June 15, 1943. E. N. LIGHTFOOT ET AL 2,321,689

MOUNTING FOR ELECTRICAL AND OTHER DEVICES

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Fig. 1

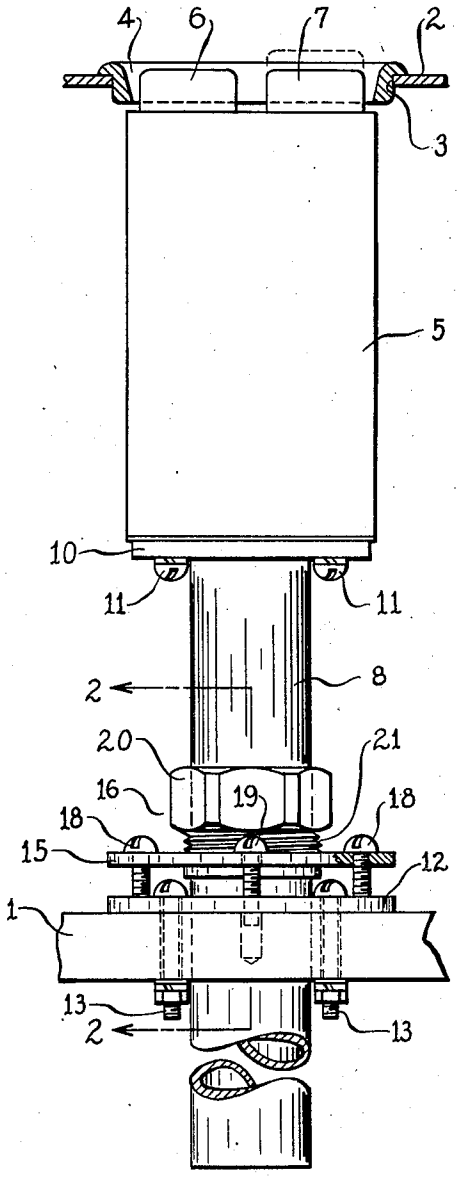
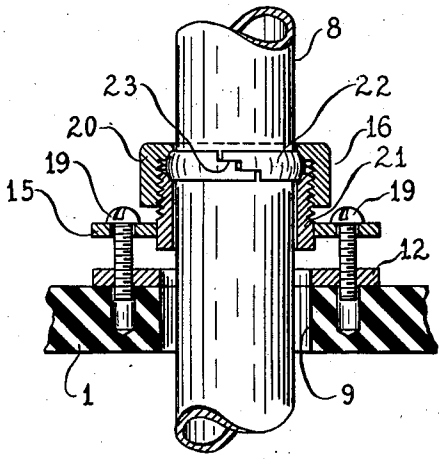


Fig. 2



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MOUNTING FOR ELECTRICAL AND OTHER DEVICES

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5 Claims. (Cl. 248—27)

This invention relates to mountings for electrical and other devices.

It is common practice to house electrical apparatus in cabinets, the electrical instrumentalities employed being usually mounted on a panel fixed to a wall of its cabinet, and frequently it is desired to have the operating element or elements of some such panel supported device accessible through a preformed opening in a wall of the cabinet, which wall may be fixed or may comprise a door. As an example, it frequently is desired to employ in conjunction with electrical apparatus so enclosed an overload protective device equipped with one or more push buttons affording manual control thereof and to have the push button or buttons register with an opening in a wall of the cabinet. However, considerable difficulty has been experienced in obtaining proper alignment of the push button or buttons of the overload device with the preformed opening in the cabinet wall and in obtaining just the right degree of projection of the push button or push buttons, especially where a push button is to be employed to indicate by the position of its exposed part the condition of the overload device.

This invention has among its objects to provide for overload devices and other devices simple and rugged mounting means overcoming the difficulties which proper mounting has presented in installations of the character aforementioned and other installations.

A further object is to provide such mounting means for an overload or other device affording adjustment of the device in various directions and enabling the desired adjustments to be made easily and quickly.

Various other objects and advantages of the invention will hereinafter appear.

The accompanying drawing illustrates one embodiment of the invention which will now be described, it being understood that the invention is susceptible of various modifications without departing from the scope of the appended claims.

In the drawing,

Figure 1 is an elevational view partly in section, and

Fig. 2 is a sectional detail view of a part shown in Fig. 1.

Referring to Fig. 1 of the drawing, there is shown a portion 1 of a panel which it may be assumed is fixedly mounted in a cabinet of suitable form and material of which the part 2 shown in section is a wall portion disposed parallel to the panel. The wall portion 2 has preformed therein an opening 3 provided with a bezel 4, also shown in section, which is formed to receive a pair of push buttons of a device 5.

The device 5 which it may be assumed is an overload protective device, has push buttons 6 and 7 and it may be assumed that button 6 is provided for manual trip of the overload device and that button 7 is provided for resetting said device. Also it may be assumed that button 7 in accordance with well known practice is to occupy the position shown in full lines when the overload device is set and the position shown in dotted lines when the overload device is tripped, whereby according to its position it indicates the condition of the overload device. It is to be noted that in its full line position the end of the button 7 is on one side of the outer plane of the bezel 4 while in its dotted line position it is on the other side of said plane, and that consequently a nice adjustment of the overload device relative to the bezel is required to establish this relationship of parts. Also it will be apparent that for neatness of appearance, etc. it is desirable to have the push buttons properly positioned within the bezel, this requiring precise mounting of the overload device which it is desired to support on the panel.

The mounting for the overload device is illustrated as comprising a post 8 which may be hollow and which preferably projects through an opening 9 in the panel 1, said post having suitably fixed thereto at its upper end a plate 10 on which the overload device rests and to which it is rigidly secured as by screws 11. A plate 12 drilled to receive the post 8 is fixed to panel 1 by bolts 13, and a second plate 15 drilled to receive the post is secured to the post through a coupling 16 of any preferred type to permit of adjustment of the post axially within the plate, and subsequent securement against relative movement. The coupling is in turn connected through the medium of plate 15 to the plate 12 secured to the panel, the two plates having an adjustable connection therebetween.

The adjustable connection between the plates 15 and 12 comprises a pair of screws 18 threading into and through the plate 15 on opposite sides of the post and bearing on plate 12. Also the adjustable connection comprises a pair of screws 19 (Fig. 2), passing loosely through the plate 15 at points on opposite sides of the post and on a line at right angles to the line passing through the screws 18 wherefore only one of the same appears in Fig. 1. These screws 19 thread into and through the plate 12, projecting into recesses in panel 1. Obviously therefore through

adjustment of the screws 18 and 19 the post may be tilted with respect to the base in any of a number of directions and through such tilting may be made to shift the push button end of the overload device laterally of the opening in the wall 2. Moreover these screws enable such adjustment to be made with great nicety whereas nice adjustment of the overload device for proper projection of its push button into the bezel 4 is afforded by the coupling 16 and to some degree also by the screws 18 and 19 if it be desired to use said screws for this further purpose.

The coupling as shown in Fig. 2 may comprise two interfitting annular members 20 and 21 having coacting screw threads for tightening the same on an interposed split ring 22 surrounding post 8. The ring 22 is shown as split on a stepped line 23 and as being formed of a strip transversely curved to present to the interfitting members 20 and 21 a wedging surface whereby the ring is contracted to grip tightly post 8 when members 20 and 21 are screwed together. Thus with member 21 suitably fixed to plate 15, as for example by welding, the post may be tightly clamped in a given relation to said plate subject to adjustment relative thereto at will upon turning member 20 relative to member 21 to relieve the pressure on the ring 22, said ring preferably having resiliency to cause it to spread when thus relieved of pressure.

What we claim as new and desire to secure by Letters Patent is:

1. In combination, a supporting panel, a device to be supported thereby, a housing for said panel and said device, said housing having an opening to receive and render accessible a part of said device, a supporting post for said device having said device fixed to one end thereof and disposed substantially perpendicularly to said panel, and means to secure said post to said panel comprising means to tilt said post in different directions and to secure it at a given angle, said means also providing for adjustment of said post axially and for securement thereof against axial movement after adjustment.

2. In combination, a supporting panel, a device to be supported thereon, a housing for said panel and said device, said housing having an opening to receive and render accessible a part of said device, a supporting post for said device extending through an opening in said panel, and means for attaching said post to said panel, said means affording adjustment of said post axially and enabling said post to be tilted in different directions, said means also affording rigid securement of said post in its different positions of adjustment.

3. In combination, a device to be supported on one of two opposed and spaced walls and to have a part thereof projected into an opening provided in the other wall, a post to one end of which said device is attached, and means to attach said post to said supporting wall, said means providing for tilting of said post in different directions, for adjustment of said post axially and for rigid securement of said post in its adjusted positions, all after attachment of said means to said supporting wall.

4. In combination, a device to be supported on one of two opposed and spaced walls and to have a part thereof projected into an opening provided in the other wall, a post to one end of which said device is attached, and means to attach said post to said supporting wall, said means comprising two plates, one to be fixed to said supporting wall and the other carrying said post, and means securing said plates in spaced relation, the last mentioned means affording relative adjustment of said plates for tilting of said post in different directions and for rigid securement of said post in the desired position.

5. In combination, a device to be supported on one of two opposed and spaced walls and to have a part thereof projected into an opening provided in the other wall, a post to one end of which said device is attached, and means to attach said post to said supporting wall, said means comprising two plates, one to be fixed to said supporting wall and the other carrying said post, the former plate having threaded into the same a pair of screws passing loosely through the latter plate at points between which and in line with which the axis of said post lies and the latter plate having threaded engagement with a pair of screws bearing on said former plate at points between which the axis of said post lies and approximately midway between the first mentioned screws, said two pairs of screws affording tilting of said post in different directions and fixing of the angular position thereof.

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