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L. KNEEBONE

2,461,427

TENSION ABSORBER

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Fig. 1.

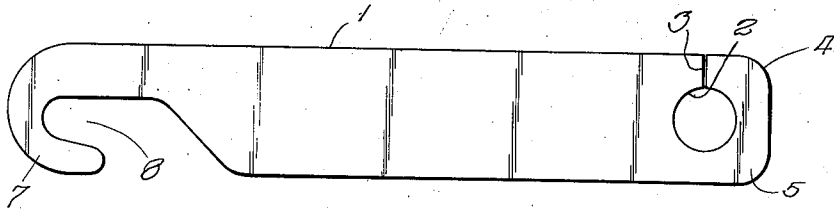


Fig. 2.

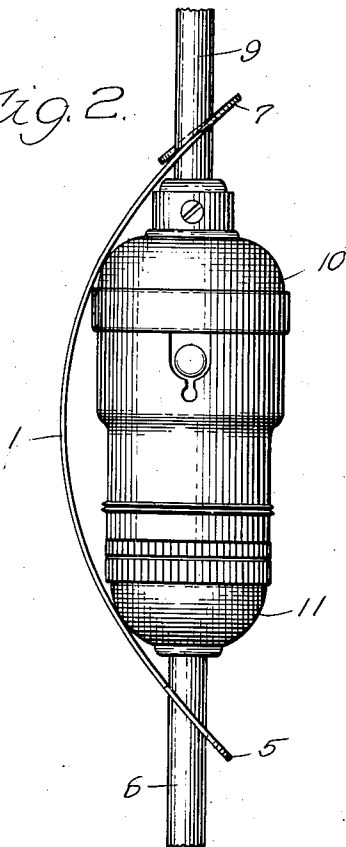
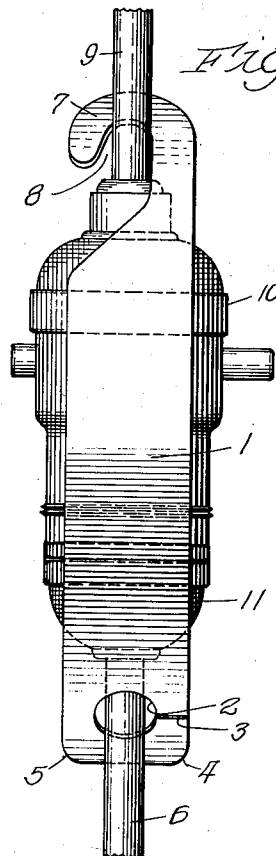


Fig. 3.



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UNITED STATES PATENT OFFICE

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TENSION ABSORBER

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1 Claim. (Cl. 173-322)

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My invention relates to a tension absorber and more particularly to a device adapted to be connected to flexible conduits leading to and from a connection to relieve tension on the connection.

Electrical appliances have a multiplicity of uses, and one of the more common methods of attaching such appliances to an electrical source is by means of a bayonet plug, plugged into a female member of an electrical connection such as shown in Figures 2 and 3. Difficulty has been experienced in retaining the bayonet plug in its socket under stress produced by the wire itself, or from accidentally produced tension on the wire. Such strains not only tend to pull the plug out of the socket, but also to strain the female member of the connection and to wear the wires at the point where they enter the connection. Strain on the connection and wear on the wires also occurs where the male member is of the screw-in type.

My invention is a device which eliminates the above difficulties by detouring all shocks and strains around the electrical connection and transferring them to the wires leading to said connection, as shown in the drawings, in which:

Figure 1 is a side elevation of my invention;

Figure 2 is a side elevation of an electrical connection having male and female members with my invention attached thereto.

Figure 3 is a side elevation partly in section of Figure 2 viewed from a position 90° therefrom.

Referring to Figure 1, I show a side elevation of my tension absorber 1. It is preferably constructed of a flexible material which is a non-conductor of electricity, and should be of sufficient length to reach from the wire leading from the male member of an electrical connection to the wire leading from the female member of such connection, such as shown in Figure 2. A length of from five to eight inches is usually sufficient, but I prefer a length of approximately five and three-quarter inches for the ordinary electrical connection. Formed adjacent one end of the tension absorber is an opening 2, of sufficient size to receive a wire such as ordinarily found in electrical connections of the type shown. On the periphery of the opening 2, a radial slot 3 is formed. By bending the corners 4 and 5 up and down, respectively, the radial slot 3 is extended sufficiently to admit a wire 6 to the opening 2 and releasing the corners 4 and 5 would allow them to return to position. A hook 7 is formed at the opposite end of the tension absorber having therein a space 8

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large enough to receive wire 9 leading from the opposite end of the electrical connection 10. The male member of the electrical connection 10 is the ordinary bayonet plug 11.

My tension absorber will be used as follows: Corners 4 and 5 are pressed upwards and downwards, respectively to extend the slot 3, and wire 6 leading from the male member of the connection 10 is inserted in the opening 2 through the space thus formed. Upon releasing corners 4 and 5 the resiliency of the material of which the tension absorber is constructed will close the space, and the wire 6 will be imprisoned in opening 2. The bayonet plug 11 will be inserted in the female member of the electrical connection 10. The tension absorber will then be bent around the electrical connection as shown in Figures 2 and 3, and the hook 7 will be hooked on to the wire 9 leading from the female member of the connection. If desired, some slack can be left in the wire 6 (between the point where the tension absorber is attached and the male member 11) to insure that no strains upon the wire will be transmitted to the connection. In the preferred embodiment of my invention, the tension absorber 1 is made of flexible material with the resilient properties so that it can be bent as shown in Figures 2 and 3, and so that the resiliency of the material will cause the tension absorber to tend to straighten, thereby frictionally engaging the hook 7 and the edges of the opening 2 with the wires 6 and 9.

It can be seen that any tension on the wire tending to pull the plug 11 out of its socket will be transmitted by the tension absorber to the other wire, retaining the plug in its proper position. It can also be seen that any tension upon the wires will be detoured around the electrical connection relieving it of any strain.

While the invention has been disclosed and described herein in a particular embodiment it is not intended that the invention is to be limited thereby to the specific disclosure made. On the contrary, it is intended to cover all modifications and alternative constructions following within the spirit and scope of the invention as defined in the appended claim.

I claim:

In combination with an electrical connection having cooperating male and female members and conduits leading therefrom, a tension absorber comprising a substantially linear flat strip of flexible insulating material, a hook at one end of the strip engaging the conduit leading from one of the members, said hook having

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a bight substantially equal to the diameter of the last mentioned conduit, a circular opening at the other end of the strip with the edges of the opening engaging the conduit leading from the other member, said opening having a diameter substantially equal to the diameter of the conduit leading from the other member, a slot extending from the opening to the marginal edge of the strip, the edges of said slot being spaced apart a distance less than the diameter of the last mentioned conduit, said strip being flexed longitudinally with said hook and the edges of the opening engaging said conduits and the resiliency of said strip causing said hook and the edges of the opening frictionally to grip said conduits by virtue of the resiliency of the material urging the strip to return to its original linear shape.

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