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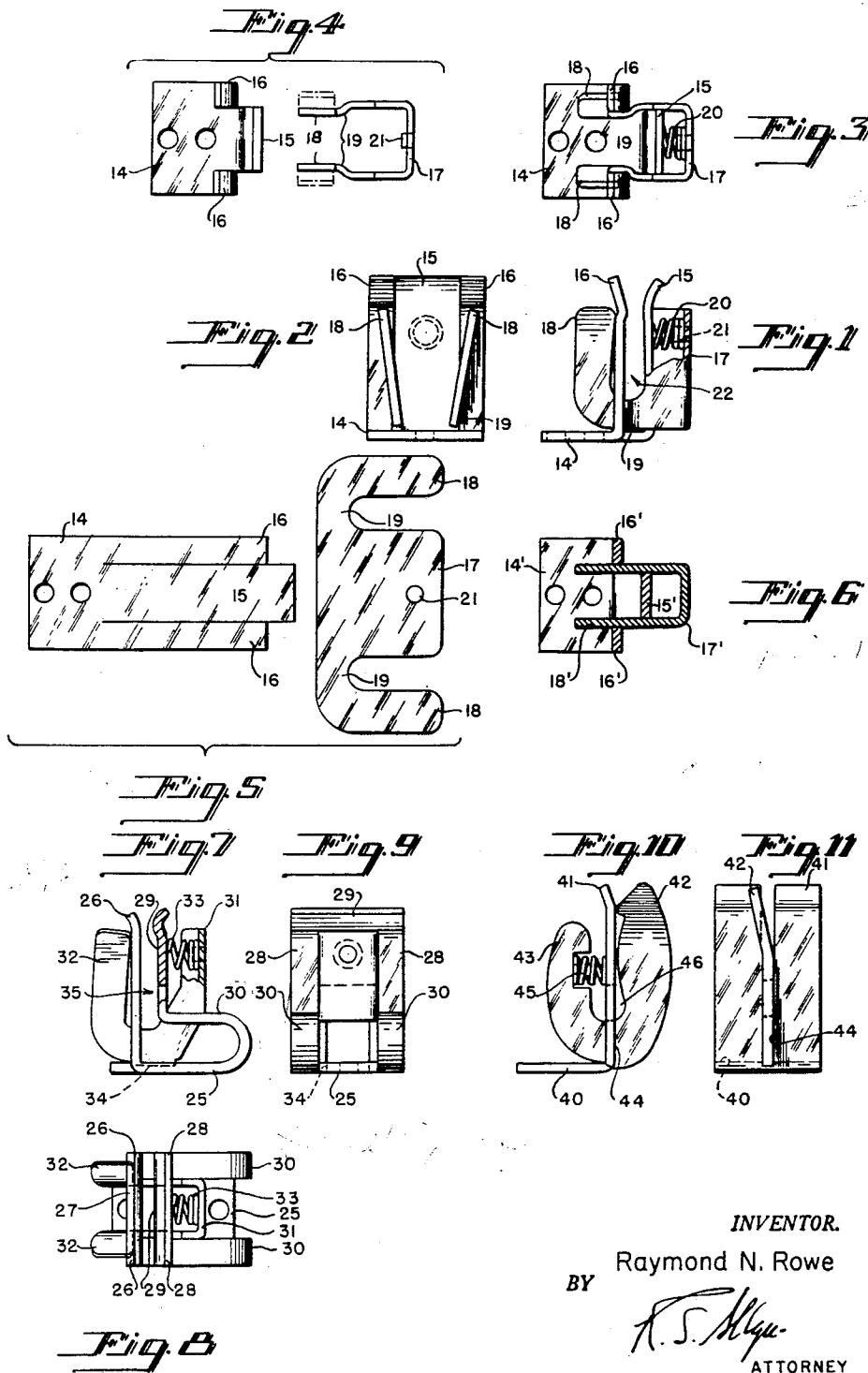
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CLAMP FOR ELECTRIC FUSES, ETC.

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## UNITED STATES PATENT OFFICE

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## CLAMP FOR ELECTRIC FUSES, ETC.

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1

My invention relates particularly to clamps or clips for holding fuses of the cartridge type which have contact terminal blades.

The main object is to provide a clamp for receiving and for forcibly engaging and holding the end of such a device.

In solving the problem I have discovered that a U-shaped clamp may be interlocked with a resilient jaw and pressed toward the jaw by a spring interposed between one arm of the clamp and the jaw. In its preferred form two jaws are provided and the clamp has two pairs of arms interlocked with one jaw and a spring interposed between the clamp and the other jaw.

The accompanying drawings and specification disclose four embodiments of the invention.

Fig. 1 is a side view and partial section of a fuse clamp embodying one form of my invention.

Fig. 2 is a rear view of the same device.

Fig. 3 is a plan view of the same device.

Fig. 4 is a plan view of two parts of the device of Figs. 1 to 3 separated.

Fig. 5 is a view of the blanks from which the parts of Fig. 4 are to be formed.

Fig. 6 is a horizontal section showing a modified form of the device of Figs. 1 to 3.

Fig. 7 is a side view and partial section of a fuse clamp embodying another form of my invention.

Fig. 8 is a plan view of the device of Fig. 7.

Fig. 9 is a rear view of the device of Fig. 7.

Figs. 10 and 11 are detail views of another form of my invention.

The base 14 is of any suitable shape to facilitate mounting on a suitable support and in the form shown in Figs. 1 to 5 there are two resilient jaws 15 and 16 the latter being in two parts spaced apart from each other with the other jaw 15 between the parts and offset to receive the terminal blade of the fuse (not shown).

The clamp is U-shaped. The arm 17 is channel-shaped embracing the jaw 15 and the other arm is in two parts 18, 18 which pass on opposite sides of jaw 15 and through the space between the parts 16, 16 of the other jaw and are bent laterally to overlie the parts 16, 16 and thus hold the clamp in place. In Fig. 4 I have shown in dot and dash lines the position of the arms 18, 18 when they are bent laterally. The blank of Fig. 5 shows that substantially no metal is removed when separating the jaws. In this case it is necessary to offset the parts 19, 19 in order to pass the arms 18, 18 between parts 15 and 16. After the clamp is applied to the jaws a helical spring 20 is inserted between the arm 17 of the

2

clamp and the jaw 15 so as to press the two jaws 15 and 16 toward each other and thus tightly hold a fuse blade between them. The clamp member side arms extend in planes normal to the planes of the fuse jaws so as to utilize the maximum strength of the material. Spring 20 is positioned by the projection 21. A space 22 is allowed between the jaws 15 and 16, 16.

Fig. 6 shows a slight modification in which some metal is removed from between the jaw 15' and jaws 16', 16' so that the arms 18' of the clamp can be passed between parts 15' and 16', 16' without the necessity of offsetting the connection between parts 17' and 18'.

In the form shown in Figs. 7, 8 and 9 the jaw members are connected by base 25 and have openings through which the clamp member is inserted. One jaw member has two arms 26, 26 connected by a cross piece 27 and the other jaw member has two arms 28, 28 connected by a cross piece 29. The arms 26, 28 are connected by spring bows 30, 30.

The clamp has an arm 31 between bows 30, 30 and the arms 32, 32 which overlie the edges of arms 26, 26. A spring 33 is interposed between arm 31 of the clamp and the cross piece 29 of the adjacent jaw member. The bottom of the arms 26, 26 are positioned in slots 34 in the base 25. It will be noted that there is a space 35 to permit the insertion of the fuse blade between the two jaws.

In the simplified form of Figs. 10 and 11 the base 40 carries a contact jaw 41. The U-shaped clamp has the two arms 42 and 43 which extend through a slot 44 in jaw 41. Arm 42 serves to coact with an inserted jaw blade (not shown) and is pressed toward jaw 41 by spring 45. It will be noted that the end of arm 42 is displaced laterally to hold it in place.

I claim:

1. A fuse clip having two contact jaws, one jaw having two spaced parts with a space between the parts, a U-shaped clamping member extending through said space and having two extensions bent to overlap edges of the two spaced parts of the one jaw and a spring interposed between said clamping member and the other jaw.

2. A fuse clip having two contact jaws, one jaw having two spaced parts with the other a central jaw between the parts, a clamping member having an extension bent to overlap one edge of one of the two spaced parts and a helical spring interposed between said clamping member and the central jaw.

3. A fuse clip having two contact jaws, one

3

jaw having two spaced parts with the other a central jaw between the parts, a clamping member embracing the central jaw and having two extensions bent to overlap edges of the two spaced parts and a spring interposed between said clamping member and the central jaw.

4. A fuse clamp comprising a jaw having a contact surface in one plane and a U-shaped clamp extending through said jaw in a plane at right angles to the plane of the contact surface of the jaw and having an arm interlocked with said jaw and another arm with a spring interposed between said latter arm and said jaw.

5. A fuse clip comprising a base, two jaws bent up from said base, a third jaw bent up from said base between said first two jaws and parallel to them, and a spring-pressed U-shaped member embracing said third jaw and furnished with outwardly-bent arms adapted to interlock with said first two jaws whereby said first two jaws and said third jaw are urged toward each other by said spring-pressed member.

6. A contact member comprising a base having two spaced jaw members and a sheet metal clamping member extending edgewise between said jaw members and having a clamping arm on one side of said jaw members and a second arm on the opposite side of said jaw members and a helical spring compressed between the second arm of said clamping member and one of the jaw members.

7. A contact comprising a jaw member having two spaced jaws and a third central jaw offset from the space between said spaced jaws and a clamping member formed of sheet metal with a channel-like part and two arms extending alongside of the central jaw and between the spaced jaws and having their ends offset to engage the spaced jaws edgewise and a spring interposed between the clamping member and the central jaw whereby the clamping member reenforces the jaws.

8. A contact member formed of two pieces of

4

sheet metal and a helical spring, one piece of sheet metal having a base and two projecting spaced contact jaws and the other piece having two arms, one arm extending between said jaws and serving as a clamping member having an end offset alongside an edge of at least one of said jaws and the other arm extending opposite the space between said jaws and the helical spring being compressed against the latter arm and pressing the clamping jaw toward a position to clamp a conductor.

9. A contact member comprising a base having three jaw members, two of said jaw members constituting a pair and being parallel to each other but spaced apart and the third jaw member being substantially parallel to the other two and offset opposite the space between the other two jaw members so as to receive a conductor between the first two jaw members and the third jaw member, a reinforcing member comprising a channel-like part extending behind the third jaw member and having two arms extending on opposite edges of the third jaw member and engaging the opposite faces of the two jaw members and a helical spring compressed between the channel-like part and the third jaw member.

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