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PLUG AND SOCKET CLAMP

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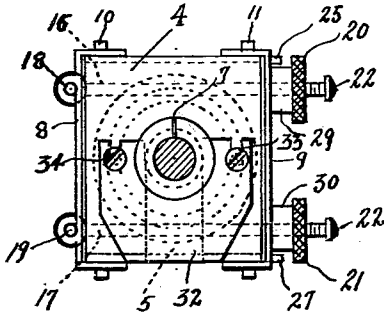


Fig. 1.

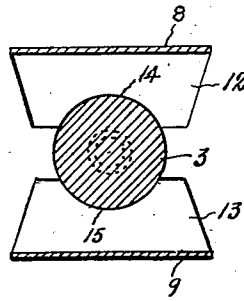


Fig. 3.

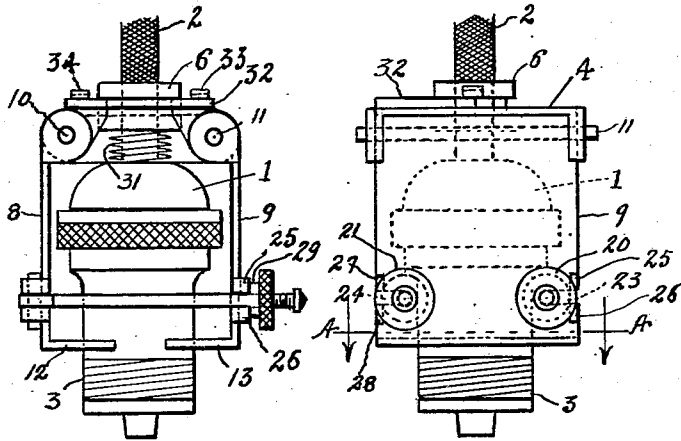


Fig. 2.

Fig. 4.

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# UNITED STATES PATENT OFFICE

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## PLUG AND SOCKET CLAMP

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2 Claims. (Cl. 173—328)

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The object of my invention is to provide a means to releasably clamp the two-pieces constituting the plug and socket in operative relationship, so that the portion in which the wire or cable is connected cannot be withdrawn from the socket which is screwed into the receptacle without releasing the clamp therefrom.

A further object of the invention is to provide a device of the kind mentioned which shall be simple and inexpensive in construction and positive in operation.

To these and other ends it consists of the novel features and combinations hereinafter described, and more particularly set forth in the claims.

For the purpose of aiding in the explanation of the invention I show in the accompanying drawing and hereinafter describe one practical embodiment of it. It is to be understood, however, that this embodiment is presented merely by way of illustration and that the specific showing and description of it are not to be construed in any fashion as limiting the appended claims short of the true and comprehensive scope of the invention in the art. There are of course numerous methods of performing the mechanical features of my invention of which I have shown but one.

Referring to the drawing in which numerals of like character designate similar parts throughout the several views.

Figure 1 is a plan view of the clamp showing the same mounted on a plug and socket.

Figure 2 is a side view thereof.

Figure 3 is a sectional view on line AA in Figure 4.

Figure 4 is a front elevation of the clamp mounted on the plug and socket.

In the drawing, 1 designates the plug secured on the end of the cable or wire 2, the plug being inserted into the socket 3 through which current may be supplied to the cable or wire. The end of the wire of cable remote from the plug may be connected to an electrical device, such as an electric drill, etc.

The clamp comprises stamped or moulded members formed to the shapes indicated. The top member 4 is provided with a U-shaped notch 5 for the reception of the split bushing 6, the split in the bushing is indicated as at 7. The bushing is adapted to insulate the wire or cable on which it is mounted from the metal forming the top member.

The clamping members 8 and 9 are hinged to the top member by means of hinge pins 10 and 11. The lower end portions of the clamping mem-

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bers are bent inwardly as at 12 and 13, and each portion is provided with an arc as at 14 and 15, adapted to engage the periphery of the socket to position the clamp thereon.

The clamp is provided with hinged clamping rods or bolts 16 and 17, hinged to the clamp by means of hinge pins 18 and 19. The ends of the rods or bolts remote from their hinges are threaded, and each rod or bolt is provided with a knurled threaded thumb nut 20 and 21. The end of each rod or bolt is peened or hammered out as at 22 to prevent the knurled thumb nut from being screwed off, and hence the possibility of its loss prevented.

The clamping member 9 is provided with slots 23 and 24 for the reception of the clamping rods or bolts. At the entrance of each slot and on either side thereof, there is provided out bent lugs 25, 26, 27 and 28, behind which the hub 29 and 30 of the knurled thumb screw engage, so that the rod or bolt is held in the slot against accidental disengagement after the clamp is finally fixed and clamped in position on the socket.

The helical spring 31 is twisted or otherwise mounted on the wire or cable, and is interposed between the upper end of the plug and the underside of the top member, and is adapted to exert its inherent pressure against the plug, and hence the pull on the wire or cable connected thereto, so that if the plug is pulled slightly out of the socket, it will be immediately forced back in the socket when the pull thereon is released.

The top member is provided with a removably mounted cover plate 32, that is held in assembled relationship thereon by means of the screws 33 and 34. The cover plate is provided to cover the notch in the top member, and also to hold the bushing and the wire or cable in proper position therein.

It is believed that the operation of the device as a whole will be clear, in view of the foregoing description which has been given in connection with that of the construction of the same.

Many constructional changes may, of course, be introduced in the embodiment described and illustrated by way of example, without departing from the scope of the invention.

What is claimed is:

1. A device of the class described, comprising, in combination a top member having a notch formed therein, a cover plate to cover the aforementioned notch, clamping members hinged to the top member, one of the aforesaid hinged members being provided with oppositely spaced notches and having lugs bent outwardly one on

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each side of the entrance of each notch, clamping bolts hingedly connected to the other of the said members and being aligned with and adapted to engage in the spaced notches in the other member, the end of the clamping bolts remote from the hinge being provided with a threaded portion, a nut threaded unto the threaded portion of the clamping bolt and having a portion adapted to engage behind the outwardly bent lugs to prevent the clamping bolt from becoming disengaged from the slot after the clamping members are brought into clamping engagement with a socket on which the device is removably clamped.

2. A device as set forth in claim 1, in which a helical spring is engageable with the underside of

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the top member and the upper end of a plug and adapted to spring-urge the plug into a socket when a pull is exerted upon a cable connected to the plug to insure certainty and sufficiency of contact between the plug and socket.

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#### REFERENCES CITED

The following references are of record in the file of this patent:

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