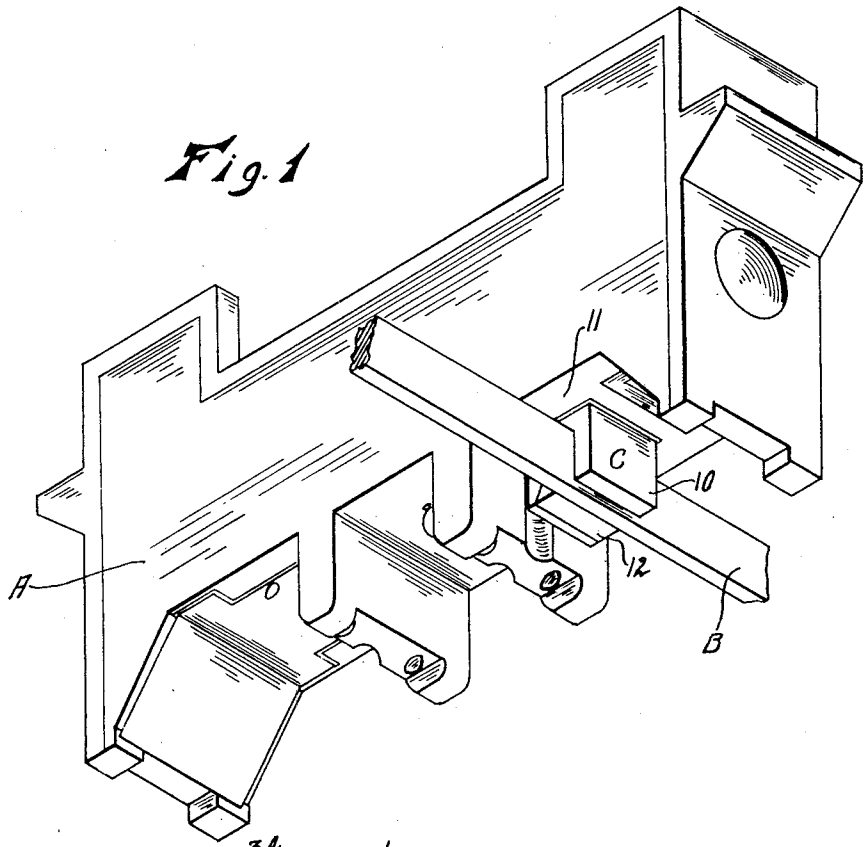
Feb. 23, 1932. W. H. FRANK 1,846,714

SWITCH BLOCK MOUNTING

Filed March 13, 1930 2 Sheets-Sheet 1

Fig. 1



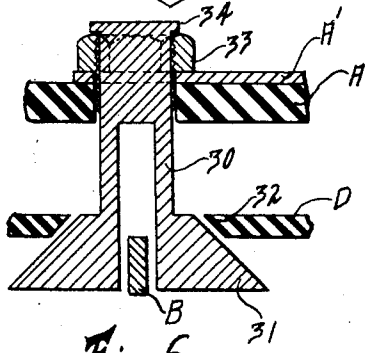


Fig. 6

INVENTOR.

BY William H. Frank

Francis D. Hardesty

ATTORNEY.

Feb. 23, 1932. W. H. FRANK 1,846,714

SWITCH BLOCK MOUNTING

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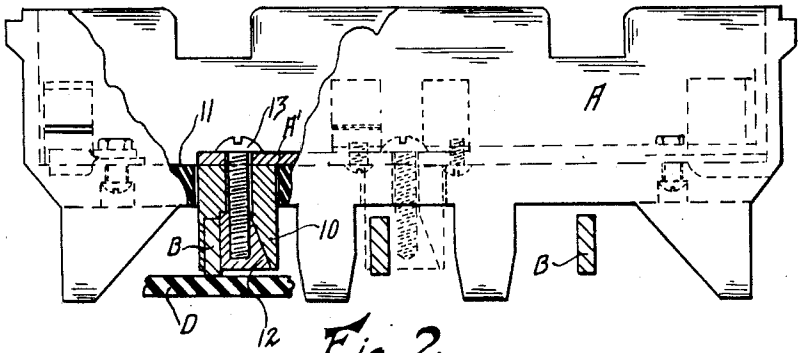


Fig. 2

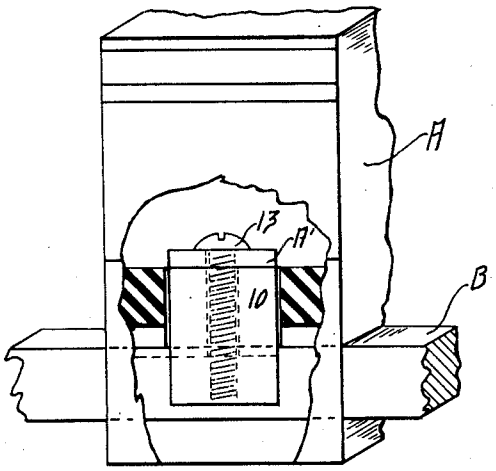


Fig. 3

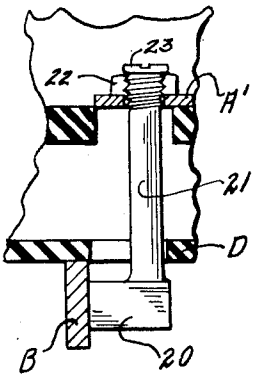


Fig 5

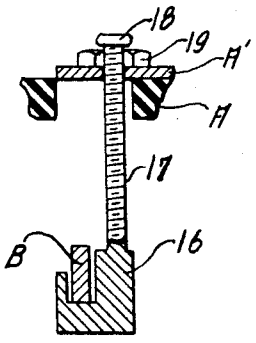


Fig 4

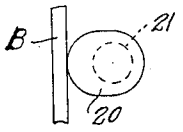


Fig. 7

INVENTOR.

BY William H. Frank

Francis D. Hardesty

ATTORNEY.

Patented Feb. 23, 1932

1,846,714

UNITED STATES PATENT OFFICE

WILLIAM H. FRANK, OF DETROIT, MICHIGAN, ASSIGNOR TO BULL DOG ELECTRIC PRODUCTS COMPANY, OF DETROIT, MICHIGAN, A CORPORATION OF WEST VIRGINIA

SWITCH BLOCK MOUNTING

Application filed March 13, 1930. Serial No. 435,601.

This invention relates to means for mounting electrical parts on panel boards or bus bars and refers more particularly to mountings for switch blocks of the type disclosed in the application of Harrison J. L. Frank, Serial No. 353,343, filed April 8, 1929.

In the application referred to the switch blocks are secured by means of screws to an insulating mounting plate in front of which are disposed bus bars, electric connection to which is made by means of screws threaded into the latter and thru electrically conducting strips disposed within the block. It is necessary in mountings of the character referred to, to provide threaded apertures in the bus bar at intervals so that switch blocks may be secured thereto wherever desired.

It is an object of this invention to provide mounting means similar to those disclosed in said application, but differing therefrom in that no threaded apertures in the bus bars need be provided, the switch block carrying a clamp or wedge which cooperates with a bus bar to form electric contact therewith.

It is also an object of this invention to provide a means which will mechanically and electrically connect parts to a bus bar wherever desired, the bus bar itself having no threaded apertures or the like.

A further object is to provide a mounting means wherein a mounting plate may be dispensed with, the switch block being mounted upon or secured directly to the bus bars.

A still further object is to provide a mounting wherein the bus bars may be disposed upon one side or the other of the mounting plate.

Still other objects will readily occur to those skilled in the art upon reference to the following description and the accompanying drawings in which

Fig. 1 is a view looking upwardly at a switch block secured directly to a bus bar.

Fig. 2 is a plan view, partly in section, of a form of my invention.

Fig. 3 is an end view, partly in section, of the device of Fig. 2.

Figs. 4, 5 and 6 show details of modifications of my mounting means.

Fig. 7 is a bottom plan view of part of Fig. 5.

Referring to the drawings, a switch block A, disposed over a bus bar B, is connected thereto by means of the mounting or clamping means C described hereafter. The bus bar B may be on the front side of the mounting plate D as in Fig. 2, on the rear side thereof as in Figs. 5 and 6, or mounting plate D may be dispensed with altogether as in Figs. 1 and 4, and my invention is not limited in any way to the specific method of mounting a bus bar with relation to mounting plates, if the latter are provided. The mounting means disclosed in Figs. 1 and 2 and 3 includes a prism-like member 10 disposed within the base 11 of the switch block A, the member 10 containing a wedge 12 held therein by means of the clamping screw 13, the wedge 12 being non-rotatable in the member 10 by virtue of the cooperation of their side walls, as disclosed in Fig. 1.

As will be seen from Fig. 2, rotation of the screw 13 will cause wedge 12 to ride upwardly in member 10 and into clamping and contacting engagement with the bus bar B.

Fig. 4 discloses a modification wherein a hook shaped member 16 having a threaded portion 17 and a head 18 is drawn upwardly and into interlocking and contacting engagement with the bus bar B by means of the nut 19, rotation of the latter causing movement of the parts in the manner specified, bus bar B and hook 16 preventing rotation of the screw 17.

Figs. 5 and 7 disclose a modification wherein a cam 20 substantially or completely integral with a threaded post 21 secured to the nut 22 by means of the screw head 23 may be rotated in an obvious manner for clamping and contacting engagement with the stationary bus bar B, the latter being fixed on the panel board in any desired fashion.

Fig. 6 discloses a modification wherein a split bolt 30 having portions 31 contacting with the beveled walls 32 of the mounting plate D is adapted to be moved upwarlly by means of the nut 33 under the head 34 of the latter.

It will be seen therefore, that I have dis-

closed a mounting and clamping means which can secure the electrical parts A' of the block in electrical and interlocking or clamping engagement with the bus bar B, there being necessary no extraordinary formations on the latter to insure such operation.

Now having described the invention and the preferred form of embodiment thereof, it is to be understood that the said invention is to be limited, not to the specific details herein set forth but only by the scope of the claims which follow:

I claim:—

1. In combination, a bus bar, a cup shaped receptacle of insulating material disposed over said bus bar, an electrically conducting part in said receptacle and spaced from said bus bar, and means to connect said part to said bus bar, said means including a manipulating portion in said receptacle adjacent and above said part and a contact portion secured to the manipulating portion and disposed behind said receptacle and adapted to clampingly engage the side walls of said bus bar, said manipulating portion being entirely operable from above and within the receptacle, said contact portion being manipulable so as to present no parts below the bus bar, whereby the receptacle with its parts in assembly therewith, may be removed from the bus bar from above the latter and without disassembling any parts.

2. In combination, a bus bar, a cup shaped receptacle of insulating material disposed over said bus bar, an electrically conducting part in said receptacle and spaced from said bus bar, and means to connect said part to said bus bar, said means including a screw member having a manipulating portion in said receptacle adjacent and above said part and a contact portion secured to the manipulating portion and disposed behind said receptacle and adapted to clampingly engage the side walls of said bus bar, said manipulating portion being entirely operable from above and within the receptacle, said contact portion being manipulable so as to present no parts below the bus bar, whereby the receptacle with its parts in assembly therewith, may be removed from the bus bar from above the latter and without disassembling any parts.

3. In combination, a bus bar, a cup shaped receptacle of insulating material disposed over said bus bar, an electrically conducting part in said receptacle and spaced from said bus bar, and means to connect said part to said bus bar, said means including a block disposed in the bottom of the receptacle, between said part and the bus bar, and having a slot in which the bus bar is disposed, and a screw member having its head in the receptacle, adjacent and above said part, a shank projecting thru the block and into the slot, and an element secured to the shank and disposed within the slot between a wall thereof and the bus bar, the aforemenioned wall of the slot and a wall of the element being at an angle with respect to the shank axis to form a wedge, the element being drawn into the slot as the screw head is rotated, to engage and clamp the bus bar.

4. In combination, a bus bar, a cup shaped receptacle of insulating material disposed over said bus bar, an electrically conducting part in said receptacle and spaced from said bus bar, and means to connect said part to said bus bar, said means including a block disposed in the bottom of the receptacle, between said part and the bus bar, and having a slot in which the bus bar is disposed, and a screw member having its head in the receptacle adjacent and above the part, a shank projecting thru the block and into the slot, and an element secured to the shank and disposed within the slot between a wall thereof and the bus bar, the aforementioned wall of the slot and a wall of the element being at an angle with respect to the shank axis to form a wedge, the element being drawn into the slot as the screw head is rotated, to engage and clamp the bus bar, the screw head being operable from above the part and within the receptacle.

5. In combination, a bus bar, a cup shaped receptacle of insulating material disposed over said bus bar, an electrically conducting part in said receptacle and spaced from said bus bar, and means to connect said part to said bus bar, said means including a manipulating portion in said receptacle adjacent and above said part and a contact portion secured to the manipulating portion and disposed behind said receptacle and adapted to clampingly engage said part and the side walls of said bus bar, said manipulating portion being entirely operable from above and within the receptacle, said contact portion being manipulable so as to present no parts below the bus bar, whereby the receptacle with its parts in assembly therewith, may be removed from the bus bar, from above the latter and without disassembling any parts.

6. In combination, a bus bar, a cup shaped receptacle of insulating material disposed over said bus bar, an electrically conducting part in said receptacle and spaced from said bus bar, and means to connect said part to said bus bar, said means including a block disposed in the bottom of the receptacle, between said part and the bus bar, and having a slot in which the bus bar is disposed, and a screw member having its head in the receptacle, adjacent and above said part, a shank projecting thru the block and into the slot, and an element secured to the shank and disposed within the slot between a wall thereof and the bus bar, the aforementioned wall of

the slot and a wall of the element being at an angle with respect to the shank axis to form a wedge, the element being drawn into the slot as the screw head is rotated, to engage and clamp the bus bar, and also to cause said part to be clamped between the block and the screw head.

WILLIAM H. FRANK.