May 3, 1932. R. B. WOLCOTT 1,856,681

ELECTRICAL CONNECTER

Filed July 23, 1930

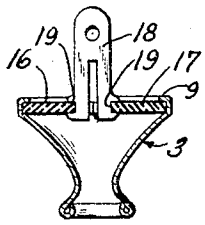

Fig. 10.

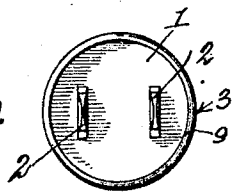

Fig. 1.

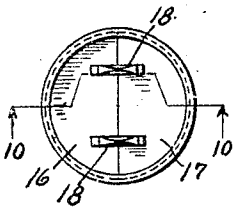

Fig. 9.

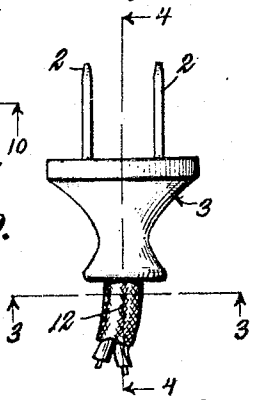

Fig. 2.

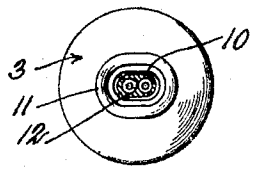

Fig. 3.

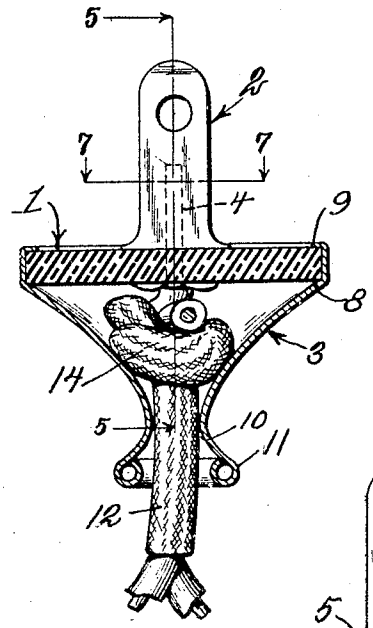

Fig. 4.

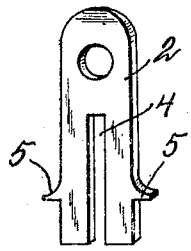

Fig. 8.

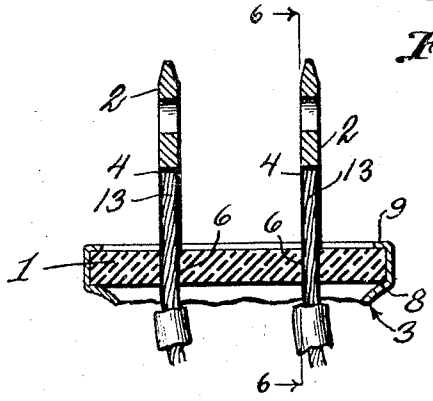

Fig. 5.

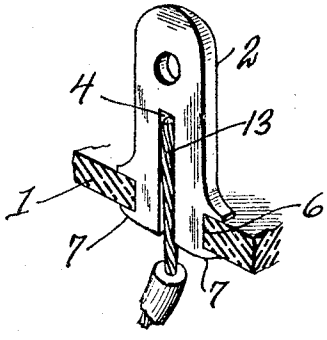

Fig. 6.

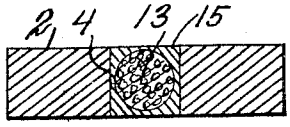

Fig. 7.

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UNITED STATES PATENT OFFICE

ROBESON B. WOLCOTT, OF ELMHURST, ILLINOIS

ELECTRICAL CONNECTER

Application filed July 23, 1930. Serial No. 469,972.

My invention relates to connecter caps and especially to connecter caps used in connection with extension cords or conductors on electrical appliances for making separable electrical connection with attachment plugs or receptacles.

In devices of this kind, it is desirable to have plugs arranged for permanent connection with the extension cords and of such construction that they are not easily broken. It is an important feature of the present invention to provide a cap in which the wires may be permanently connected to suitable connecter blades and in which the wires are not bent or kinked in making connection, and wherein any strain thereon will be in a longitudinal direction relative to the wire and the connecter blades.

My invention contemplates a connecter cap which is simple in construction and of few parts and comprises only a comparatively thin insulating base which may be made of fibre, laminated bakelite, molded bakelite or similar insulating material, and a suitable casing forming a handle for the cap. The casing also provides an efficient strain relief and is so constructed as to prevent the turning of the conductor therein.

Conductor cords on household electrical devices are usually substantially oval in form and the conductors therein are not twisted but are parallel rubber-covered wires with an outer covering of braided silk or other suitable material.

It is an object of my invention to provide a suitable connecter cap in which these oval connecter cords may be used and in which the twisting of the cord relative to the cap will be prevented.

A further object is to provide suitable means for connecting the conductor wires to the flat connecter blades in such a manner that the conductor wires lie longitudinally within the limits of the cross-sectional contour of the blades and whereby any strain on the conductors adjacent the blades will be in longitudinal relation thereto.

It is also an object to provide a connecter cap which will be of few parts, cheap to manufacture, easy to assemble and which will not easily get out of order.

Further objects will appear in the specification and the appended claims.

In the drawings:

Figure 1 is a top plan view of a connecter cap embodying my invention;

Fig. 2 is a side elevation of the cap with a conductor cord attached thereto;

Fig. 3 is a bottom view of the cap as shown in Fig. 2, the cord being sectioned on a line corresponding to line 3—3 of Fig. 2;

Fig. 4 is a longitudinal sectional view taken on a line corresponding to line 4—4 of Fig. 2;

Fig. 5 is a longitudinal sectional view taken substantially on line 5—5 of Fig. 4, a portion of the casing being broken away, and the conductor wires being shown inserted in the blades in a position to be secured thereto;

Fig. 6 is a sectional perspective view taken on a line corresponding to line 6—6 of Fig. 5, the conductor wires being shown in position in the blade before being soldered in place;

Fig. 7 is a transverse section taken on a line corresponding with line 7—7 of Fig. 4 and illustrates the position of the wire after being secured in the blade and the securing means therefor;

Fig. 8 is a perspective view of one of the blades before being secured in the base.

Fig. 9 is a plan view showing a somewhat different form of construction; and

Fig. 10 is a cross section on the line 10—10 of Fig. 9.

Referring to the drawings in detail, the embodiment illustrated comprises an insulating base 1 having outwardly extending connecter blades 2 suported thereon, and a metallic casing or handle 3 secured thereto. The in-

sulating base in the present instance consists of a comparatively thin insulating disc which may be stamped from sheet fibre, laminated bakelite or similar material or which may be made of molded composition.

The blades 2 are formed of suitable flat material and provided with an elongated slot 4, as illustrated in Fig. 8. Shoulders 5 are adapted to rest against the insulating base when the bifurcated end of the blades are inserted in the slots 6, which latter are pierced in the disc 1. The ends of the blades 2 are riveted against the insulating base, as shown at 7, thereby securing the blades rigidly in the slots 6 in outwardly extending position. The casing 3 is preferably formed of metal and provides a shoulder 8 against which the base is secured by forming an inwardly extending flange 9 thereover as illustrated.

The casing 3 is funnel-shaped and a substantially oval cord passage 10 is provided, which passage conforms to the contour of the standard extension cord. The lower end of the casing is also flanged outwardly at 11 to provide a suitable grip whereby the cap may be easily removed from the receptacle, the casing being beaded to provide a smooth edge. These casings are preferably of aluminum and may be electro-plated by a comparatively new process which provides a plating in colors to harmonize with any color scheme desired.

It is desirable that the connecter caps should be permanently connected to the conductor cords of electrical appliances when they are prepared for market, and in practicing my invention the connecter blades 2 are first riveted securely in the insulating base 1. The casing 3 is then threaded over an extension cord 12 and a knot 14 may be tied in the cord to form a strain relief against the casing 3 after the device is assembled. The bared ends 13 of the conductor wires are then inserted longitudinally in the slots 4, as shown in Figs. 5 and 6, and are soldered therein. The solder 15 fills practically the entire length of the slot and forms a flat surface on each side of the blade as illustrated in Fig. 7. The insulating base is then inserted in the end of the casing 3 and against the shoulder 8 and the flange 9 is formed over the base securely locking it in the casing. It will be noted that by this means the conductor wires extend longitudinally through the base and in the slot 4 and are confined within the limits of the cross sectional contour of the blades and a considerable length of the wire is secured to the blade by the solder, thereby forming a very secure joint both electrically and mechanically.

The construction shown in Figs. 9 and 10 is substantially the same as that just described, except that the insulating base is made in two semicircular halves 16 and 17 having opposed registering notches to accommodate the contact blades 18 which are notched out on opposite sides, as indicated at 19, to receive the edges of the adjacent portions of the insulating discs. This form may be assembled without any riveting operation, as the two semicircular insulating discs are simply slipped into position with respect to the contact blades, a portion of the blade being received in the notch in the insulating disc and a portion of the insulating disc being received in the notch 19 in the blade.

When the metallic casing or handle 3 is flanged over the edges of the insulating disc the entire assembly is securely held in assembled relation.

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

1. A connecter cap comprising an insulating disc, a bifurcated blade extending through said disc and riveted thereto and a conductor wire extending through said disc and between the bifurcations of said blade, and means for securing said wires between said bifurcations and within the cross sectional contour of said blade.

2. A connecter cap comprising a comparatively thin insulating base, a connecter blade extending through said base and secured thereto, said blade having a longitudinal slot therein extending through said base, a conductor wire in said slot and extending through said base, said wire being entirely within the cross sectional contour of said blade and secured in the slot above said base.

3. An attachment plug cap comprising an insulating disc, a hollow sheet metal handle clamped on said disc, an outwardly extending contactor blade on said disc and riveted thereto and having an elongated longitudinal slot therein, and a conductor wire extending through said disc and in said slot and soldered therein to secure said wire and to provide a substantially flat surface on each side of said blade.

4. A connecter cap comprising an insulating disc, a connecter blade supported in said disc and having a longitudinal slot therein, a conductor wire in said slot and secured longitudinally therein within the cross sectional contour of said blade, and a hollow sheet metal handle clamped on said disc and having a restricted passage for said conductor.

5. A connecter cap comprising a funnel-shaped sheet metal handle forming a casing for said cap, an insulating disc secured in and substantially closing the large end of said handle, an outwardly extending connecter blade extending through said disc and riveted thereto, said blade having an open end slot in the riveted end thereof extending a substantial distance above said disc, a conductor wire extending longitudinally in said slot and soldered therein, said handle providing a strain relief for engaging a knot tied in the

conductor and flanged to provide a hand grip.

6. In a connecter cap, a flat conductor blade having an elongated longitudinal open end slot therein, shoulders on said blade adjacent the slotted end, and an insulating base, the open end of said blade extending through said base and riveted over said base to clamp said base against said shoulders and retain said slot open to receive a conductor wire.

In witness whereof I have hereunto subscribed my name.

ROBESON B. WOLCOTT.