of the following claims.

As will appear, the rubber like element 1 constitutes a main base or body of the plug cap whereas the disk like element 14 constitutes an auxiliary base or body. Also as will appear, the element 14 may appropriately be termed a spacer or a retainer.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In combination, a flexible electric conducting cord, a contact prong connected to the end of said cord and projecting a substantial distance beyond the end of said cord, and a two-part body

portion constituting an enclosure for said connection, one of said parts being apertured to receive and fit the cord and the other of said parts serving to position the projecting end of said prong, said parts being interlocked against separation one from the other when they are assembled together, and one of said parts being formed of resilient material capable of being distorted to permit such assembly.

2. In an electric plug connecter, the combination of a body member provided with an aperture, a pair of contact prongs having inner end portions enclosed in said body and outer end portions projecting from said aperture and beyond the adjacent end of said body member, a spacer member interlocked with said body for maintaining said contact prongs in spaced relation and serving to close the end of said aperture from which said prongs project, and a pair of electric current conductors connected respectively to said contact prongs within said body portion, the body and spacer members being relatively distortable to permit assembly of the body and spacer.

3. An electric plug connecter comprising a main body having a recess therein, an auxiliary member interlocked therewith, one of said members being formed of resilient material so as to be capable of being distorted for permitting interlocking thereof with the other member, and a contact prong disposed in the recess in said body member and having a portion engaging said auxiliary body member, whereby the contact prong is positioned in said body.

4. An electric plug connecter, comprising a main body member having a recess therein, an auxiliary body member interlocked therewith, one of said members being formed of resilient material so as to be capable of being distorted for permitting interlocking thereof with the other member, and a terminal disposed in the recess in said main body member and provided with a portion engaging said auxiliary member, whereby the terminal is retained in said aperture.

5. An electric plug connecter, comprising a main body member having a recess therein, an auxiliary body member interlocked therewith, one of said members being formed of resilient material so as to be capable of being distorted for permitting interlocking of said members, a terminal disposed in said recess, and a contact member connected to said terminal, said terminal and contact member being provided with means engaging said auxiliary member and thereby maintained in operative position relative to said main body member.

6. An attachment plug cap comprising a base made of a soft, flexible, elastic rubber like material having a shallow chamber therein and a circumferential groove adjacent to the floor of said chamber, a removable insulating disk in said groove, outwardly and inwardly extending connecter pins supported in said disk, the inner ends of said pins extending into snugly fitting cavities in said base, said base and said disk cooperating to hold said pins in parallel spaced relation.

7. A connecter cap comprising an elongated body made of soft, flexible, elastic rubber like material having a chamber in one end and a passage thru the other end communicating with said chamber, said chamber having a circumferential groove therein, an insulating disk in said groove, outwardly and inwardly extending connecter pins supported in said disk, the inwardly extending ends of said pins seating in cavities in said body, all of said parts being held in assembled relation by the inherent elastic properties of said body.

8. A connecter cap comprising a body made of a soft, flexible, elastic, rubber like material having a chamber therein, an insulating connecter pin retainer removably held in said chamber by the inherent properties of the base, connecter pins supported in cavities in said base and extending thru said retainer, and shoulders on said pins and resting against said retainer to prevent longitudinal movement.

9. An attachment plug cap comprising a base made of a soft, flexible, elastic, rubber like material having an open chamber formed therein, said chamber having a circumferential groove formed in the wall thereof, a disk of insulating material, the wall of said chamber being distortable to permit insertion of said disk into said groove, a plurality of one-piece combined plug jack and wiring terminal members extending through said disk in spaced relationship to each other and having parts abutting said disk, the wiring terminal portions of said members extending rearwardly of said disk for concealment thereof within said chamber, and the plug jack portions of said members extending forwardly from said disk beyond the end of said base.

10. An attachment plug cap comprising a base made of soft, rubber-like material having an open chamber in one end and an axial cord passage communicating with said chamber, plug-jacks located in said chamber and seated in direct contact with said base, and means to secure said plug-jacks to said base, said means comprising a relatively thin and relatively rigid disk-like member of insulating material supported within said base transversely of the latter, said plug jacks being associated with said disk-like member to be spaced thereby.

11. In an attachment plug cap, the combination with a base comprising a molded soft, rubber-like body and a relatively thin and relatively rigid disk-like member of insulating material, said body having an axial cord passage and an open end chamber communicating with said passage and said disk-like member being supported within said body transversely of the latter, of a plurality of one-piece combined plug-jack and wiring terminal members located in said chamber in said body and seated in direct contact with said body, said plug-jack members and said disk-like member having mechanical connections whereby the former are anchored and spaced by the latter, the aforedefined construction enabling attachment and wiring of said plug-jack members subsequent to molding of said body.

12. An attachment plug cap comprising contact prongs and a supporting base therefor into which conductors may be led in one direction for attachment to said contact prongs, said contact prongs having integral terminal parts extending into said base in an opposite direction for enclosure of said terminal parts by said base whereby at least a partially unassembled relation of said base and contact prongs is a prerequisite of wiring, said base comprising a resilient rubber body constituting the only exposed part of the plug cap when plugged into a receptacle and said base and contact prongs having means to effect their securement in assembled relation by the elastic properties of said resilient body.

FRANCIS C. KOLLATH.