Oct. 17, 1950 C. A. MILBANK 2,526,255

ELECTRICAL TEST BLOCK

Filed Jan. 11, 1949

FIG. 1

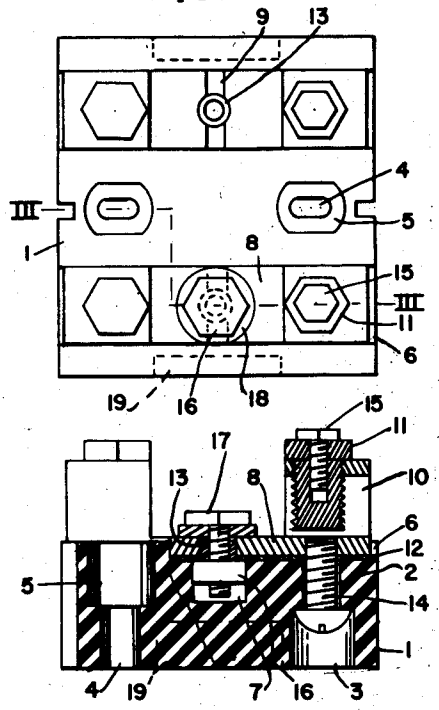


FIG. 2

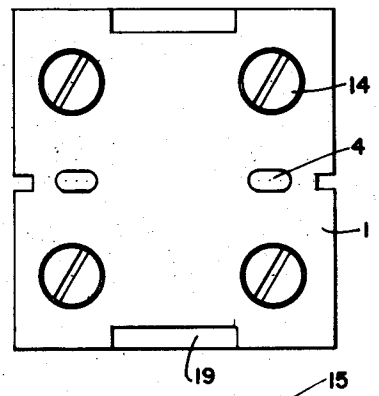


FIG. 3

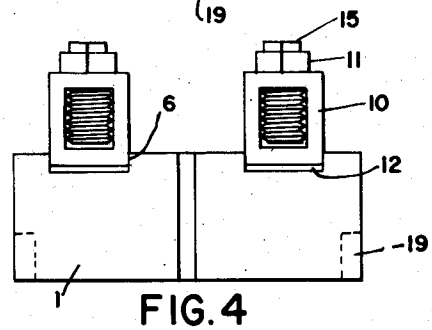
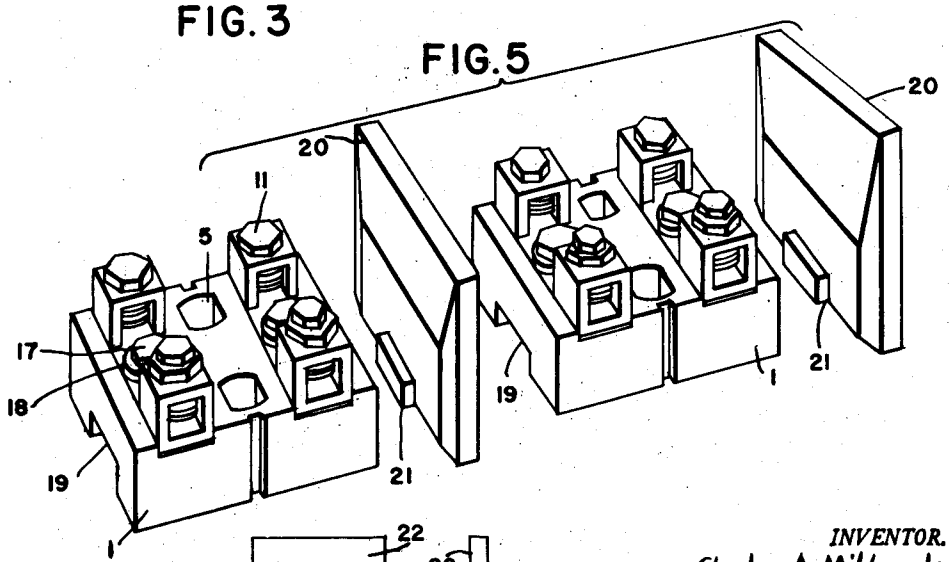


FIG. 4

FIG. 5



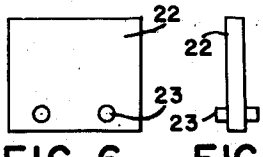


FIG. 6 FIG. 7

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ELECTRICAL TEST BLOCK

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1 Claim. (Cl. 173—324)

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This invention relates to electrical test blocks, that is to devices whereby an electric circuit from a drop through meters or the like to the point of use, may be connected in series with test apparatus so that the accuracy of a meter may be determined without interrupting the current supply to the point of use.

Another object is to produce a device of this character whereby a meter may be by-passed or removed from the line for any purpose without interrupting the current to the point of use. A further object of the invention is to produce a test block of this kind which is strong, durable, convenient and may be insulated by barriers to prevent arcing between terminals of opposite polarity and to guard against accidental short circuiting by pliers, wrenches, or the like.

A still further object of the invention is to provide a unit test block, together with means for assembling a plurality of the blocks for as many circuits as desired, each block being separated from adjacent blocks by an insulating barrier.

With the general object named in view and others as will hereinafter appear, the invention consists in certain novel and useful features of construction and organization of parts as hereinafter described and claimed; and in order that it may be fully understood, reference is to be had to the accompanying drawing, in which—

Figure 1 is a top plan view of a unit test block embodying the invention.

Figure 2 is a bottom plan view of the same.

Figure 3 is a section on the line III—III of Figure 1.

Figure 4 is a side elevation of the device, taken at right angles to the plane of the section shown in Figure 3.

Figure 5 is a perspective view of a multiple installation in exploded position to show the insulating barriers of the invention.

Figure 6 is a face view of a slightly modified form of insulating barrier.

Figure 7 is a side elevation of the barrier shown in Figure 6.

In the drawing, where like reference characters identify corresponding parts in all of the figures, 1 is a rectangular insulating block formed with four through bolt receiving openings 2 in coincidental relationship to the four corners of the block, said openings 2 being countersunk as at 3 from the under face or bottom of the block. In addition to the openings 2, the block is formed with a pair of through openings 4 on the center line of the block paralleling that of the four

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openings 2. The openings 4 are countersunk from the top face of the block as indicated at 5. The top face of the block is molded or formed with a pair of parallel grooves 6, each groove intersecting perpendicularly the axes of the openings 2, and at their midpoint a pair of nut-receiving sockets 7 are formed in the upper face of the block, said sockets opening into the grooves 6.

Adapted to be snugly received within the grooves 6 are four terminals of any suitable type, but for convenience of illustration are shown as identical, the proximate ends or tangs of each pair being spaced apart and are notched or have a radius 9 for a purpose which hereinafter appears. The outer ends of the connectors may be formed with rectangular chambers 10 adapted to receive line wires held in position by clamp screw 11 tapped through the top wall of the members 10, or any other suitable terminals may be used if desired. Fitted within the grooves 6 and underlying the tangs 8 are insulating strips 12 having openings registering with the openings 2 and being provided at their midpoint with upstanding insulating sleeves 13 which fit into the radii in the ends of the tangs as indicated at 9, Figure 1.

The connector tangs 8 are positioned on top of the insulating strips 12 and are held rigidly in place by screws 14 inserted through the bottom face of the insulating block through the openings 2, and are used to draw the assembly, connectors and insulating strips, tightly down in the grooves 6. With the parts in the relation described circuits have not yet been completed through the connectors.

Circuits through the tanks 8 are completed by positioning a threaded nut 16 in non-rotatable relation in the sockets or cavities 7, it being noted in this connnection that the insulating strips 12 prevent the nuts 16 from accidentally completing a circuit through the spaced tangs and at the same time guard against any tendency of the tangs to be bent or inclined when the circuit is completed as will hereinafter appear. The circuit through the tangs 8 is completed by a clamp screw 17 having a circuit completing washer 18, which is preferably of copper, staked or otherwise nonrotatably secured to the clamp screws, said screw extending through the sleeve 13 and being engaged with the nut 16. Obviously when a circuit is to be broken the screws and their washers can be loosened or backed away from contact with tangs 8, in a convenient and expeditious manner without

handling a multiplicity of parts. If desired a pair of clamp screws 11 may be tapped to receive small clamp screws 15 for supporting circuit jumpers when a meter is to be by-passed or removed for repair or replacement.

In order that a plurality of the unit test blocks may be assembled as a panel, each set of blocks being partitioned from adjacent blocks so that there is no danger of arcing between terminals of opposite polarity or accidental shorting by tools or the like, each of said blocks is formed in a pair of its opposite lower edges with recesses or chambers 19. Insulating barriers 20 are adapted to be interposed between adjacent unit blocks, said barriers being of considerable height and being formed with oppositely projecting lugs 21 to be received within the recesses 19 of a pair of adjacent blocks, see Figure 5. With this arrangement any number of units may be built up, each unit being held to a base or support by mounting screws (not shown) engaged with the openings 4 in the blocks. In Figures 6 and 7 a slightly modified barrier is shown at 22, such barrier having a pair of lugs or dowels 23 projecting from its opposite faces.

From the above description it will be apparent that I have produced an electrical test block embodying all of the features of advantage set forth as desirable, and while I have described and illustrated the preferred construction, it is to be understood that I reserve the right to all changes within the spirit and scope of the appended claim.

I claim:

A test block comprising a rectangular insulating base having a pair of parallel grooves in its upper face and recesses in its lower face, a pair

of insulating strips fitted in the grooves and having upstanding insulating sleeves at their midpoint, a pair of tangs resting on each strip within the grooves and having upstanding hollow rectangular terminals at their outer ends and having arcuate inner ends to accommodate the insulating sleeves, clamp bolts threaded through the top walls of the terminals, a second set of clamp bolts extending through the bottom of the block into threaded engagement with each tang and in coaxial relation to the first clamp bolts, and a connector for completing a circuit through the tangs, said connector comprising a bolt and nut combination, the latter being seated in a recess in the block and the former extending through the insulating sleeve and overlying and contacting the upper surfaces of the tangs.

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