July 11, 1933. G. E. WADSWORTH 1,917,862

FUSE MOUNTING BLOCK

Filed Jan. 22, 1931

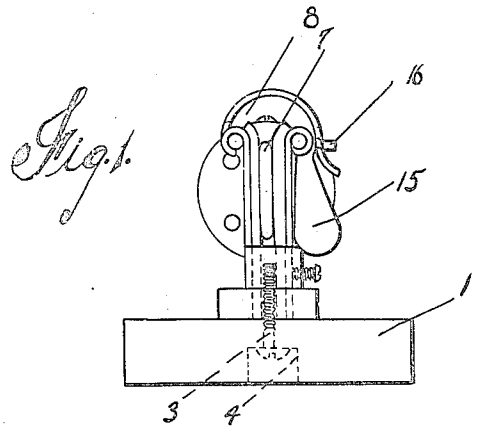


Fig. 1.

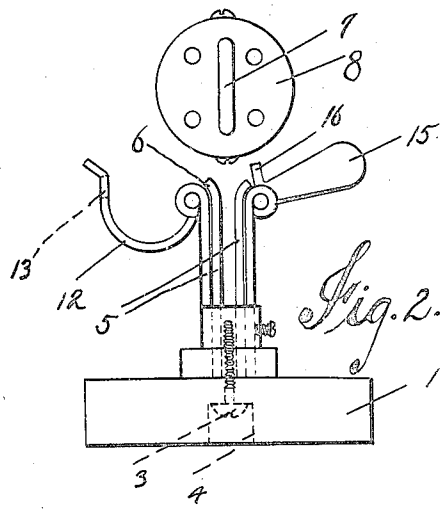


Fig. 2.

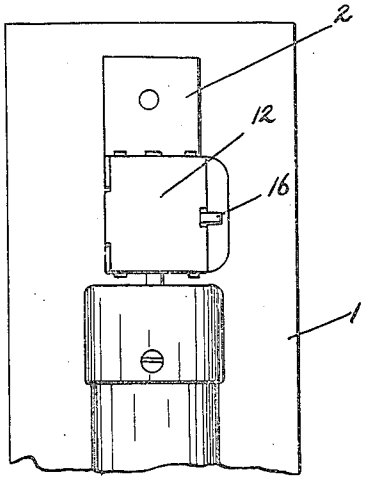


Fig. 3.

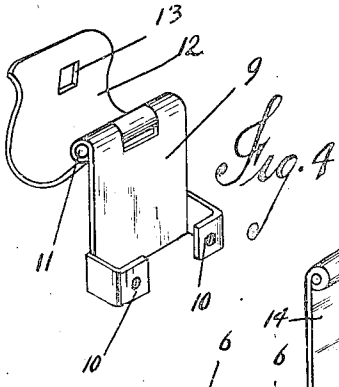
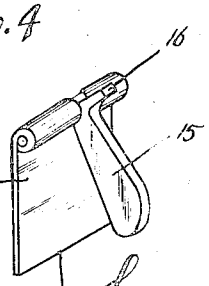


Fig. 4.



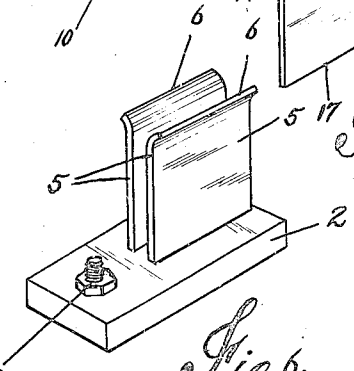
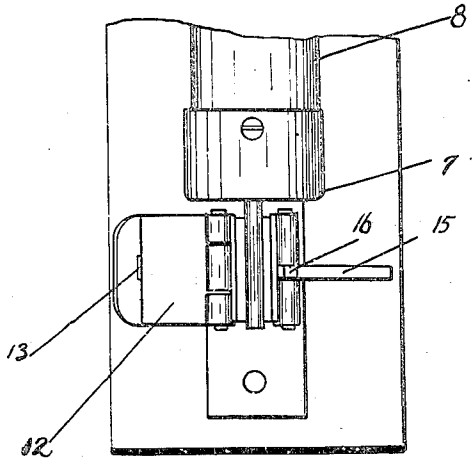


Fig. 5.

Fig. 6.



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UNITED STATES PATENT OFFICE

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FUSE MOUNTING BLOCK

Application filed January 22, 1931. Serial No. 510,430.

My invention relates to fuse mounting blocks, particularly the type known in the trade as fuse contact bases. My invention specifically relates to detachable clamps for clamping the contact jaws of the bases into firm surface engagement with the sides of the blades of cartridge fuses which are mounted on the bases.

The ordinary type of fuse contact base to which my invention relates is old and well known and comprises terminals in the form of clamping jaws composed of two pieces of metal spaced sufficiently far apart as to resiliently receive the blades of a cartridge fuse. In the use of fuse contact bases of the type noted, the jaws often become bent or lose their resiliency by being pried too far apart so that the cartridge fuse is either insecurely mounted or does not provide a good electrical connection with the terminals of the base.

It has been suggested to provide detachable clamps which are inserted over the opening in the clamping base, and which can be tightened up to exert pressure against the clamping jaws to cause them to firmly grip the knife blades of the fuses. Such detachable clamps ordinarily extend out so far from the clamping jaws that they interfere with the cabinet in which the bases are mounted. It is for this reason that such clamping members have not commercially solved the difficulty of the heating up of the cartridge fuses due to improper electrical contact of the blades with the mounting jaws.

It is an object of my invention to provide clamping devices which may be readily inserted on fuse contact bases without removing the contact bases from the panel on which they are mounted, and which, when once inserted on the contact bases, ordinarily become a permanent part of said base. It is further an object of my invention to provide a clamping device which will cause the clamping jaws which receive the blades of the fuses to bear firmly against substantially the entire surface of the blades, thereby eliminating the danger of the fuse heating up and burning out either the fuse or the mounting block.

A further object of my invention is to provide a clamping device which will be inexpensive to manufacture, and which will be so simple in operation that it may be applied to electrical installations quickly.

The above objects and other objects to which reference will be made in the ensuing description, I accomplish by that certain combination and arrangement of parts of which I have shown a preferred embodiment.

Referring to the drawing:

Figure 1 is a side elevation of a fuse contact base with a cartridge fuse mounted therein, and with the clamping device shown in clamped position.

Figure 2 is a side elevation of the base shown in Fig. 1 with the clamp open, showing the manner in which the blades of the cartridge fuse are inserted in the base.

Figure 3 is an open view of my preferred type of contact base with one of the clamps open and the other closed.

Figure 4 is a perspective view of one part of the clamping device.

Figure 5 is a perspective view of the other part of the clamping device which co-operates with the device shown in Fig. 4.

Figure 6 is a detail perspective view showing a standard type of clamping jaw.

In the drawing I have indicated the mounting base at 1, with terminal blocks 2 secured on the base with terminal screws 3 which are ordinarily screwed into the terminal block from a recessed aperture 4 extending into the block 1 from underneath.

Two plates 5 which have their upper edges 6 bent outwardly, extend up from the terminal blocks 2. These plates are spaced apart sufficient distance to resiliently receive the blades 7 of a cartridge fuse such as is indicated at 8.

The clamping device forming the preferred embodiment of my invention is composed of a plate 9, having lugs 10 extending up from the plate and bent inwardly so that the space between the surface of the plate 9 and the inner surfaces of the lugs 10 will fit freely over the contact jaws. Hinged to the plate 9 on a pivot 11, I have shown a curved cover member 12, having an opening 13 therein.

Co-operating with the clamping device just described there is another plate 14 which

has a lever 15 pivoted to its upper end. The lever or handle 15 has a latch member 16 which engages within the opening 13 in the cover 12, when the cover is swung over so as to enclose the clamping jaws.

The ordinary difficulty with the contact jaws of the type for which my invention is adapted is that the outer ends of the jaws become bent apart so that they do not snugly receive the blades of the fuse.

When my clamping device is inserted on the contact jaws of a fuse contact base of the type described, when the cover 12 is swung over the latch 16 engages within the hole 13 in the cover, and when the latch is pressed down to the position indicated in Figs. 1 and 5, the eccentric movement pulls the outer edges of the jaws together while at the same time it maintains the inner surfaces of the jaws in parallel alignment. The result of the clamping action is to insure a thorough surface contact of the blades with the contact jaws.

It will be noted that when the plates 9 are placed in position over the clamping jaws 5 there is sufficient space between the inner surfaces of the lugs 10 and the outer surface of the clamping jaw 5 so that the lower edge 17 of the plate 15 fits snugly into the opening. Thus the plate 14 cannot be mounted on the contact jaws until the plate 9 is in position, and until such time the plate 9 is loosely mounted so that it cannot be readily removed.

When it is desired to insert a new fuse, all that is necessary is to lift up on the handle 15, and the cover 12 will then swing counterclockwise, uncovering the blades.

It is a further advantage of my invention that the clamping arrangement extends at the sides of the contact jaws so that when opened up there is no difficulty in removing the cartridge fuses. With the type of clamp to which I have referred, which is in common use, each time the fuse is removed the clamp has to be removed first, so that there is considerable saving in the time required to replace a fuse with the use of my new type of clamp, and in addition the surface contact is greatly improved.

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

1. A device for clamping together the contact jaws of a fuse contact base, comprising a support, a cover hinged thereto, lugs extending from said support for interlocking around said jaws, a latch member having eccentrically mounted means for engaging said cover and thereby drawing together the outer ends of said jaws.

2. A device for clamping together the contact jaws of a fuse contact base comprising means for holding the contact jaws in alignment, and means for drawing together the fuse blade receiving ends of the jaws, said means for drawing the blade receiving ends together comprising a hinged cover and a pivoted latch.

3. A device for clamping together the contact jaws of a fuse contact base comprising means for holding the contact jaws in alignment, and means for drawing together the fuse blade receiving ends of the jaws, said device being detachable from said jaws, and comprising co-operating members one of which provides in combination with the contact jaws a permanent mounting for both members.

4. A clamp for the contact jaws of a fuse contact base comprising a hinged cover and a hinged latch, plates on which said cover and latch are mounted, one of said plates adapted to be mounted outside one of said jaws, and the other adapted to be mounted outside the other jaw, and one of said plates provided with means for engaging the other.

5. A clamp for the contact jaws of a fuse contact base comprising a hinged cover and a hinged latch, plates on which said cover and latch are mounted, one of said plates adapted to be mounted outside one of said jaws, and the other adapted to be mounted outside the other jaw, and one of said plates provided with means for engaging the other, said cover having an opening therein which said latch engages.

6. A clamp for the contact jaws of a fuse contact base comprising a hinged cover and a hinged latch, plates on which said cover and latch are mounted, one of said plates adapted to be mounted outside one of said jaws, and the other adapted to be mounted outside the other jaw, and one of said plates provided with means for engaging the other, said cover having an opening therein which said latch engages, and said latch having an eccentric mounting.

7. A device for clamping together the contact jaws of a fuse contact base comprising means for holding the contact jaws in alignment, and means for drawing together the fuse blade receiving ends of the jaws, said means for drawing the blade receiving ends together comprising a hinged cover and a pivoted latch, said hinged cover having an opening therein which said latch engages.

8. In combination with the contact jaws of a fuse contact base, a clamping device for attachment to the contact jaws comprising a support reinforcing one of the jaws, a clamping member movably mounted on said support adapted to span the receptacle portion of the jaws and to engage a member clamped to the opposed jaw.

9. In combination with the contact jaws of a fuse contact base, a clamping device for attachment to the contact jaws comprising a support reinforcing one of the jaws, a clamping member movably mounted on said support adapted to span the receptacle portion of

the jaws and to engage a member clamped to the opposed jaw, and eccentric means for actuating said clamping member.

10. In combination with the contact jaws of a fuse contact base, a clamping device for attachment to the contact jaws comprising a support reinforcing one of the jaws, a clamping member movably mounted on said support adapted to span the receptacle portion of the jaws and to engage another member reinforcing said other jaw.

11. In combination with the contact jaws of a fuse contact base, a clamping device for attachment to the contact jaws comprising a support reinforcing one of the jaws, a clamping member movably mounted on said support adapted to span the receptacle portion of the jaws and to engage another member reinforcing said other jaw, and eccentric means for actuating said clamping member.

GEORGE E. WADSWORTH.