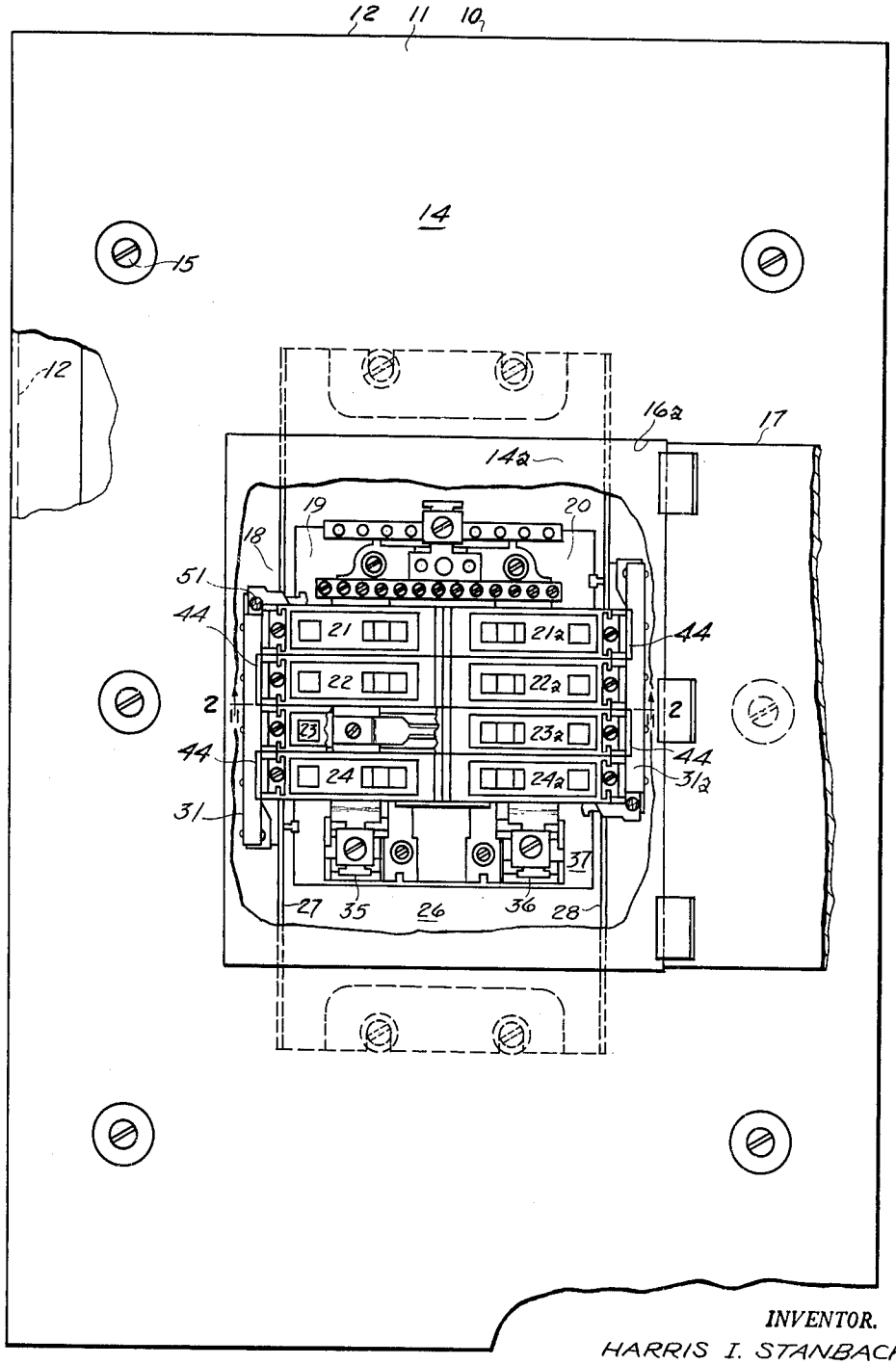
Aug. 24, 1965 H. I. STANBACK 3,202,880

CIRCUIT BREAKER PANELBOARD

Filed July 27, 1960 3 Sheets-Sheet 1



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FIG. 1

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CIRCUIT BREAKER PANELBOARD

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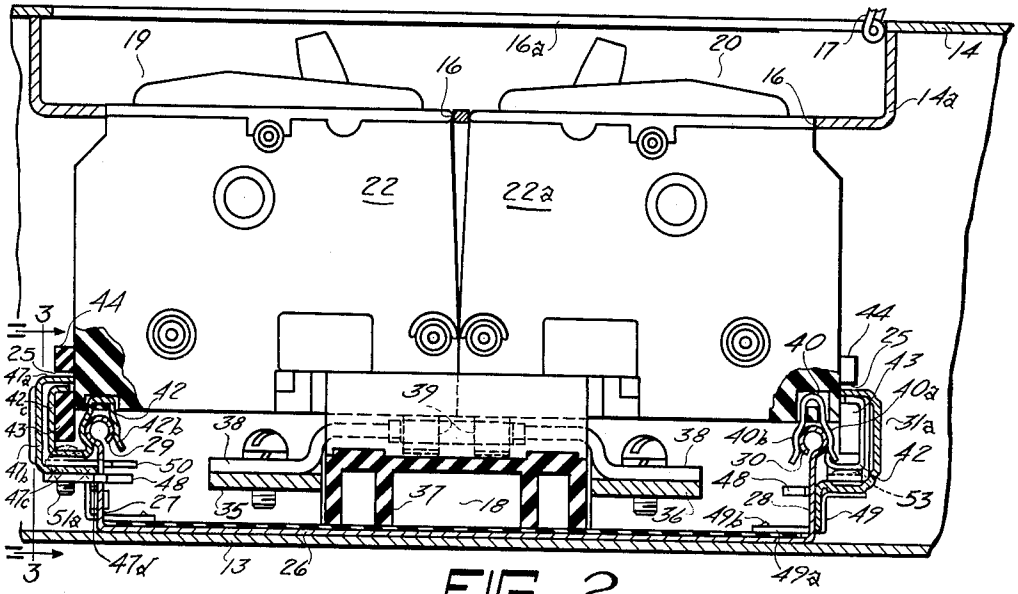


FIG. 2

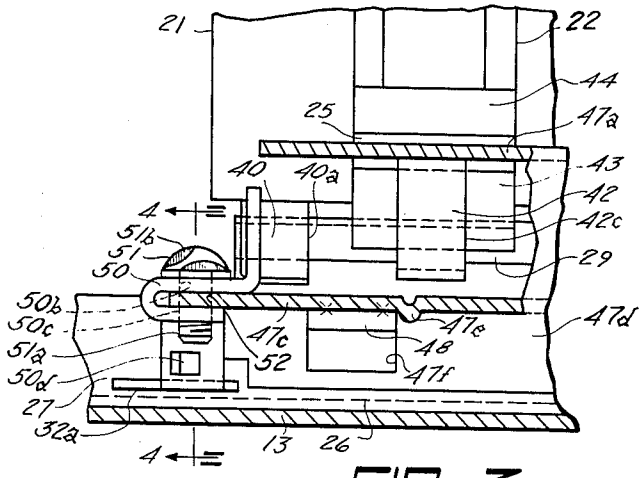


FIG. 3

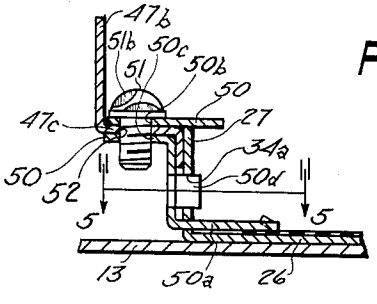


FIG. 4

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CIRCUIT BREAKER PANELBOARD

Filed July 27, 1960 3 Sheets-Sheet 3

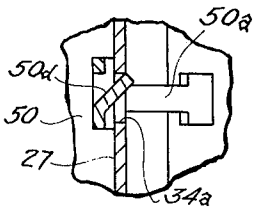


FIG. 5

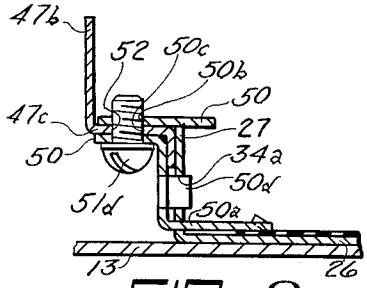
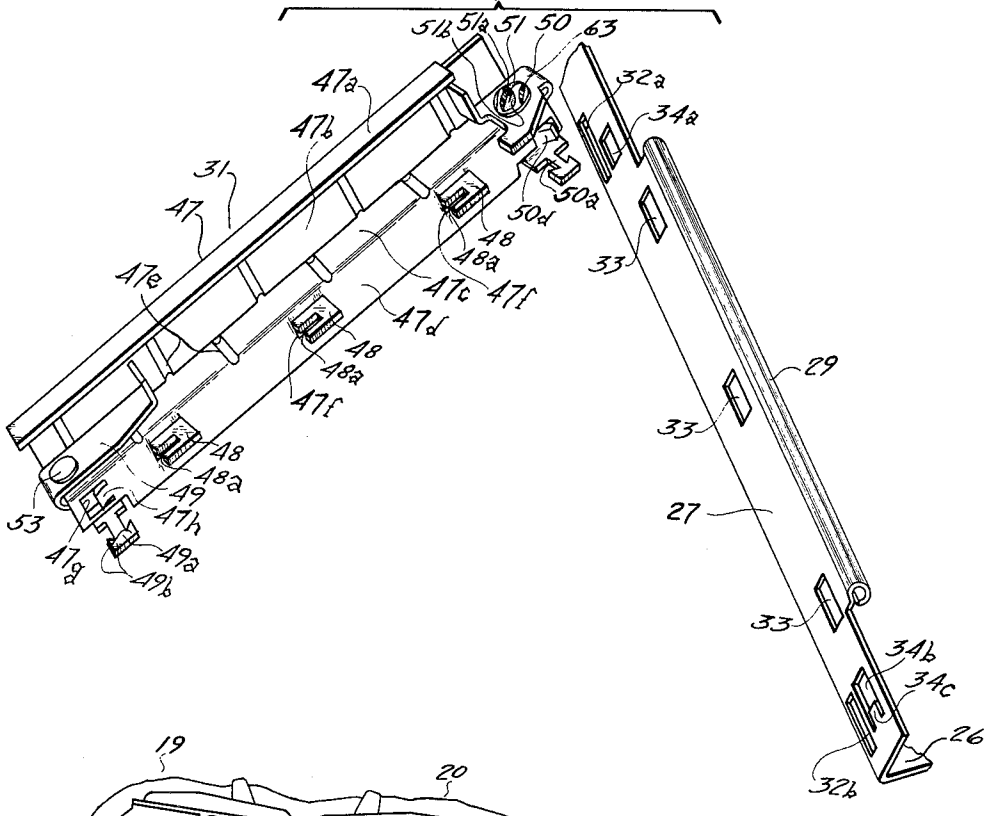


FIG. 8

FIG. 6



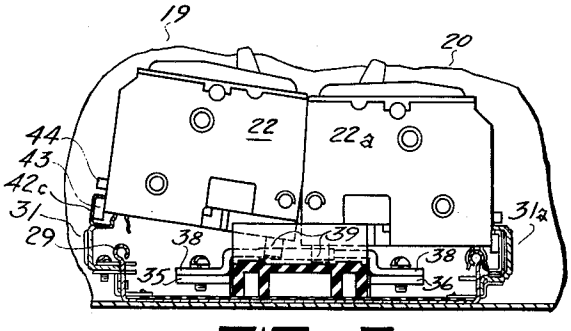


FIG. 7

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United States Patent Office 3,202,880 Patented Aug. 24, 1965

3,202,880

CIRCUIT BREAKER PANELBOARD

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Filed July 27, 1960, Ser. No. 45,568
7 Claims. (Cl. 317—119)

This invention relates generally to circuit breaker panelboards. More particularly, it relates to means for preventing attachment or detachment of circuit breakers to or from the mounting panel assembly incorporated in such panelboards. To facilitate economic mass production and distribution of molded case type circuit breakers, such circuit breakers and the panelboards therefor are presently constructed so that circuit breakers of different electrical ratings have the same physical configuration and are normally interchangeable on the panelboard. Unfortunately, in residential and commercial establishments unauthorized or inexperienced persons sometimes intentionally or inadvertently replace relatively low rated circuit breakers wtih those of higher rating. To combat this hazard, various regulatory bodies have enacted, or contemplate enacting, regulations which require, in effect, that panelboards and circuit breakers for use therein be constructed so that such substitution is difficult for unauthorized or inexperienced persons to carry out. These regulations contemplate that necessary replacements of low rated circuit breakers (i.e., on the order of 15 or 20 amperes) can be readily accomplished but that necessary replacement of circuit breakers above these ampere ratings (i.e., on up to 100 amperes) cannot be accomplished unless special tools are employed or unless the mounting panel assembly is substantially removed from its enclosure box.

Accordingly, it is an object of this invention to provide improved panelboards and circuit breakers for use therein which comply with the aforesaid regulations and which, at the same time, retain the many advantages afforded by presently existing types of such apparatus.

Another object is to provide improved mounting panel assemblies for use in panelboards which are adapted to prevent detachment or attachment of circuit breakers of predetermined current rating but which permit detachment or attachment of circuit breakers rated below said predetermined rating.

Still another object is to provide improved mounting panel assemblies which are adapted to accommodate improved locking means to carry out the aforesaid objects, said locking means being readily associated with said mounting panel assemblies but not able to be easily disassociated therefrom by unauthorized or inexperienced personnel.

A further object of the invention is to provide improved circuit breaker devices which are especially modified for use with mounting panel assemblies and locking means of the aforesaid character.

A specific object of the invention is to provide an improved mounting panel assembly which is adapted to accommodate a locking bar assembly which is attachable thereto without any tools but requires either a special tool or substantial displacement of the mounting panel assembly from its enclosure box to effect removal of the bar therefrom, said locking bar assembly when in place on the mounting panel assembly preventing attachment or detachment of circuit breakers of predetermined rating or higher which have been modified in accordance with the invention.

A still further object of the invention is to provide a locking bar assembly of the aforesaid character which can be employed with a mounting panel assembly and circuit breakers of existing design after relatively minor changes are made in such apparatus, such changes not

substantially altering the basic design of such apparatus.

An even further object is to provide apparatus made in accordance with the invention which is reliable in use, tamper-proof, relatively economical to manufacture, and well adapted to mass production techniques.

Other objects and advantages of the invention will hereinafter appear.

Generally speaking, the present invention contemplates an enclosure box, a mounting panel assembly removably mounted therewithin, circuit breakers for attachment to the mounting panel assembly, and one or more locking bar assemblies. When circuit breakers are associated with the mounting panel assembly and the locking bar assemblies are lockingly attached to the mounting panel assembly, a portion of a locking bar assembly engages a projection formed on each circuit breaker in accordance with the invention to prevent detachment of the circuit breaker from the panel assembly. Each locking bar assembly is positioned on the mounting panel assembly so that it interferes with attachment of circuit breakers modified in accordance with the invention to the mounting panel assembly at any vacant position thereon. The locking bar assembly is constructed so that no tools are needed to attach it to the mounting panel assembly but in one embodiment a special tool is required to effect its detachment from the panel assembly, it being contemplated that such tools are not readily available to unauthorized or unskilled personnel. In other embodiments the locking bar is detachable from the mounting panel assembly only if the mounting panel assembly is first removed or substantially displaced from the enclosure box.

The drawings illustrate preferred embodiments of the invention which will hereinafter be described in detail, it being understood that the embodiments illustrated are susceptible to modification with respect to certain details thereof without departing from the scope of the appended claims.

In the drawings:

FIG. 1 is a front elevational view of an electrical panelboard constructed in accordance with the invention and having mounted thereon a plurality of circuit breakers and locking bar assemblies constructed in accordance with the invention.

FIG. 2 is a view, partly in section, of the panelboard taken along the line 2—2 of FIG. 1.

FIG. 3 is an enlarged view, partly in section, taken along the line 3—3 of FIG. 2 which shows details of one end of a locking bar assembly.

FIG. 4 is a cross-sectional view taken along the line 4—4 of FIG. 3 showing further details of the said one end of the locking bar assembly.

FIG. 5 is a cross-sectional view taken along the line 5—5 of FIG. 4 showing details of a latching member of the locking bar assembly.

FIG. 6 is a perspective view of a portion of the pan of the mounting panel assembly and the locking bar assembly prior to their association.

FIG. 7 is a view similar to that of FIG. 2 but showing how proper attachment of a circuit breaker to the mounting panel assembly is prevented when the locking bar assembly is associated with the mounting panel assembly.

FIG. 8 is a view similar to FIG. 4 but showing the screw inserted from the bottom instead of the top.

In FIGS. 1 and 2 there is shown an electrical panelboard **10**. Panelboard **10** comprises a metal enclosure box **11** which has side walls **12** and a back wall **13** (see FIG. 2). A trim member or cover **14** is secured to the enclosure box **11** by the screws **15** which are screwed into threaded clamps (not shown) within the enclosure box. The trim member **14** overlies a hopper member **14a** which, as FIG. 2 shows, is associated with the tops of the circuit breakers and is provided with openings such as

16 through which the circuit breakers project. The trim member 14 is provided with a frontal opening 16*a* which is closable by a hinged door 17 which is supported by the trim member. In FIG. 1 portions of the hopper member 14*a* have been shown as cutaway for purposes of illustration.

A mounting panel assembly 18 is secured, by any suitable means, to the back wall 13 of the enclosure box 11 and is adapted to be removable therefrom. The mounting panel assembly 18 mechanically supports the two parallel rows 19 and 20 of circuit breakers of the molded case type, which are more particularly described hereinafter. The row 19 comprises the circuit breakers 21, 22, 23 and 24 which are substantially identical to each other in general overall configuration but which differ in that in accordance with the invention the circuit breakers 22 and 24 are each provided with projections which define a slot 25 at the rear thereof and may be assumed to be rated to trip at higher current values than the circuit breakers 21 and 23 which are not provided with slotted projections. The circuit breakers 21*a*, 22*a*, 23*a* and 24*a* in row 20 are identical to the circuit breakers 22, 21, 24 and 23, respectively.

The mounting panel assembly 18 comprises a pan 26, preferably fabricated of sheet metal, the side edges of which are folded upwardly to form a pair of spaced-apart parallel upstanding flanges 27 and 28. The flanges 27 and 28 are provided with rolled-over bead portions 29 and 30, respectively, that function as elements of a mounting system for the circuit breakers in the rows 19 and 20, respectively, as will hereinafter be described.

As FIG. 6 best shows, the flange 27 is modified in accordance with the invention by the provision of certain apertures therein which cooperate with various elements of a locking bar assembly 31 to secure the latter to the pan 26 in such a position that the circuit breakers 22 or 24, or those similarly modified, cannot be detached from the mounting panel assembly 18 or cannot be attached thereto at any vacant position thereon in row 19. The two slots 32*a* and 32*b* in flange 27 serve to position the locking bar assembly 31 for attachment to the pan 26. The three slots 33 afford a means of mechanical support for the locking bar assembly 31 when the latter is in place on the pan 26. Of course, if preferred, a greater or lesser number of slots such as 33 could be employed. The slots 34*a* and 34*b*, the latter of which has the tab 34*c* extending from a side wall thereof, serve to lock the locking bar assembly 31 to the pan 26, as will hereinafter appear.

It is to be understood that the flange 28 of the pan 26 is provided with slots similar to the slots 32*a*, 32*b*, 33, 34*a* and 34*b* but that the slots are disposed in reverse order with respect to the flange 27. Thus, the flange 28 is adapted to accommodate a locking bar assembly 31*a*, shown in FIGS. 1, 2 and 7, which is identical in all respects to the locking bar assembly 31.

The mounting panel assembly 18 further comprises a pair of longitudinally extending bus bars 35 and 36 which are mounted in spaced parallel relationship with respect to each other upon an insulating support 37 which is suitably secured to the pan 26. A plurality of terminal connectors 38, each electrically and mechanically connected to one of the bus bars 35 and 36 in alternate arrangement lengthwise of the panel assembly 18, extend transversely from their associated bus bar toward the other to define longitudinally spaced mounting areas for the circuit breakers in the rows 19 and 20 and to provide for electrical connection of each of the circuit breakers to one of the bus bars 35 or 36.

Each circuit breaker is provided with an electrically conductive spring jaw clip 39, best seen in FIGS. 2 and 7, which extends downwardly from the base thereof for making electrical connection to the terminal connector which is associated with that respective circuit breaker. Each pair of transversely aligned circuit breakers in the rows 19 and 20 is thus connected to one of the connectors 38 and thus to one of the bus bars 35 or 36. The structural details of the interior mechanism of the circuit breakers are more fully disclosed, for example, in Patent No. 2,902,560, filed May 18, 1955 by H. I. Stanback et al. and assigned to the assignee of the present invention.

As FIGS. 2, 3 and 7 make clear, each circuit breaker 21, 23, 22*a* and 24*a* is provided near its outer and lower end with a spring mounting clip 40 having spaced-apart spring jaws 40*a* and 40*b* which accept the rolled-over bead portions 29 and 30, as the case may be, of the flanges 27 and 28, respectively, of the pan 26 therebetween in clamping engagement. The clips 40 are not adapted to be electrically energized and are preferably made from high strength spring steel. The circuit breakers are mechanically supported on the mounting panel assembly 18 by engagement of the spring mounting clips 40 with the beads on the flanges and by engagement of the electrically conductive clips 39 with the terminal connectors 38. The clip 40 is retained in a suitable recess in the circuit breaker casing.

In accordance with the invention, the circuit breakers 22, 24, 21*a* and 23*a*, which have a higher electrical rating than the circuit breakers 21, 23, 22*a* and 24*a*, are provided with a form of spring mounting clip 42 which differs from the spring mounting clip 40, hereinbefore described, in that the outermost jaw 42*a* of the spring mounting clip 42 is provided with an integrally formed extension 42*c* which extends outwardly from the jaw 42*a*, is bent back along the jaw and then inwardly toward the circuit breaker casing. Extension 42*c* of the clip 42 is intended to surround and afford mechanical protection for a projection 43 of rectangular cross-section, formed in accordance with the invention, which may be rigidly attached to, or integrally formed with, the housing of the circuit breakers. Another projection 44, similarly associated with the circuit breaker housing, is located above the projection 43 to define the slot 25 which accommodates a portion of the locking bar assembly 31.

Normally, all of the circuit breakers in the rows 19 and 20 are attachable to or detachable from the mounting panel assembly 18 without difficulty. However, as FIGS. 1, 2, 3 and 6 make clear, when the locking bar assemblies 31 and 31*a* are attached to the mounting panel assembly 18, the higher rated circuit breakers 22, 24, 21*a* and 23*a* and those similarly modified in accordance with the invention, cannot be detached from the mounting panel assembly 18, whereas the lower rated circuit breakers 21, 23, 22*a* and 24*a* can still be attached to or detached from the mounting panel assembly.

Since, as stated hereinbefore, the locking bar assembly 31*a* is identical and interchangeable with the locking bar assembly 31, only the latter will be described in detail.

Locking bar assembly 31, best seen in FIG. 6, comprises an elongated rigid sheet metal member or bar 47 to which a plurality of lugs 48 are rigidly affixed, a hooking member 49 and a latching member 50. Bar 47 comprises a top wall 47*a*, a side wall 47*b*, a bottom wall 47*c* and a depending flange 47*d* and is corrugated as at 47*e* to strengthen it. As will be understood, the terms "top" and "bottom" employed in connection with the locking bar assembly 31 are merely to aid in understanding the drawings and in no way limit the attitudes in which the circuit breakers and panelboard may be disposed in practice. Depending flange 47*d* is provided with the slots 47*f* through which the lugs 48 extend, the latter being welded or otherwise rigidly secured to the undersurface of bottom wall 47*c*. Depending flange 47*d* is also provided with an aperture 47*g* which has an offset tongue 47*h* extending thereinto which is adapted to engage with the offset tongue 34*c* in the slot 34*b* in the flange 27 of the pan 26. The lugs 48, which are notched as at 48*a*, correspond in number and location to the supporting slots 33 in the flange 27 of the pan 26 and are adapted to fit therethrough and the notches 48*a* grip the flange 27 when the bar is longitudinally shifted with respect to

the pan to support the locking bar assembly 31 on the pan 26. If preferred, the lugs 48 could be integral, struckout portions of the depending flange 47*d*.

The hooking member 49, which is best seen in FIGS. 2 and 6 is preferably fabricated of spring steel and is rigidly and permanently attached to bar 47 by a rivet 53. Hooking member 49 comprises a T-shaped portion 49*a* which lies in a plane which is normal to the plane in which depending flange 47*d* of bar 47 lies and parallel to the plane in which bottom wall 47*c* lies. The T-shaped portion 49*a* is adapted to be inserted in positioning slot 32*b* in the flange 27 of pan 26 to align the locking bar assembly 31 with the pan 26 for attachment thereto. The cross-arm of the T-shaped portion 49*a* of hooking member 49 is provided with struck-up nibs 49*b* at each end thereof, as FIG. 2 shows, which are adapted to engage the area of flange 27 of pan 26 above and adjacent to the slot 32*b* therein to prevent unintentional disengagement of the locking bar assembly 31 and pan 26 when the former is initially being associated with the latter.

The latching member 50 of the locking bar assembly 31, shown in FIGS. 1, 2, 3, 4, 5, and 6, is adapted by the untapped holes 50*b* and 50*c* to be rigidly secured to the bar 47 by a "one-way" screw 51, hereinafter described, but is adapted to be movable with respect to the bar when the screw is loosened, as will hereinafter appear, so that the bar can be unlocked from the pan. The latching member 50 is provided with a T-shaped portion 50*a* of the same configuration and for the same purpose as the T-shaped portion 49*a* of hooking member 49 hereinbefore described, which engages the slot 32*a* in flange 27 of pan 26. The latching member 50 is further provided with a struck-out, resilient tongue 50*d* which is adapted to interlock with the edge of the slot 34*a* in flange 27 of pan 26 to lock the locking bar assembly 31 to the pan 26, as will appear. In accordance with the invention, the latching member 50 preferably is rigidly secured to the bar 47 by the "one-way" screw 51 during manufacture and the latching member is thus disposed in proper position with respect to the bar. The particular form of "one-way" screw 51 herein disclosed is a well-known type and comprises a threaded shank 51*a* which takes into a tapped hole 52 provided in the bottom wall 47*c* of bar 47. The head of the screw 51 is provided with a slot 51*b* which permits rotation of the screw in the clockwise direction (see FIG. 1) with an ordinary blade-type screw driver (not shown) but the head of the screw is provided with sloped surfaces 51*b* which effectively prevent rotation of the screw in the counterclockwise direction for removal by such a screw-driver. The head of the screw 51 is further provided with "flats" such as 63 which adapt the head of the screw for engagement by a special socket-type wrench to effect removal thereof. If preferred, other types of "one-way" screws may be employed, provided that their removal is not readily accomplished through the use of tools which are ordinarily available to unskilled persons. If preferred, and in order to further discourage loosening or removal of screw 51 to effect displacement of the latching member 50 with respect to bar 47 when the locking bar assembly 31 is attached to the pan 26, the screw 51 or even an ordinary type of screw such as 51*d* shown in FIG. 8 can be inserted from the underside of the locking bar assembly so that the screw would be inaccessible for removal unless the entire mounting panel assembly 18 with circuit breakers and locking bar assemblies attached were first removed from the enclosure box 11. Upon removal, the screw 51*d* would be accessible and readily loosened. Such a task is not likely to be undertaken by unskilled or unauthorized personnel.

The invention is employed as follows:

Assume that the mounting panel assembly 18 is secured within the enclosure box 11. Further assume that circuit breakers of the types described are attached to the

mounting panel assembly 18 in desired locations as hereinbefore described. The circuit breakers 22 and 24 in row 19 are then locked to the mounting panel assembly by attachment of the locking bar assembly 31 to the mounting panel assembly as follows. It is to be understood that the circuit breakers 22*a* and 24*a* are locked to the panel assembly in a similar manner by the locking bar assembly 31*a*.

The locking bar assembly 31 is held adjacent the left side of pan 26 so that the T-shaped portions 49*a* and 50*a* of the hooking member 49 and the latching member 50, respectively, register with the positioning slots 32*b* and 32*a*, respectively. The locking bar assembly is then moved toward the mounting panel assembly so that the T-shaped portions 49*a* and 50*a* enter the positioning slots 32*b* and 32*a*, respectively. At this stage the locking bar assembly could conveniently be released to free the hands of the operator and it would hang on the pan 26 since the upstruck nibs on the cross-arms of the T-shaped portions of the hooking member 49 and the locking member 50 would prevent the T-shaped portions from slipping out of the slots. Assuming, however, that the locking bar assembly 31 is not released, the locking bar assembly is then positioned so that the lugs 48 register with and enter the supporting slots 33 in the flange 27 of the pan 26. It will be seen that at this stage, the top wall 47*a* of the bar 47 of the locking bar assembly 31 has entered the slots 25 provided in the rear of the circuit breakers 22 and 24. The locking bar assembly 31 is now in position to be locked to the mounting panel assembly 18. This is accomplished by first pressing the locking bar assembly 31 firmly against the mounting panel assembly 18 so as to cause the resilient tongue 50*d* of the locking member 50 to flex toward the plane of the depending flange 47*d* and then by shifting the bar assembly lengthwise so that the notches 48*a* in the lugs 48 engage the sides of the supporting slots 33 in the flange 27. As the shift takes place, the tongue 50*d* of the latching member 50 springs into slot 34*a* in flange 27. Furthermore, the offset tongue 47*h* in the aperture 47*g* in flange 47*d* of the locking bar assembly 31 engages with the offset tongue 34*c* in the slot 34*b* in the flange 27 of the pan 26. The locking bar assembly 31 cannot now be shifted in the opposite direction because of the interference of the tongue 50*d* with the edge of the slot 34*a*, as FIG. 5 best shows.

At this stage, the locking bar assembly 31 is locked to the mounting panel assembly 18 and the circuit breakers 22 and 24 on the mounting panel assembly cannot be removed therefrom. It is also apparent, as FIG. 7 shows, that circuit breakers modified in accordance with the invention such as 22 and 24 cannot be attached to the mounting panel assembly because the locking bar interferes with the type of clip employed thereon. It will be understood that the low rated circuit breakers, such as 21 and 23, could be readily attached to the mounting panel assembly 18 even though the locking bar assembly 31 is in place.

In order to disengage the locking bar assembly 31 from the panel assembly 18, the screw 51 must be loosened or removed so that latching member 50 can be moved to free tongue 50*d* thereof from engagement with the side edge of slot 34*a* in flange 27. When the screw 51 is loosened with a special wrench, the locking bar assembly 31 is then able to be shifted to effect disengagement of the lugs 48 from the sides of the supporting slots 33 in the flange 27 of pan 26, and disengagement of the tongues 47*h* and 34*c*.

What is claimed is:

1. An electrical panelboard for circuit breakers comprising an open-front box including a back wall, a mounting panel assembly removably secured to said back wall within said box and having a plurality of mounting spaces for circuit breakers, a circuit breaker of a first casing configuration mounted on said mounting panel assembly in one of said mounting spaces, a circuit breaker of a second casing configuration mounted on said mounting

panel assembly in another of said mounting spaces, and a bar member secured to said mounting panel assembly, said circuit breaker of said first casing configuration having a portion disposed between said bar member and said back wall of said box in overlapping relationship with said bar member to effect an interfering relationship with said bar member, all portions of said circuit breaker of said second casing configuration between said bar member and said back wall of said box being disposed laterally of said bar member, and said bar member interfering with removal of said circuit breaker of said first casing configuration from said mounting panel assembly and interfering with the mounting of another circuit breaker of said first casing configuration on said mounting panel assembly in a third of said mounting spaces and accommodating removal of said circuit breaker of said second casing configuration from said mounting panel assembly without interference and accommodating the mounting of another circuit breaker of said second casing configuration on said mounting panel assembly in said third mounting space without intereference.

2. An electrical panelboard as claimed in claim 1, wherein said bar member is secured to said mounting panel assembly by means including a resilient latch member pivotally mounted on said bar member but held against rotation relatively thereto by a one-way screw.

3. An electrical panelboard as claimed in claim 1, wherein said bar member is secured to said mounting panel assembly by means including a resilient latch member pivotally mounted on said bar member but held against rotation relatively thereto by a screw accessible only after said mounting panel assembly is first removed from said back wall of said box.

4. An electrical panelboard for circuit breakers comprising an open-front box including a back wall, a mounting panel assembly removably secured to said back wall within said box and having a plurality of mounting spaces for circuit breakers, a first molded-case circuit breaker of a first predetermined electrical rating mounted on said mounting panel assembly in one of said mounting spaces and having a projection on one end of the case thereof, a second molded-case circuit breaker of a second predetermined electrical rating mounted on said mounting panel assembly in another of said mounting spaces, the case of said second circuit breaker being flush at one end, and a bar member secured to said mounting panel assembly, said bar member cooperating with said projection on the case of said first circuit breaker to interfere with the removal thereof from said mounting panel assembly and also being cooperable with a projection on the case of another circuit breaker of said first predetermined electrical rating to interfere with the mounting thereof on said mounting panel assembly in a third of said mounting spaces, said bar member operatively cooperating with said flush end of said case of said second circuit breaker to accommodate the removal thereof from said mounting panel assembly without interference and also being operatively cooperable with a flush end of the case of another circuit breaker of said second predetermined electrical rating to accommodate the mounting thereof on said mounting panel assembly in said third mounting space without interference.

5. An electrical panelboard as claimed in claim 4, wherein said bar member has a resilient latch member pivotally mounted thereon but held against rotation relatively thereto by a screw rotatable in one direction by a screw driver, said bar member with said latch member secured thereto is securable to said mounting panel assembly without the use of tools, and said screw is rotatable in the other direction only by a socket-wrench-type tool to release said latch member and enable said bar member to be removed from said mounting panel assembly.

6. An electrical panelboard as claimed in claim 4, wherein said bar member has a resilient latch member pivotally mounted thereon but held against rotation relatively thereto by a screw, said bar member with said latch member secured thereto is securable to said mounting panel assembly without the use of tools, and said screw is accessible only after said mounting panel assembly is first removed from said back wall of said box to release said latch member and enable said bar member to be removed from said mounting panel assembly.

7. An electrical panelboard for circuit breakers comprising an open-front box including a back wall, a mounting panel assembly removably secured to said back wall within said box, said mounting panel assembly having a plurality of mounting spaces for circuit breakers and including a mounting pan having a flange, said flange having a plurality of supporting slots and having a locking catch thereon, a first molded-case circuit breaker of a first predetermined electrical rating mounted on said mounting panel assembly in one of said mounting spaces, said first circuit breaker having a supporting clip engaging said flange of said mounting pan and having a projection on an end of the case thereof adjacent said supporting clip, a second molded-case circuit breaker of a second predetermined electrical rating mounted on said mounting panel assembly in another of said mounting spaces, said second circuit breaker having a supporting clip engaging said flange of said mounting pan and the case of said second circuit breaker having a flush end adjacent said supporting clip thereof, and a bar member secured to said mounting panel assembly and having a plurality of hooks thereon in cooperative association with said flange of said mounting pan and respectively extending through said supporting slots therein, said bar member cooperating with said projection on the case of said first circuit breaker to interfere with the removal thereof from said mounting panel assembly and also being cooperable with a projection on the case of another circuit breaker of said first predetermined electrical rating to interfere with the mounting thereof on said mounting panel assembly in a third of said mounting spaces, said bar member operatively cooperating with said flush end of said case of said second circuit breaker to accommodate the removal thereof from said mounting panel assembly without interference and also being operatively cooperable with a flush end of the case of another circuit breaker of said second predetermined electrical rating to accommodate the mounting thereof on said mounting panel assembly in said third mounting space without interference, and means releasably locking said bar member on said flange of said mounting pan, said locking means including a resilient latch engaged with said locking catch on said flange and pivotally mounted on said bar member but held against rotation relatively thereto by a screw.

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