B. D. HORTON.

ELECTRICAL INSTRUMENT BOARD.

APPLICATION FILED JAN. 29, 1918.

1,405,133.

Patented Jan. 31, 1922.

2 SHEETS—SHEET 1.

FIG. 1.

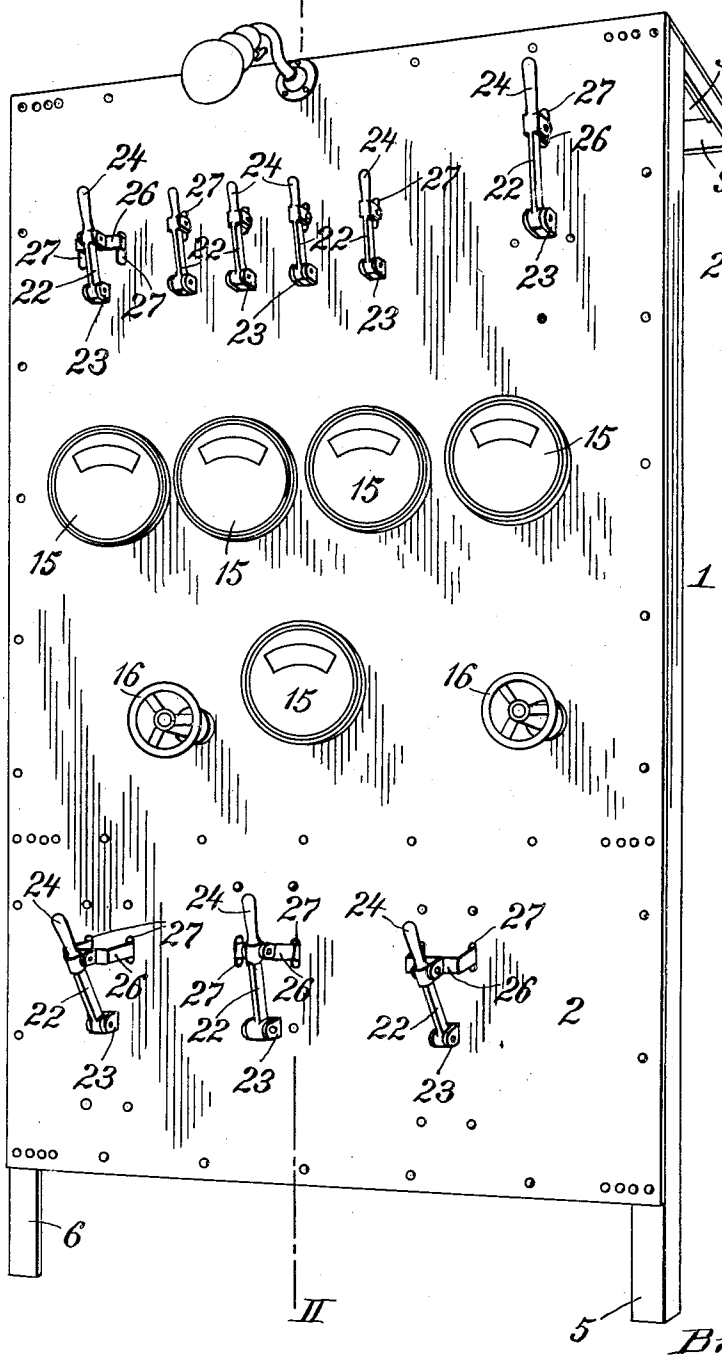
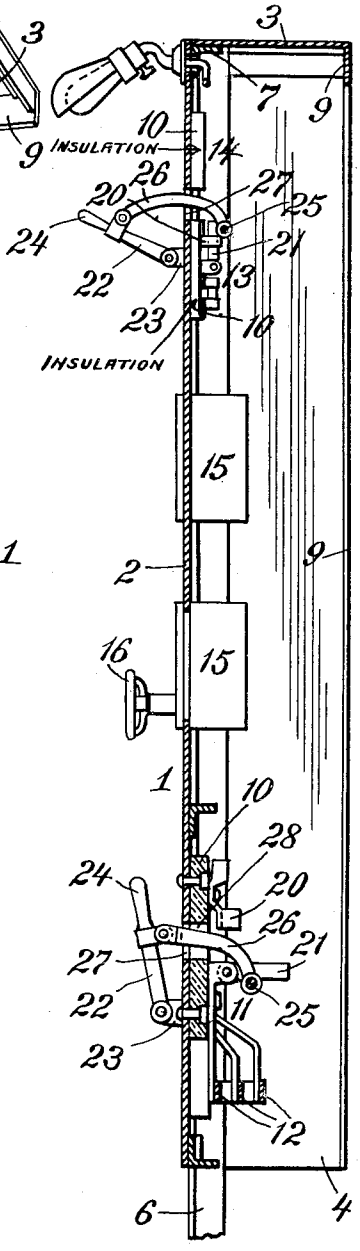


FIG. 2.



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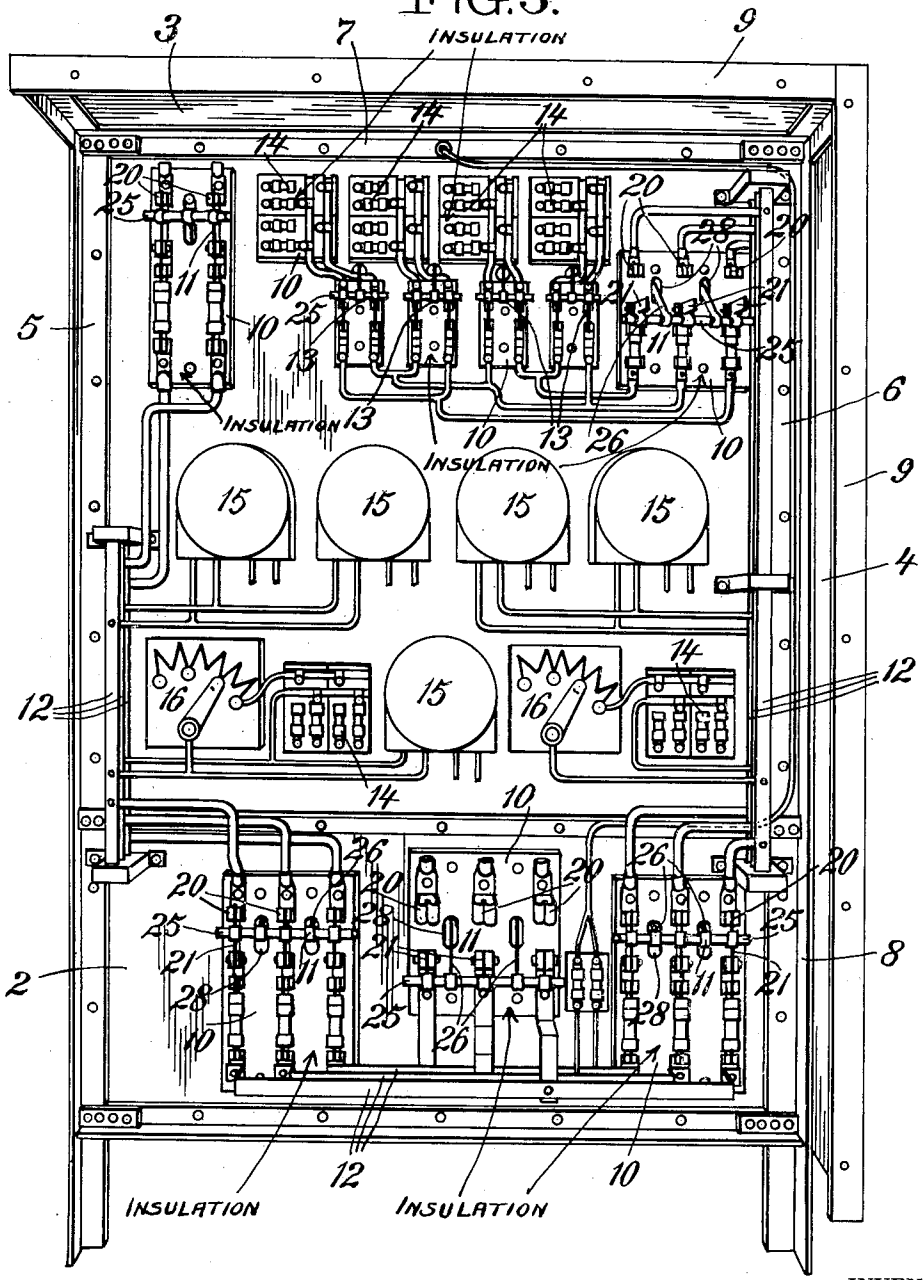
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FIG. 3.



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ELECTRICAL INSTRUMENT BOARD.

1,405,133. Specification of Letters Patent. Patented Jan. 31, 1922.

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To all whom it may concern:

Be it known that I, BRYSON D. HORTON, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Electrical Instrument Boards, of which the following is a specification.

This invention relates to electrical instrument boards and switches and with regard to certain more specific features thereof to boards or cabinets of sheet metal.

It is one of the objects of the present invention to provide an inexpensive, light and durable device of the character mentioned which shall be reliably safe in use and easy to ship and install.

Another object of the invention lies in the provision of improved switch mechanism construction whereby a considerable saving in labor and materials is effected, yet maintaining and increasing the safety characteristics of these devices.

Other objects will be in part obvious and in part pointed out hereinafter.

The invention accordingly consists of the various features of construction, combination of elements and arrangements of parts which will be exemplified by the construction hereinafter set forth and the scope of the invention will be indicated in the following claims.

In the accompanying drawings, wherein is shown one of various possible embodiments of the invention,—

Figure 1 is a perspective view showing the front and one side of an improved instrument board;

Figure 2 is a sectional view taken substantially along the line 2—2 of Figure 1, and

Figure 3 is a perspective view looking at the rear of Figure 1.

Referring now more particularly to the drawings, there is indicated at 1 a sheet metal instrument board of substantially cabinet form comprising a front wall or panel 2, a top wall or ceiling 3 and a side wall 4. Two upright angle irons 5 and 6 are secured, respectively, to opposite sides of the rear face of the panel 2. These angle irons extend substantially below the panel, providing supporting legs for the board. Along the top edge of the panel 2 and at the rear thereof there is secured a horizontally extending angle iron 7, to one wall of which is secured the top wall 3, and a wall 8 of the side angle member 6 provides the surface to which the side wall 4 may be attached. This construction provides a light and durable cabinet, which may be readily shipped in condition to be immediately installed. The side and top walls are flanged, as indicated at 9, providing means for ready connection with a wall or closure.

The invention in certain of its aspects contemplates the association of a multiplicity of electrical appliances with the board, and preferably these appliances are provided in units having bases 10 of insulating material, which bases are adapted to be attached to the rear face of the panel board 2.

By reference to Fig. 3, it will be seen that these electrical appliances may take varied forms. For example, there is provided multipolar combined switch and fusible cut-outs 11, bus bars 12, smaller switches 13 associated with fusible cut-outs, cut out blocks 14, meters 15 and rheostats 16. These mechanical and fusible cut-out devices may be associated with one another in any desired form according to the service for which the board is designed.

Referring particularly to the switch 11 shown in the upper-right-hand corner of Figure 3, the same is provided with fixed contacts 20 and pivotally movable knife-blade contacts 21, all mounted and supported on the rear or exposed face of the base block 10 of insulating material. The actuating member for this switch is shown in Figure 1 and comprises a lever 22 pivotally mounted in a yoke 23 which is in turn secured to the front face of the panel 2. The lever 22 is provided at its free end with a handle 24 and is connected to a suitably insulated cross-bar 25 of the switch by means of a link or yoke 26, which passes through apertures 27 formed in the panel 2 and through corresponding apertures 28 provided in the base block 10. It will be seen, therefore, that the actuating mean for the switch is forwardly of the board where it is conveniently accessible to the operator, and that all live metal parts are rearwardly of the board and suitably insulated. The other switches shown in the drawings are of similar construction and it is thought that a description of one will suffice. In closing the switch the handle is pulled toward the operator and the link 26, having one end pivot-

ally connected beyond the pivot of the knife blade, causes the latter to swing about its pivot mounting until the knife blades 21 engage with the stationary contacts 20 closing the circuit. It will be obvious that as the handle is pivotally moved to a substantially upright position, as shown in the drawings, the switch will be opened.

As many changes could be made in the above construction and as many apparently widely different embodiments of the invention could be made without departing from the scope thereof, it is intended that all matter set forth in the foregoing description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

What I claim is:—

1. In a device of the character described, in combination, a sheet metal instrument board of cabinet form substantially, said board comprising a front panel, insulation on the rear face of said panel, fuses and switches mounted on said insulation, said insulation being only large enough to support said switches, switch actuating means arranged forwardly of said panel, and connections between the switches and the actuating means extending through said insulation and panel.

2. In a device of the character described, in combination, an instrument board of substantially cabinet form comprising a front panel, a side wall, and a top wall or ceiling of sheet metal, side upright angle irons secured at the rear of said panel board and extending below to form supporting legs therefor, a horizontally disposed angle iron at the top rear of said board, said top and one side angle irons providing means whereby the top and side walls may be united with said panel, a plurality of electric appliances having insulation bases mounted at the rear of said panel, actuating means for said appliances arranged forwardly of said panel and operating connections between the appliances and said actuating means.

3. In a device of the character described, in combination, an instrument board of substantially cabinet form comprising a front panel, a side wall, and a top wall or ceiling of sheet metal, side upright angle irons secured at the rear of said panel board and extending below to form supporting legs therefor, a horizontally disposed angle iron at the top rear of said board, said top and one side angle irons providing means whereby the top and side walls may be united with said panel, a plurality of electrical appliances having insulation bases mounted at the rear of said panel, actuating means for said appliances arranged forwardly of said panel and operating connections between the appliances and said actuating means, said connections extending in some instances through the bases of insulating material.

4. A panel board comprising a front of sheet metal, a plurality of cut-out elements with insulating bases, the bases being mounted directly on one side of the metal sheet.

5. A panel board, comprising a front of sheet metal, a plurality of insulating bases adapted to carry switches and fuses either separately or combined, said bases being mounted directly on the rear face of the metal sheet.

6. A panel board comprising a front of sheet metal, a plurality of insulating bases, fuses and switches either separately or combined mounted on said bases, said bases being mounted directly on the rear face of the metal sheet, and means on the front of the sheet to operate the switches.

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