

Dec. 15, 1931.

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1,836,890

ELECTRIC FUSE CLAMPING DEVICE

Filed Feb. 14, 1930

Fig. 1-

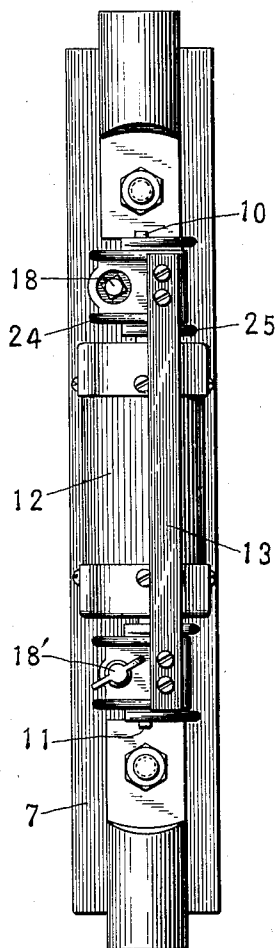


Fig. 2-

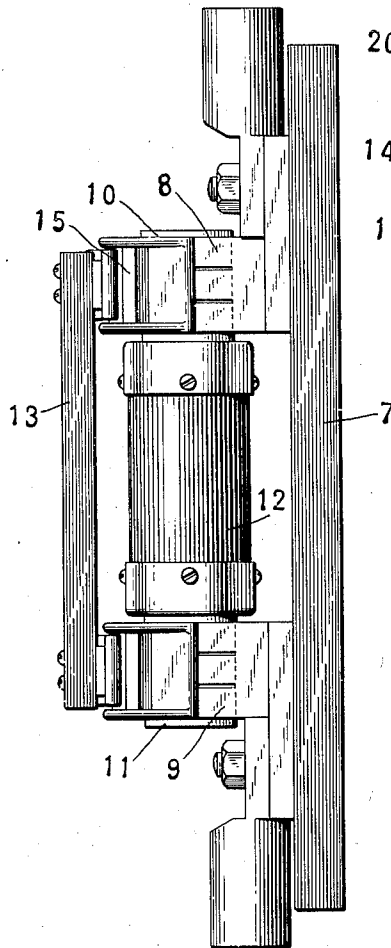


Fig. 3-

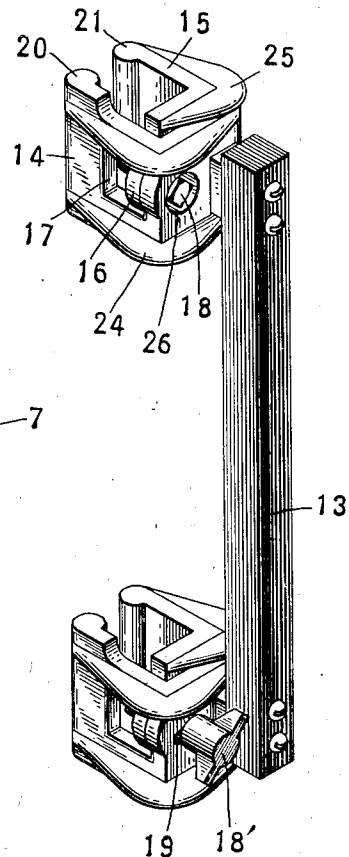


Fig. 4-

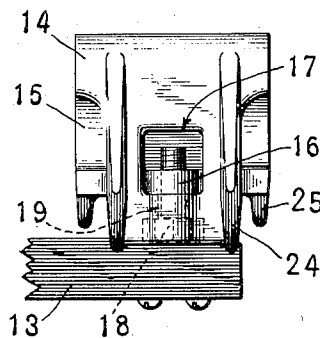
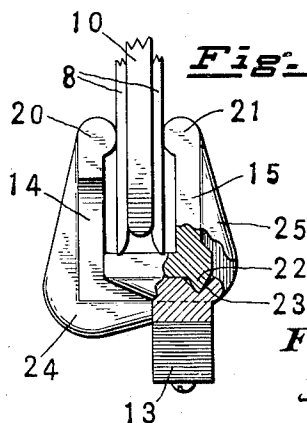


Fig. 5-



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ELECTRIC FUSE CLAMPING DEVICE

Application filed February 14, 1930. Serial No. 428,414.

My invention relates to devices for protecting the terminals of electric circuits against overheating and particularly to a clamping device for fuses having blade-like ends which are detachably mounted in spring jaws. In such devices it is highly important that the jaws and fuse blades be in substantially perfect alinement, otherwise the contact between the blades and jaws is likely to be irregular and incomplete, as a result of which the jaws and blades are likely to be overheated. There should be a considerable degree of flexibility to permit self-alinement of the fuse blades in the holder.

I propose to provide an additional device or devices for clamping the fuse blades or terminals in the jaws so as to provide the best possible contact between the blades and the jaws and prevent overheating. Further I have sought to provide adjustable means for exerting a substantial pressure of the jaws against the blades, thus further tending to avoid overheating. By my invention I also increase the surface available for radiation of heat from the metal parts.

I have also sought to design a form of clamp which is readily adjustable to various sizes of fuses.

Another object is to provide a clamp of such design that it can be used on a multiple fuse holder when the fuses are placed as close together as their size will permit.

Another object is to provide a clamping device which can be readily adjusted or locked as may be desired.

Another object is to provide a form of clamp which can be readily applied to the fuse jaws.

Another object is to provide a clamping device which is simple and easy to manufacture cheaply.

Another object is to provide a clamp which can be safely handled and readily applied or removed.

Another object is to provide a clamping means which can be simultaneously or successively applied to both sets of the jaws of a fuse.

Another object is to provide means for locking a fuse in place in the usual jaws.

Another object is to provide means for preventing tampering with the fuse.

Fig. 1 is a front view of a single unit embodying my invention.

Fig. 2 is a side view of the same.

Fig. 3 is a perspective view showing a pair of clamps with a connecting handle.

Fig. 4 is a side view of one of the clamps on a larger scale.

Fig. 5 is a top plan view of one of the clamps showing it applied to a pair of jaws.

In the form shown the stationary jaws are arranged in pairs and suitably connected to an insulating base 7. The upper jaws 8—8 are identical with the lower jaws, of which jaw 9 is one. These jaws are of the usual type, considerably resilient and adapted to hold snugly between them the blades 10 and 11 of the cartridge type fuse 12 in the usual manner.

I have shown two clamps, one for each pair of jaws and for convenience in handling, the two clamps are connected by an insulating handle or bar 13.

Each clamp consists of two L-shaped members, such as 14 and 15. The member 15 is provided with a lug 16 which extends into a recess or passage 17 in the other member. An adjusting screw 18 extends through one flange of the member 14 and screws into the lug 16. Preferably the screw shank passes through the slot 19 in the member 14 so as to permit tilting of the clamp 15 with respect to the member 14. The clamp members are preferably provided with rounded shoulders such as 20 and 21 adapted to engage the jaw members 8—8.

The member 15 is preferably provided with a rib 22 which seats in the groove 23 in the member 14 so as to facilitate the tilting of the member 15 on the member 14 and permit the shoulders 20 and 21 to adjust themselves and snugly grasp the opposite sides of the jaws 8—8.

The flanges 24 serve to reinforce the clamp member 14 and to provide additional heat radiating surfaces. The flanges 25 similarly reinforce the member 15 and may serve to assist in positioning the member 15 with respect to the member 14.

To apply the clamp above described it is simply necessary to release the screw 18 so as to provide the necessary space between the shoulders 20 and 21, whereupon the clamp may be applied to the jaws 8—8 and secured in place by tightening of the bolt 18. By locating the head of the bolt 18 in a recess 26 I have in effect provided a locking device which can only be released by the use of a tool of the proper shape.

Individual clamps such as above described may be provided with handles of any suitable kind but preferably I employ two clamps, one for each pair of jaws and connect them by a handle 13 which is preferably of insulating material. In the form shown the lower clamp is provided with an adjusting bolt with a thumb piece 18' so that this particular clamp can be released by the use of the fingers alone.

It will be understood that the round edges 20 and 21 facilitate the application of the clamp to the jaws and that the jaws may be clamped together with great force by means of the clamped screws above described.

When the clamps are in place it is obvious that the fuse can not be removed and in fact this device when used constitutes a safety precaution to prevent the unauthorized removal or tampering with the fuse.

I claim:

1. A fuse clamp comprising a pair of members, one of which is fulcrumed on the other, each of said members being provided with a projecting arm and the projecting end of each arm having a rounded end portion for adjustable engagement with the opposite sides of a pair of fuse jaws and means for adjustably tilting one member upon the other member.

2. A fuse clamp comprising a pair of angular members, one pivoted on the other, one having a recess and the other a lug in the recess and an adjusting screw passing through a part of one member into said lug.

3. A fuse clamp comprising a pair of members, one of said members having a groove and the other a rib for rockable engagement in said groove, and each of said members being provided with a projecting arm for engagement with one of the opposite sides of a pair of jaws and means for tilting one of said members upon the other, each of said members being provided with heat radiating flanges.

4. A fuse clamp comprising two pairs of clamping members, each pair of said members having screw means for separate clamping adjustment and an insulating handle connecting said members and holding them in spaced relation.

5. A fuse clamping construction comprising two oppositely disposed pairs of jaws, a fuse having its contact blades supported in the respective pairs of jaws and a pair of

clamps for each of the oppositely disposed pairs of jaws, one clamp of each pair being hinged to its correlated jaw and an adjusting screw for each individual pair of clamps.

6. A fuse clamp having two angular jaw members, one having a fulcrum on the other, one having a recess and the other a lug projecting into the recess and a clamp screw passing through the one member into said lug.

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