No. 679,897. Patented Aug. 6, 1901.

M. L. JONES.

SELF RESTORING FUSE BLOCK.

(Application filed Apr. 4, 1900.)

(No Model.)

Fig. 1.

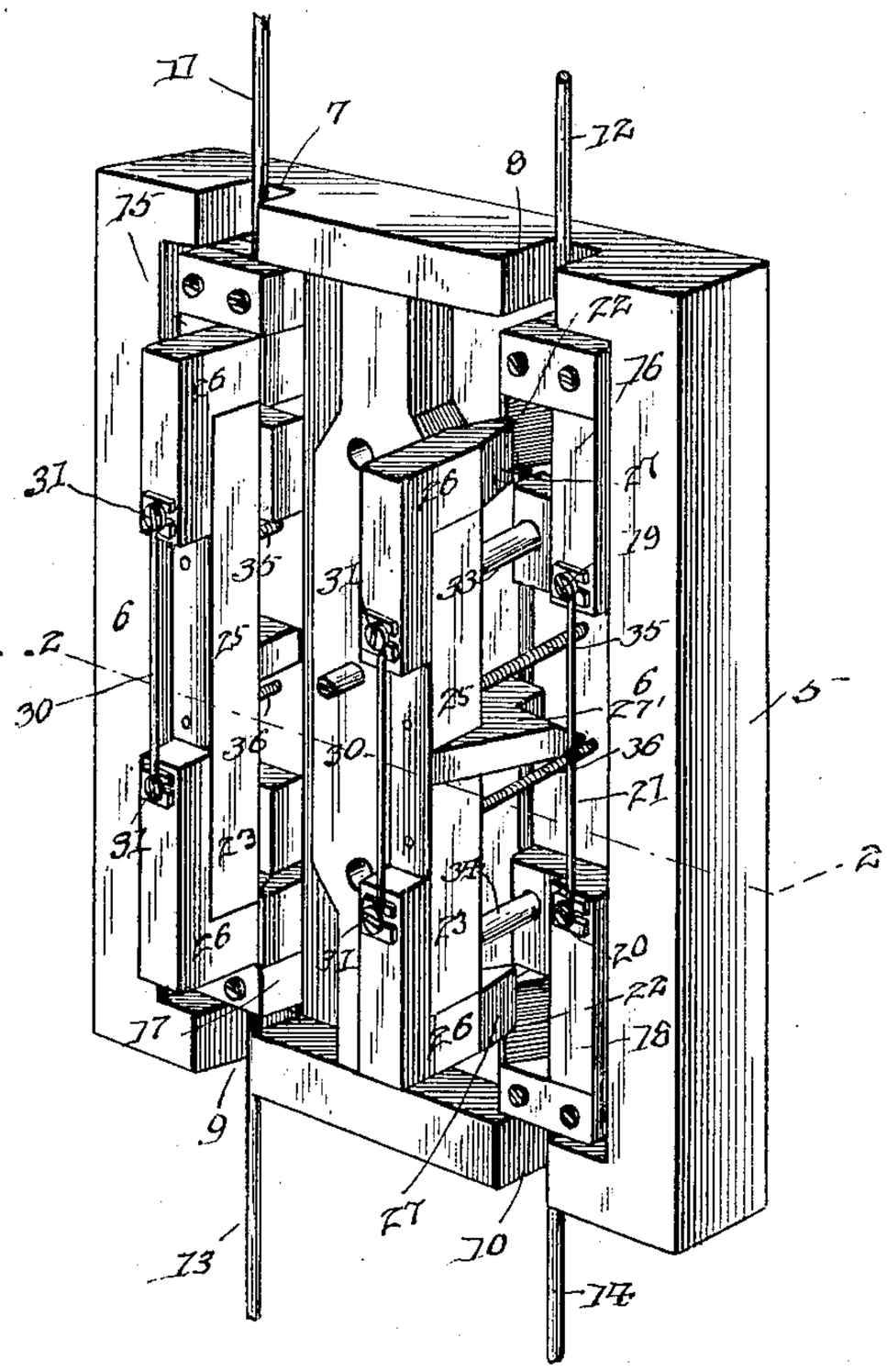
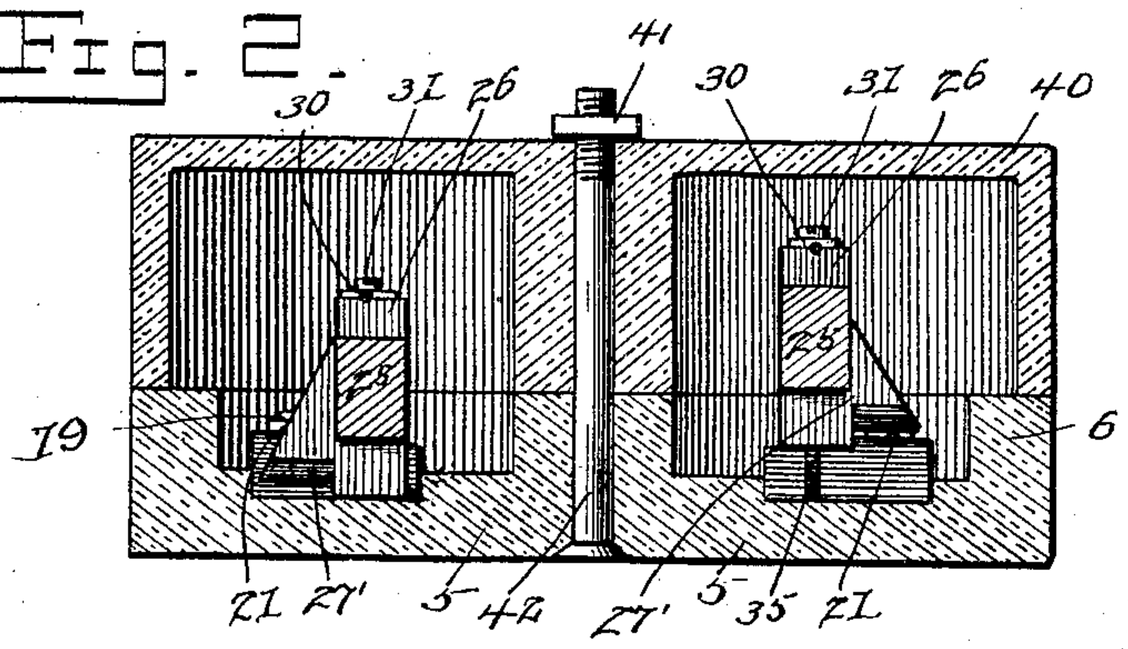


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

MACON LEIGH JONES, OF MONTGOMERY, ALABAMA.

SELF-RESTORING FUSE-BLOCK.

SPECIFICATION forming part of Letters Patent No. 679,897, dated August 6, 1901.

Application filed April 4, 1900. Serial No. 11,523. (No model.)

To all whom it may concern:

Be it known that I, MACON LEIGH JONES, a citizen of the United States, residing at Montgomery, in the county of Montgomery and State of Alabama, have invented a new and useful Self-Restoring Fuse-Block, of which the following is a specification.

This invention relates to fuse-blocks in general, and more particularly to the class of self-restoring fuse-blocks wherein when a fuse is blown the mechanism of the block will be automatically released to permit the insertion of a new fuse to restore the circuit.

The object of the invention is to provide a simple and efficient construction which will be positive and prompt in its operation and in which the fuse-wires may be readily applied and removed as occasion may demand.

Further objects of the invention will be apparent from the following description.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in both views, Figure 1 is a perspective view showing the complete fuse-block and illustrating one portion of the mechanism set for operation when the fuse is blown, while the other part of the block is shown with the first fuse blown and the second fuse in place. Fig. 2 is a section on line 2 2 of Fig. 1.

Referring now to the drawings, the present invention consists of an insulating-base 5, preferably of porcelain or similar material, and at the edge of which is a wall 6. In the wall 6 at the ends of the base are formed openings or slots 7, 8, 9, and 10, through which the two feed-wires 11 and 12 and the two house-wires 13 and 14 are passed into the inclosure of the wall, the inner ends of these wires being connected with terminal binding-plates 15, 16, 17, and 18, respectively, by means of the usual clamps. These terminal plates are mounted directly upon the porcelain base 5 and are thus insulated from each other. In the mutually-adjacent ends of the blocks 16 and 18 are threaded perforations, with which are engaged binding-screws 19 and 20, which act to clamp a fuse-wire 21 to the plates, these fuse-wires in the present construction being of the common and well-known form either with or without the copper end plates. Similar perforations are formed in the plates 15 and 17, with which are engaged the ends of a second fuse-wire in the same manner as above described in connection with the fuse-wire 21.

Preferably formed integral with each of the terminal blocks or plates 15, 16, 17, and 18 is a switch-socket 22, the walls of which converge downwardly to receive switch-knives 23. These switch-knives each consists of a bar 25, of insulating material and preferably rectangular in cross-section, and at each end of which and upon the upper surface thereof is mounted an L-shaped copper contact-block 26, the stem of which is disposed to lie upon the upper surface of the bar 25, while the foot thereof lies against the end of the bar and projects below the lower face thereof, the projecting portion or extremity of the foot being tapered, as shown at 27, to snugly fit the corresponding switch-socket 22. The contact-blocks on each bar 25 are isolated and insulated from each other, and the blocks of each bar are connected by means of a fuse-wire 30, which is engaged with clamping-screws 31, engaged with threaded perforations in the blocks.

The bars 25 are mounted for movement toward and away from the sockets 22 to engage and disengage the blocks 26 with respect thereto, the mountings consisting of rods 33 and 34, depending from each of the bars 25 and slidably engaging perforations in the base 5. The bars 25 are held normally and yieldably in the direction of the sockets 22 by means of helical springs 35 and 36, which are connected with the bars 25 and with the base 5, as shown.

From the foregoing it will be seen that when the contact-blocks of the knives are engaged with the switch-sockets the fuse-wires that are carried by the bars 25 are in circuit, and in order to hold them normally out of circuit when the fuse-wires 21 are in position each bar 25 has a laterally-projecting foot 27′, which rests upon the adjacent wire 21 and holds the bars 25 raised against the tendency of their springs and with the contact-blocks out of contact with the switch-sockets. The fuse-wires 21 thus sustain the bars 25 raised, and hence if the wires or either wire 21 blows out the corresponding foot 27′ is released and the springs 35 and 36 immediately act to

move the contact-blocks into engagement with the switch-sockets to cut the corresponding fuse-wire into circuit. In this manner it will be seen that the block may be supplied with two sets of fuses, so that if either of one set blows out another wire will be substituted therefor, the terminal-blocks having then an additional fuse applied thereto in substitution of the one blown out, after which the mechanism may be again set.

It will of course be understood that in practice any suitable materials may be used for the various parts of the structure, that any suitable proportions may be observed, and that various modifications may be made without departing from the spirit of the invention.

The mechanism of the block is protected by means of the usual cover 40, which rests against the upper edge of the wall of the base and is held in place by a nut 41 engaging the outer end of a screw-stem 42, which is mounted upon the base and projects through a central opening in the cover.

What is claimed is—

1. A fuse-block comprising line-terminals adapted for engagement of a fuse therewith to bridge the terminals, a switch comprising mutually-insulated terminals, adapted for contact with their respective line-terminals, said switch-terminals being adapted for connection of a fuse therewith, means for moving the switch to engage its terminals with the line-terminals, said switch carrying an insulated portion disposed for engagement with the first fuse-wire to hold the switch normally inoperative.

2. A fuse-block comprising line-terminals adapted for connection of a fuse thereto to bridge the terminals, said terminals having switch-sockets, and a switch for engaging the sockets, said switch comprising an insulating-bar having contact-pieces for engagement with the sockets, guide-pins carried by the switch, and springs connected with the switch and the base of the block for moving the switch into engagement with the sockets, the bar of the switch having means for engagement with the fuse on the terminals for holding the switch inoperative.

3. A fuse-block comprising terminal-plates adapted for connection of a fuse thereto to bridge the plates, a switch comprising contacts for connection with the plates to complete the circuit between them, a projection carried by the switch for engagement with the fuse upon the terminal-plates to hold the switch inoperative, and means for moving the switch into operative position when the fuse is broken.

4. A fuse-block comprising terminal-plates mutually insulated and adapted for attachment of a fuse thereto to bridge the plates, each of the plates having a switch-socket, a switch comprising an insulating-bar having isolated contact-pieces thereon for engagement with the sockets, said contacts being adapted for connection of a fuse therewith, guide-pins carried by the switch and engaging perforations in the base of the block, springs connecting the switch and base for moving the switch into operative position, and a lateral projection on the switch disposed to rest upon the fuse connecting the terminal-plates to hold the switch inoperative.

5. A fuse-block comprising terminal-plates adapted for connection of a fuse thereto to bridge the plates, a switch adapted to bridge the terminals, and means carried by the switch and disposed to rest upon the fuse to hold the switch inoperative, said switch being movable into operative position when the fuse is broken.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

MACON LEIGH JONES.

Witnesses:

A. J. PICKETT,

W. J. CARROLL.