

Aug. 7, 1928.

1,679,723

H. HUBBELL

CORD CLAMP

Filed May 18, 1925

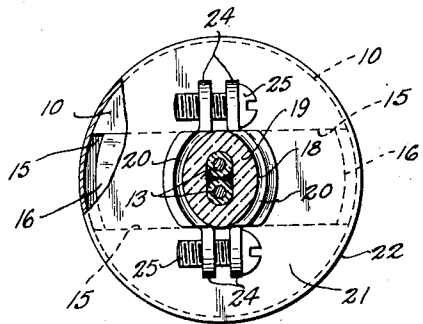


Fig. 1.

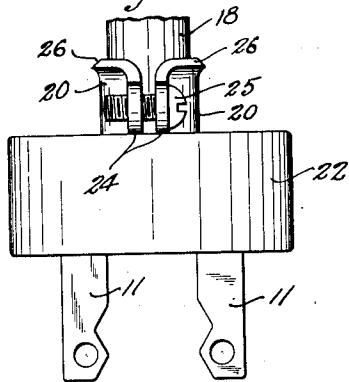


Fig. 2.

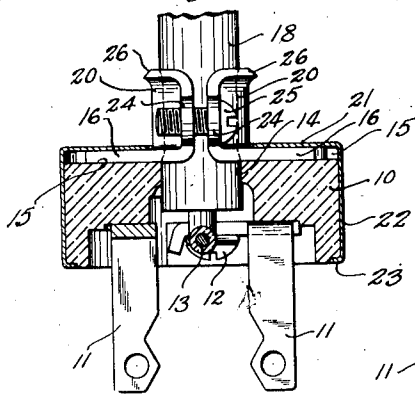


Fig. 3.

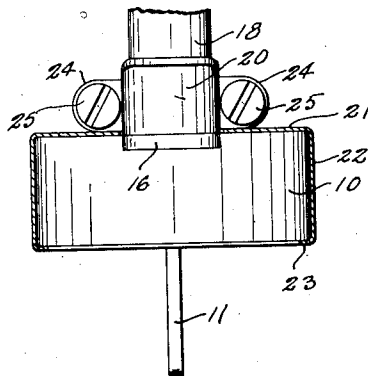


Fig. 4.

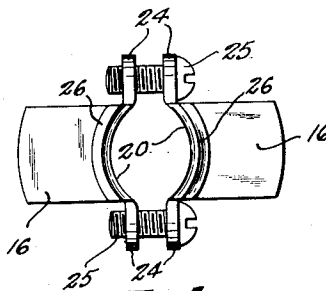


Fig. 5.

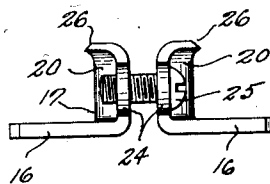


Fig. 6.

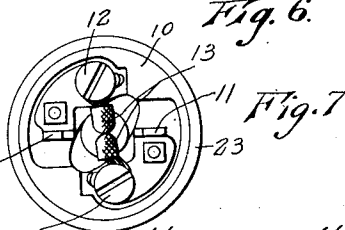


Fig. 7.

Inventor

Harvey Hubbell

By

Hooster & Davis
Attorneys.

UNITED STATES PATENT OFFICE.

HARVEY HUBBELL, OF BRIDGEPORT, CONNECTICUT; LOUIE E. HUBBELL EXECUTRIX
OF SAID HARVEY HUBBELL, DECEASED.

CORD CLAMP.

Application filed May 18, 1925. Serial No. 30,997.

This invention relates to electrical devices which are connected to flexible electrical cords or cables, such for instance as are used in operating portable electrical devices, and has for an object to provide a structure for securing the device to the cord or cable which will take the strain of any pull on the cord off the connections to the binding posts, so as to prevent breaking of these connections by the strain and also to prevent the leads from breaking loose.

With the foregoing and other objects in view, I have devised the construction illustrated in the accompanying drawing forming a part of this specification, similar reference characters being employed throughout the various figures to indicate corresponding elements. In this drawing,

Fig. 1 is a top plan view showing my invention as applied to a plug cap.

Fig. 2 is a side elevation thereof.

Fig. 3 is a section through the cap but showing the clamp and cord in elevation.

Fig. 4 is a side elevation of the clamp and body of the cap looking from the right of Fig. 2, but showing the shell or casing in section.

Fig. 5 is a top plan view of the clamp removed.

Fig. 6 is a side elevation thereof, and

Fig. 7 is a bottom plan view of the cap on a somewhat smaller scale.

Although I have shown my improved clamp as applied to a plug cap it will, of course, be obvious that it is not limited to use therewith, but may be employed with other electrical devices which are connected to a conducting cable or cord in substantially the same manner. In the construction shown the cap comprises an insulating body member 10 carrying on the lower side thereof blade contacts 11 connected with binding posts having binding screws 12 for connection of the lead wires 13 in the usual manner. This member is provided with an opening 14 for passage of these leads to the binding posts, and on the opposite side from these binding posts is provided with a pair of aligned recesses 15 placed on opposite sides of the opening 14 to receive the feet 16 of the clamping elements 17. These clamping

elements form the clamp for securing the device to the cord or cable 18 of which the leads 13 are a part. The cable shown is of a relatively heavy construction having a relatively heavy rubber insulation 19, and is used for conducting current to portable motors and the like.

Where the only connection between such a cable and the cap is the connection between the leads and the binding posts, it will be apparent that all strains from the cable to the cap, for example, pulling the cap from the receptacle, is borne by these connections, which soon breaks the connections, between the leads and the binding posts or causes them to work loose. To remove this objection I have provided a simple and effective clamping means connected to the cap which may be clamped about the cord to take this strain.

As indicated above, this clamp comprises the two elements 17, which, in the construction shown, have clamping portions 20 preferably curved to engage the curved walls of the cable, and they have feet 16 projecting at substantially right angles to these clamping portions. These feet are seated in the recesses 15 in the end of the body member 10 and are adapted to slide in and out in these recesses to allow for movement of the clamping elements as they are clamped about the cord or loosened therefrom. These feet are retained in the recesses by the end wall 21 of a metal shell or casing 22, which in the present construction encloses the body member 10. It will be apparent from Fig. 3 that the feet 16 are located between the end wall 21 and the bottom of the recesses and are, therefore, held against separation from the cap by this shell or casing, but are allowed to move toward and from the cable in tightening and loosening the clamping screws. A convenient means of securing this shell to the body member is to bend over its free end 23 over the opposite end of the body member, as shown in Figs. 3 and 4. This shell also provides a protective armor for the body of the cap to protect it against injury in use. The clamping portions are provided with laterally extending ears through which are passed the clamping

screws 25, each of which has threaded engagement with one of these ears. It will be apparent that after the connection of the leads 13 are made to the binding posts the clamping elements 17 may be securely clamped about the cord or cable by tightening up on the screws 25, the proper movement being secured by the feet 16 sliding in the recesses 15. This clamp will provide a very tight grip on the cable, effectively taking all strain or pull on the cable and preventing it from reaching the connection between the leads and the binding posts, so that there is no chance of this strain breaking the connections or working them loose. To facilitate the insertion of the cable between the clamping elements the upper ends of the clamping portion 20 are flared outwardly somewhat, as indicated at 26. It will be obvious that the clamp may be as easily released for disconnecting the cap or any other similarly connected electrical device from the cable by merely loosening the screws 25. It will also be apparent that the clamp is very simple in construction and is not liable to be easily gotten out of order.

Having thus set forth the nature of my invention, what I claim is:

1. In a device of the character described, an insulating body member having an opening, binding posts mounted on one side of said member, said member being provided with aligned recesses on the opposite side, a pair of clamping members having laterally extending feet slidable in said recesses, means for securing the feet to the body member, an insulated cord between the clamping members and having lead wires extending through said opening to the binding posts, and means for clamping the clamping members on the cord to secure the body member thereto.

2. In a device of the character described, an insulating body member, binding posts carried thereby, said body being provided with an opening leading to the binding posts and aligned recesses on opposite sides of the opening, a pair of clamping elements having laterally extending feet mounted to slide in said recesses, a shell secured to the body member and extending over said feet to retain them in the recesses, said shell having an opening and the clamping elements having clamping portions extending through said openings, an insulating cord having leads connected to the binding posts, and means for clamping the clamping portions on opposite sides of the cord to secure them together.

3. In a device of the character described, an insulating body member having an opening, binding posts carried by said member, a shell or casing member enclosing the body member and having an opening in alignment with the opening in the body member, a pair

of clamping elements having laterally extending feet between the body member and shell member and clamping portions adapted to engage an electric conductor cable or cord extending through said openings, means on one of the members forming guides for the feet to guide them for lateral reciprocation, means for clamping said portions on the cable or cord, and means for securing the shell to the body member.

4. In a device of the character described, an insulating body member having an opening and aligned recesses on opposite sides of said opening, binding posts carried by said member, a pair of clamping elements having clamping portions and feet extending at an angle to said portions and mounted to slide in said recesses, a shell enclosing the body member and secured thereto, said shell having an opening for said clamping portions and arranged to retain the feet in the recesses, and screws in said clamping portions to clamp them on opposite sides of an electric conducting cable or cord.

5. In a device of the character described, an insulating body member, binding posts carried thereby, said body having an opening leading to said posts, clamping elements having laterally extending feet, means on the body member forming guides for said feet to guide them for lateral reciprocation, and a casing connected to the body member and arranged to secure said feet to said member.

6. In a device of the character described, an insulating body member, binding posts carried thereby, clamping elements having laterally extending feet, means on the body member forming guides for said feet to guide them for lateral reciprocation, and a casing connected to the body member and arranged to secure said feet to said member.

7. In a device of the character described, an insulating body member, binding posts carried thereby, said body having an opening leading to said posts, clamping elements having laterally extending feet, and a casing member connected to the body member and arranged to secure said feet to said body member, one of said members having recesses to receive said feet and in which they are slidable to permit lateral movement of the clamping members toward and from each other.

8. In a device of the character described, a body member, binding posts carried by said member, a clamp comprising separate elements having lateral extending feet, a casing member enclosing the body member and secured thereto to secure said feet to said member, one of said members being provided with guides for said feet and cooperating with the side edges thereof to guide the clamping elements for movement toward and from each other and prevent their turning relative to said member, and means for clamp-

ing said elements on opposite sides of an electric conducting cable.

5 9. In a device of the character described, an insulating body member, binding posts carried thereby, a pair of clamping elements having laterally extending feet, a shell member secured to said body member and extending over said feet, one of said members being provided with aligned recesses in which said

feet are mounted to slide, said clamping elements having clamping portions adapted to be arranged on opposite sides of an insulating cord having leads connected to the binding posts, and means for clamping said clamping portions on opposite sides of the cord. 10 15

In testimony whereof I affix my signature.
HARVEY HUBBELL.