March 11, 1952 J. K. HOOVER 2,588,726

TERMINAL BLOCK

Filed May 29, 1950

Fig. 1

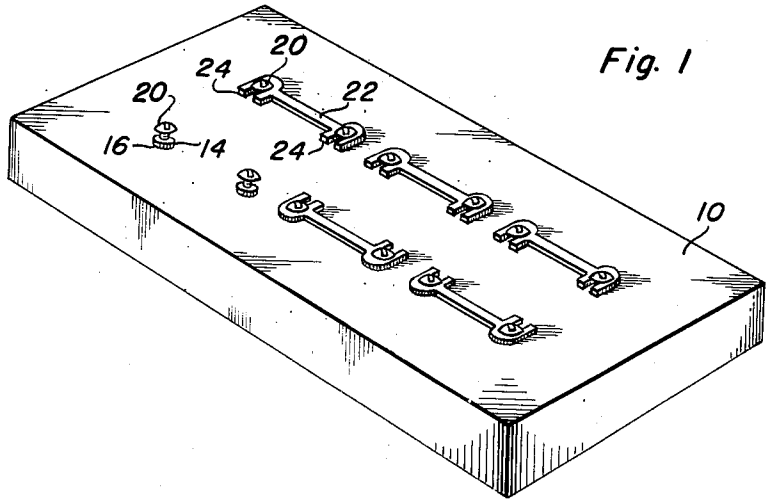


Fig. 2

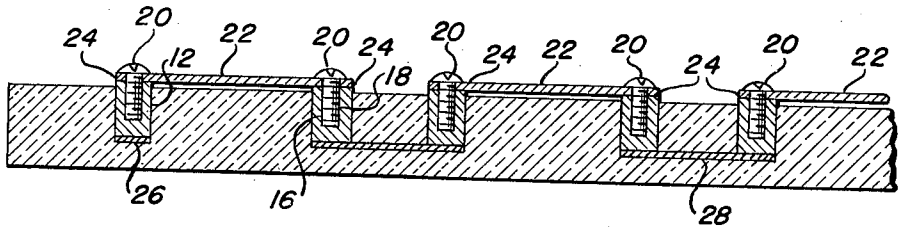


Fig. 3

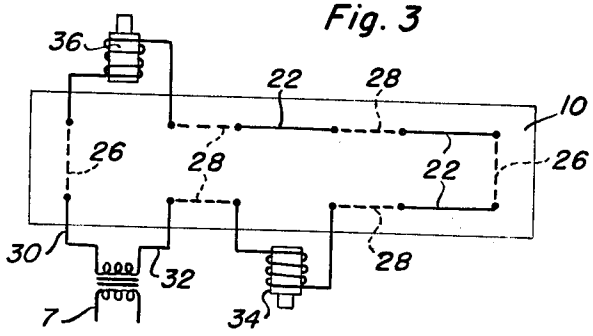
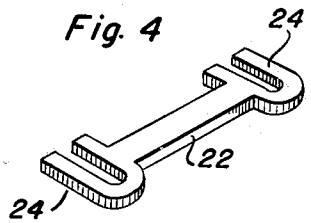


Fig. 4



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Patented Mar. 11, 1952

2,588,726

UNITED STATES PATENT OFFICE

2,588,726

TERMINAL BLOCK

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Application May 29, 1950, Serial No. 164,904

4 Claims. (Cl. 175—298)

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This invention relates to new and useful improvements in terminal blocks and the primary object of the present invention is to provide a terminal block or panel whereby all types of heating equipment may be electrically connected in series.

Another important object of the present invention is to provide a terminal block or furnace control panel so constructed as to permit an electrician to electrically connect a thermostat, transformer, automatic pilot, gas valve also a lower water control and high water control in series in a convenient manner and within a minimum time.

A further object of the present invention is to provide a furnace control panel that is extremely small and compact in structure and which is composed of conductive strips to which wires from electrical appliances may be readily attached.

A still further aim of the present invention is to provide a terminal block that is simple and practical in construction, strong and reliable in use, inexpensive to manufacture, and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a perspective view of the present invention;

Figure 2 is a longitudinal vertical sectional view taken substantially on the plane of section line 2—2 of Figure 1.

Figure 3 is an electrical diagram showing the manner in which the invention is used; and,

Figure 4 is a perspective view of one of the conductive strips used in the present invention.

Referring now to the drawings in detail, wherein for the purpose of illustration, there is disclosed a preferred embodiment of the present invention, the numeral 10 represents an elongated substantially rectangular base or block of insulation material having a first row of longitudinally spaced, parallel, and vertical recesses or bores 12 and a second row of longitudinally spaced, parallel, and vertical recesses or bores 14.

A conductive sleeve 16 is fitted in each of the recesses 12 and 14. The upper ends of the sleeves 16 lie in a plane spaced parallel to a plane through the upper face of the base 10. The sleeves 16 are provided with internally threaded

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sockets 18 that receivably engage headed screws 20.

The sleeves, like the recesses 12 and 14, are arranged in two rows with an even number of sleeves in each row. The sleeves of each row are in pairs and the sleeves of each pair are joined by conductive strips 22 having U-shaped end portions 24 through which the screws 20 extend to retain the strips 22 flat against the upper ends of the sleeves of each pair of sleeves and spaced above the base 10.

The end sleeves of one row of sleeves is connected to the end sleeves of the other row of sleeves by conductive strips 26 that are disposed transversely of the base 10 and beneath the end sleeves.

The adjacent sleeves of adjacent pairs of sleeves, for each row, are connected by further conductive strips 28 that are embedded in the base 10 and which strips contact the lower ends of adjacent sleeves of adjacent pairs of sleeves for each row as shown in Figure 2.

In practical use of the present invention one of the strips 22 is removed so that the conductors 30 and 32 from a transformer T may be attached to the screws 20 previously extending through the removed strip. Additional strips 22 are removed at will to permit the conductors extending from electrical devices or appliances, such as solenoids 34 and 36 for the thermostat and the low water control of a furnace to be connected in series as shown in Figure 3.

There are a sufficient number of the sleeves 16 to permit the automatic pilot, gas valve, high water control, lower water control, transformer, and limit switch of a furnace to be connected in series through the base and the strips 26 and 28. The strips 22 being employed only when the controls above named are not to be included in the circuit.

Having described the invention, what is claimed as new is:

1. A terminal block comprising a base of insulation material, first and second parallel rows of spaced pairs of sleeves embedded in said base, said base having recesses therein accommodating the inner end portion of said sleeves, each of said sleeves having an end exposed from the base, a conductor removably secured to and joining each pair of sleeves, said conductors being spaced from the base, means threaded in the upper ends of each pair of sleeves securing said conductors against the exposed ends of the sleeves, additional conductors embedded in the base and connecting the adjacent pairs of sleeves

of each row together and having ends entering the recesses in which the adjacent pairs of sleeves of each row are accommodated, and further conductors embedded in the base and connecting the rows to form a series circuit.

2. A furnace control panel comprising an elongated block of insulation material; a first row of longitudinally spaced, parallel pairs of sleeves having inner portions embedded in the block and each having an end exposed from the block; a second row of longitudinally spaced, parallel pairs of sleeves also embedded in the block and each having an end exposed from the block; a first set of conductive strips secured to and connecting each pair of sleeves of said first row and resting against the exposed ends of the sleeves of said first row; a second set of conductive sleeves connecting and secured to the exposed ends of each pair of sleeves of said second row; a further set of conductive strips embedded within the base and connecting and contacting the inner end portions of adjacent pairs of sleeves of said first row; a still further set of conductive sleeves embedded in said block and connecting adjacent pairs of sleeves of said second row; conductive means also embedded within said block and connecting said first row to said second row; and means electrically connecting each row to a source of electric current.

3. A terminal block comprising a base of insulation material having an upper face formed with first and second rows of vertical recesses, said base also having passages therein connecting the lower ends of certain recesses together, plugs having lower portions seated in the recesses, lower conductive strips mounted in the passages, the lower ends of certain of said plugs resting against said strips, said plugs having vertical threaded blind bores in their upper ends, upper conductive strips having their ends resting on the upper ends of certain plugs, and fasteners extending through the ends of the upper strips and threaded in the bores of the plugs whose upper ends support the ends of the upper strips.

4. The combination of claim 3 wherein each of said upper strips includes a pair of U-shaped side by side end portions having adjacent legs and an intermediate elongated straight portion terminally fixed to said adjacent legs, said U-shaped end portions being disposed transversely of said intermediate portion.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,719,284	Barnes	July 2, 1929
1,794,831	Caruso	Mar. 3, 1931
1,939,130	Mills	Dec. 12, 1933
2,019,625	O'Brien	Nov. 5, 1935

FOREIGN PATENTS

Number	Country	Date
223,402	Great Britain	1924
273,737	Great Britain	Dec. 22, 1927