No. 685,766. Patented Nov. 5, 1901.

N. JONES.

MAGNETIC FUSE CUT-OUT.

(Application filed Mar. 25, 1901.)

(No Model.)

Fig. 1.

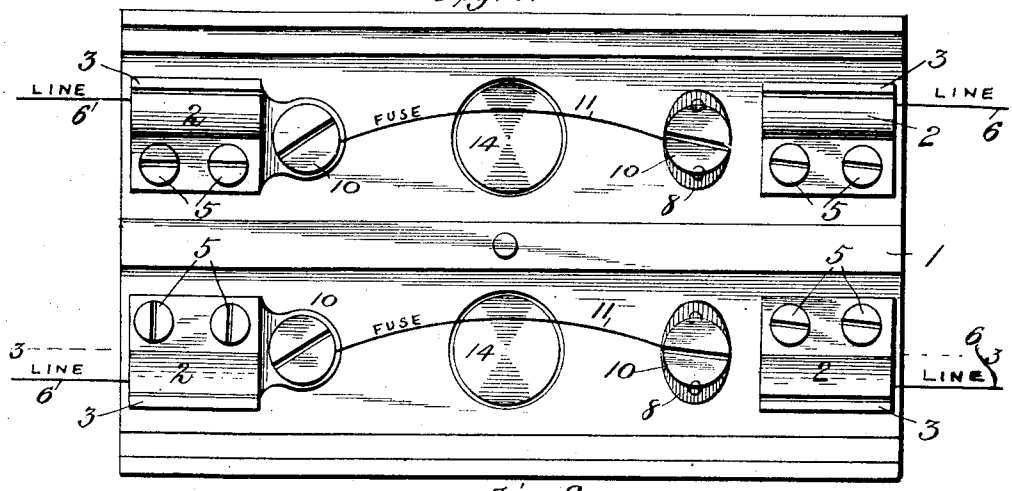


Fig. 2.

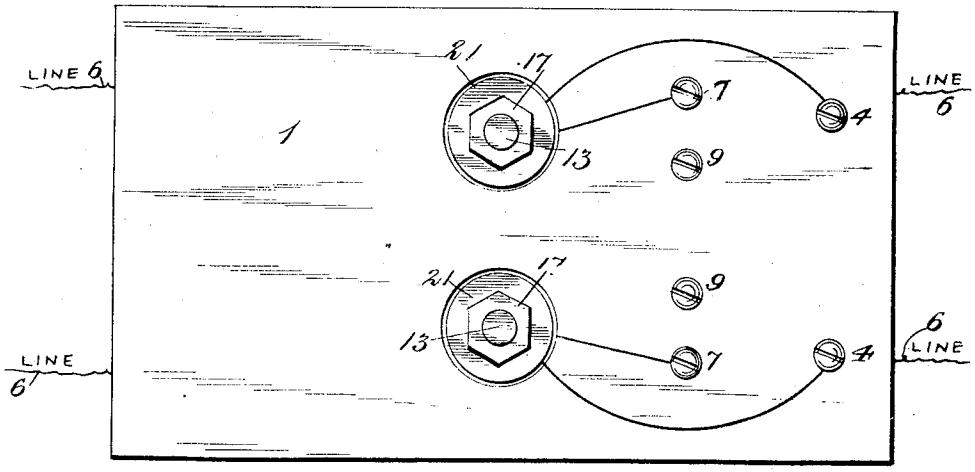
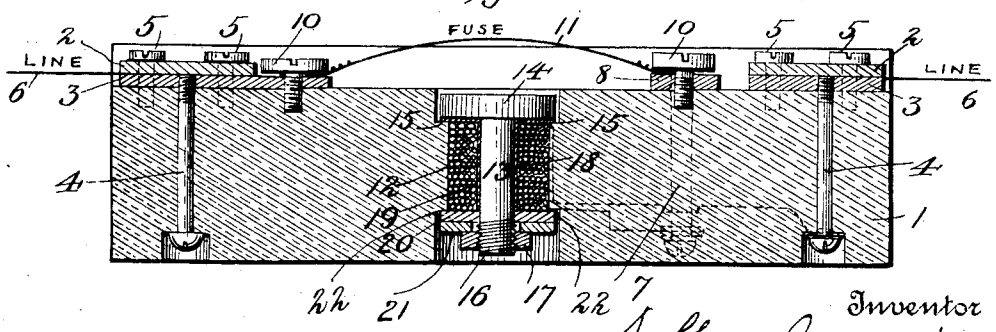


Fig. 3



Witnesses
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MAGNETIC FUSE CUT-OUT.

SPECIFICATION forming part of Letters Patent No. 685,766, dated November 5, 1901.

Application filed March 26, 1901. Serial No. 52,700. (No model.)

To all whom it may concern:

Be it known that I, NOBLE JONES, a citizen of the United States, residing at Sparrows Point, in the county of Baltimore and State of Maryland, have invented certain new and useful Improvements in Magnetic Fuse Cut-Outs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to electrical apparatus, has especial reference to fuse cut-outs designed to interrupt an electric circuit by melting a fusible conductor when the amperage on the line becomes excessive, has for its object the preventing of arcing when the fuse is melted and confining the fire due to fusing and arcing, should it occur, to the fuse box or block, and consists in certain improvements in construction which will be fully disclosed in the following specification and claims.

In the accompanying drawings, which form part of this specification, Figure 1 represents a top plan view of a fuse-box embodying my invention with the cover of the box removed; Fig. 2, an inverted plan of the same; and Fig. 3, a vertical longitudinal section on line 3 3, Fig. 1.

Reference being had to the drawings and the numerals thereon, 1 indicates the fuse box or block, which may be made of porcelain or other suitable material for the purpose; 2, the top plates of the line-clamps, to the lower plates 3 of which is attached a metallic binding-post 4, and the upper plate is detachably secured to the lower plate by screws 5 5 to clamp the line 6 between them. 7 is a metallic binding-post connected to the disk or plate 8, and 9 is a supplemental or additional binding-post, which may be used instead of 7, if desired. 10 is a clamping-screw engaging the disk or plate 8 and by which one end of the fuse 11 is secured. As thus constructed the fuse-box and its connections may be of any preferred form.

12 indicates a chamber in the fuse-box, in which a magnet is supported directly under the fuse 11, which is exposed directly to the magnet and is in series therewith and about midway between its ends. The core 13 consists, preferably, of a soft-iron bolt with a head 14, which rests upon a shoulder 15 in the box, the core being screw-threaded at 16 to receive a nut 17, and upon the core is wound wire 18, of a size or gage to suit the capacity of the current it is desired to maintain, and the core is provided with an insulator 19 around the core and under the head 14, an insulator 20 under the coil 18, and a metallic washer 21, by which the magnet is secured in the chamber 12 by the insulator 20 engaging the shoulder 22 and held in position by nut 17. One end of the wire 18 engages the binding-post 4 and the opposite end engages the post 7, thus putting the magnet in the electric circuit with the lines 6. Should the amperage become excessive and cause the fuse 11 to melt, the arc thus formed will be blown out or extinguished by the action of the magnet, and thus remove all danger of fire from this cause, this effect being produced by the magnetic field established above the magnet and to which the fuse is exposed.

It will be observed that the fuse-box is provided with duplicate sets of appliances for accommodating two lines of wires and magnets.

Having thus fully described my invention, what I claim is—

1. A fuse block or box, provided with suitable line-clamps at each end, and a fusible conductor; in combination with an electromagnet embedded in the fuse-box, beneath the fuse and about midway between the ends thereof, and which magnet is in series with the fuse and the fuse exposed directly to the magnet.

2. A fuse box or block provided with suitable line-clamps at each end, a fusible conductor, and a chamber in the body of the box; in combination with an electromagnet embedded and secured in said chamber under the fuse about midway between the ends

thereof, and which magnet is in series with the fuse and the fuse exposed directly to the magnet.

3. A fuse box or block provided with suitable line-clamps at each end, and binding-posts, a fusible conductor, and a chamber in the body of the box; in combination with an electromagnet secured in said chamber and whose core is provided with an enlarged head at one end, a nut at the opposite end, and a coil, said magnet being in series with the fuse and the fuse exposed directly thereto.

In testimony whereof I affix my signature in presence of two witnesses.

NOBLE JONES.

Witnesses:
GEO. H. WOOD,
JEROME J. WOODRUFF.