

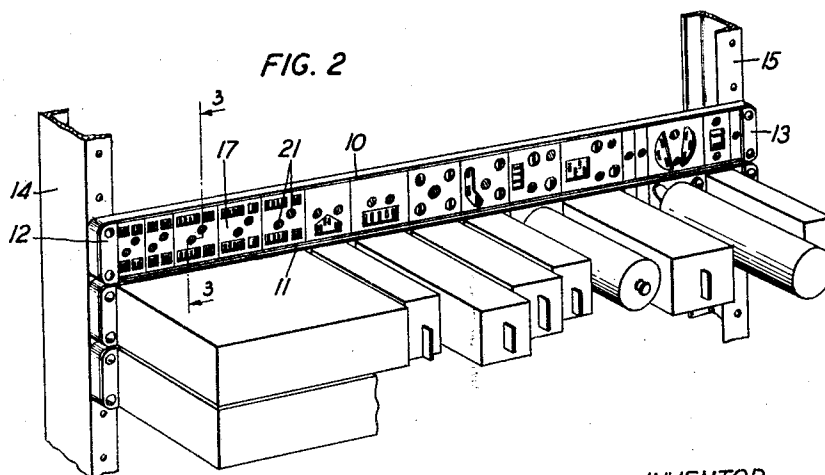
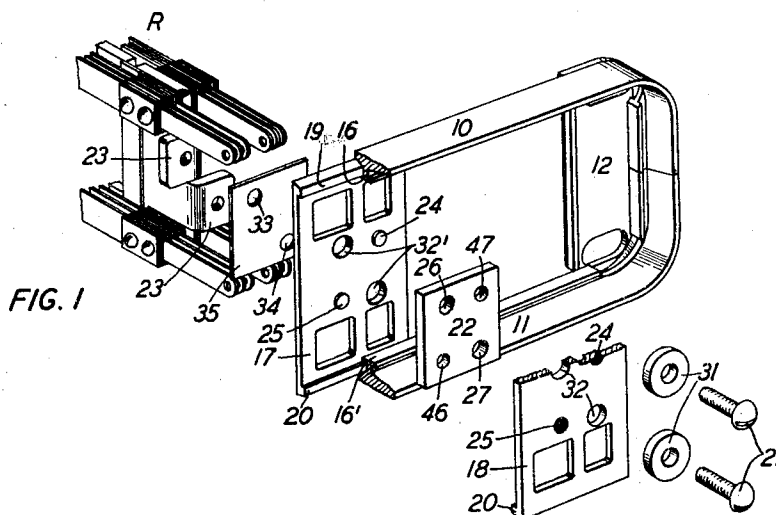
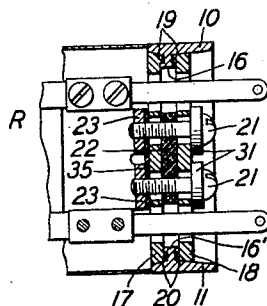
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MOUNTING FRAME FOR ELECTRICAL APPARATUS

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MOUNTING FRAME FOR ELECTRICAL APPARATUS

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This invention relates to supporting frames for electrical apparatus and more specifically to a mounting plate for telephone apparatus.

In certain types of framework used in telephone exchanges, for example, it is customary to mount a plurality of horizontally disposed mounting plates in close proximity to each other on two upright supports which form part of the framework proper. On the horizontal plates are mounted in preassigned places electrical apparatus such as relays, resistances, condensers of different types and sizes depending upon certain requirements, the plates being drilled or otherwise perforated to receive such apparatus. In this type of mounting frame, however, it is frequently necessary to transpose these pieces of apparatus on the plates. Such transposition in turn, necessitates the replacement of the plates thus affected by other differently perforated plates to receive a new combination of pieces of apparatus, such a plate being perforated only upon the determination of the requirements.

The object of this invention is to provide an improved support for equipment such as relays and the like whereby the rearrangement of the electrical apparatus or the addition of such equipment may be effected in a simple and convenient manner and without necessitating the replacement of the mounting element. The invention comprises a pair of rail members secured in parallel relation and mounted on the upright supports of the framework, these rail members being common to a relatively great number of pieces of apparatus or supports to be mounted thereon, each piece of apparatus having associated therewith a pair of plates properly apertured for receiving sets of terminals comprised in that particular piece of apparatus. Each pair of plates forms a clamping device, the fastening screws of which engage the apparatus for securing it and the plates collectively on the bars.

More specifically, the supporting bar is made up of two similarly shaped rail members having their ends bent substantially at right angles and welded together to form a

bar of unit structure. Each rail is formed with a T-shaped portion or rib which extends the whole length of the rail for receiving the clamping plates, these plates having portions engaging recesses formed by the ribs on each side of the rails. An insulating spacing member is preferably interposed between the clamping plates to prevent too great deformation of these plates under the action of the fastening screws and at both ends of the rails is welded a plate for reinforcing the mounting bar thus formed at these points and for receiving bolts or screws for securing the bar on the upright supports of the framework.

Other features and advantages of the invention will appear from the following description and by the claims appended thereto, reference being had to the accompanying drawing, in which:

Fig. 1 is a partial view of the mounting bar showing the relative position of the elements of a clamping device and an electrical apparatus with respect to the bar, each being shown in perspective;

Fig. 2 is a perspective view of a number of bars mounted on their upright supports showing a plurality of clamping devices in place on one of the bars and a number of pieces of apparatus clamped in position on the other bar; and

Fig. 3 is a cross-sectional view taken approximately on line 3—3 in Fig. 2.

In the drawing 10 and 11 indicate similarly shaped rail members having their end portions bent substantially at right angles and welded together to form a mounting bar of unit structure. To the ends of the mounting bar thus formed are welded the plates 12 and 13 as shown in Figs. 1 and 2 for reinforcing the bar at these points, these plates also serving for securing the supporting bar on upright supports, such as 14 and 15 shown in Fig. 2.

The rails 10 and 11 are formed with substantially T-shaped ribs 16 and 16' which extend the whole length thereof for mounting a plurality of clamping devices in the form of pairs of similarly shaped plates 17 and 18. These plates are provided with pro-

jections 19 and 20 adapted to fit into the recesses formed by the rib portions 16 and 16' and the rail members 10 and 11 as shown in Figs. 2 and 3. A number of screws such as 21 protrude through insulating washers 31, through relatively large clearance holes 32 in the clamping plates 17 and 18, through close fitting clearance holes 26 and 27 in an insulating spacer member 22, through the holes 33 and 34 of another insulating plate 35, for threadedly engaging with prongs 23 forming the base of a relay R partially shown in Figs. 1 and 3, the clamping plates 17 and 18 having similar locating pins 24 and 25 disposed in registry with holes 46 and 47 in the insulating plates 22 for maintaining this relay and the plates 17 and 18 in adjusted position relative to each other and thereby preventing the accidental contact of the screws 21 with clamping plates 17 and 18.

As above specified each electrical apparatus to be mounted on the bar is provided with a pair of clamping plates, such as 17 and 18 of the required width to form a base for the apparatus and these plates are properly apertured to receive their fastening screws 21 and the combination of wire terminals individual to that apparatus which may take the shapes indicated by the clamping plates shown in Fig. 2 which are perforated to receive the combination of terminals in their respective pieces of apparatus which may be a relay, a resistance or a condenser of a particular type and size, this arrangement permitting the transposition of these pieces of apparatus any place along the bar according to any predetermined requirement without replacing the affected bar by another bar and without removing the bar thus affected from the framework.

What is claimed is:

1. A pair of spaced parallelly disposed bars, apparatus to be mounted thereon, a pair of plates for each piece of apparatus, and a common securing device for clamping the bars between each pair of plates and the piece of apparatus to the plates.
2. A mounting bar for electrical apparatus comprising a pair of rail members, a pair of clamping plates for each piece of apparatus engaging said members, one of said plates forming a mounting base therefor, and means for securing said plates to said members and said piece of apparatus to said plates.
3. A mounting bar for electrical apparatus comprising a pair of rail members each having a T-shaped rib formed therewith, a pair of clamping plates individual to each piece of apparatus, said plates having portions arranged for engagement with the rib of each of said members, and means for securing said plates on said members and said piece of apparatus to said plates.
4. A mounting bar for electrical apparatus

comprising a pair of parallelly disposed rail members, each of said members having a T-shaped rib formed therewith, clamping plates having portions engaging said rib, one of said plates forming a mounting base for the apparatus, and means for securing said plates and the apparatus on said members collectively.

5. A mounting bar for electrical apparatus comprising a pair of parallelly disposed rail members welded together at their ends, rib portions formed with said members and extending substantially the whole length thereof, a pair of clamping plates mounted on said members, one of said plates serving as a mounting base for the apparatus, and means for securing said plates and the apparatus on said members collectively.

In witness whereof, I hereunto subscribe my name this 8th day of December, 1931.

EDWARD D. MEAD.