(No Model.)

H. A. SINCLAIR.

FUSE BLOCK.

No. 588,536. Patented Aug. 17, 1897.

Fig. 1.

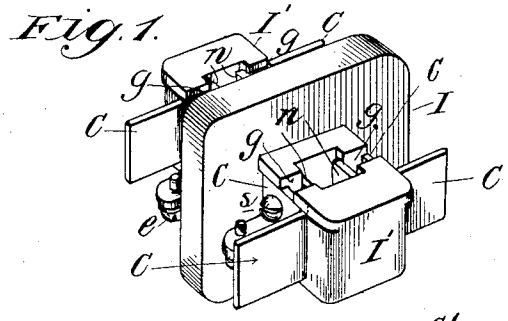


Fig. 2.

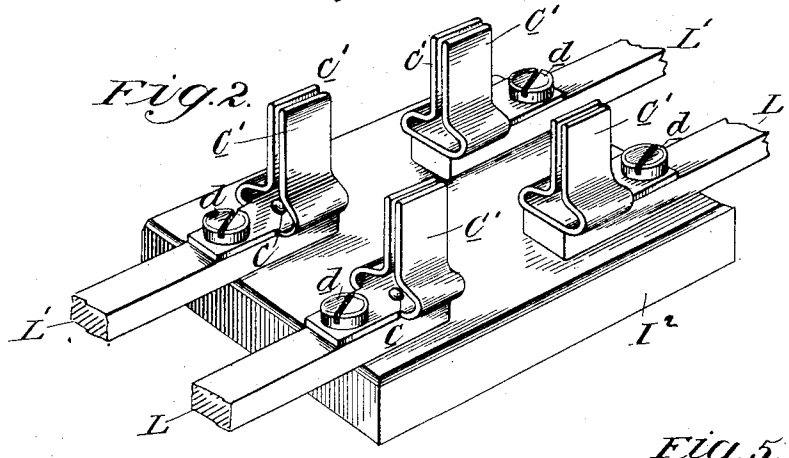


Fig. 5.

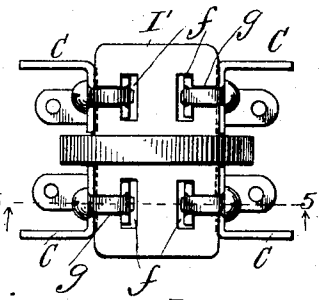


Fig. 3.

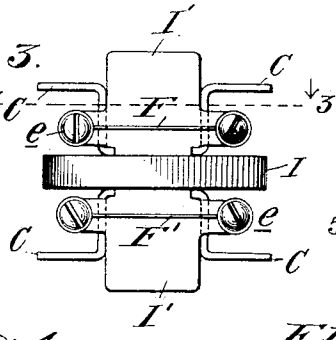


Fig. 7.

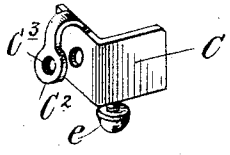


Fig. 4.

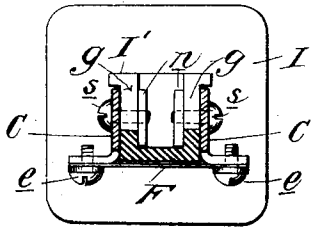
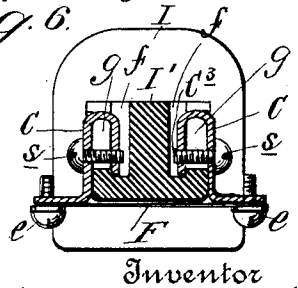


Fig. 6.



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UNITED STATES PATENT OFFICE.

HENRY A. SINCLAIR, OF BROOKLYN, NEW YORK, ASSIGNOR TO THE TUCKER ELECTRICAL CONSTRUCTION COMPANY, OF NEW YORK, N. Y.

FUSE-BLOCK.

SPECIFICATION forming part of Letters Patent No. 588,536, dated August 17, 1897.

Application filed March 9, 1897. Serial No. 626,574. (No model.)

To all whom it may concern:

Be it known that I, HENRY A. SINCLAIR, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have made a new and useful Improvement in Fuse-Blocks, of which the following is a specification.

My invention is directed particularly to fuse-blocks in which that part of the device carrying the fuse or fuses proper may be detached from the circuit-conveying conductors and the fuse or fuses restored while the removable part is thus detached, and it will be fully understood by referring to the following specification and accompanying drawings, the especial points of novelty of my invention being particularly pointed out in the claims at the end of this specification.

Referring now to the drawings, in all of which like letters of reference represent like parts wherever used, Figure 1 is a perspective view of the detachable part of one form of my novel fuse-block; and Fig. 2 a like view of the stationary parts thereof, secured to a panel or switchboard carrying terminals or conducting mains or leads of well-known form. Fig. 3 is a plan view of the detachable part as seen looking at Fig. 1 from the bottom toward the top of the drawing, illustrating also the fuse connections; and Fig. 4 is a sectional view, taken through Fig. 3 on the line 3 3 and as seen looking at that figure from the top toward the bottom of the drawing in the direction of the arrows. Fig. 5 is a plan view of the detachable part of a preferred and modified form of my invention; and Fig. 6 is a sectional view taken on the line 5 5, Fig. 5, and as seen looking at that figure from the bottom toward the top of the drawing. Fig. 7 is a detail perspective view of one of the conducting angle-pieces used in connection with this modified form of the invention.

Prior to my invention fuse-blocks had been constructed in which one or more fuses were attached to the conducting parts of a detachable part, which detachable part was of insulating material or provided with a handle or means of removing the entire detachable part or parts. A fuse-block of this general character is shown and described in United States Patent to Axel Ekstrom, No. 520,772, granted June 5, 1894.

Referring now to the drawings in detail, I represents a block of insulating material, such as porcelain, cast in a single piece and in such form that one part thereof constitutes a handle and an insulating dividing part between the supported conducting parts, and the other integral parts I′ I′ supports for such conducting parts. The insulating-block I I′ is preferably molded or cast with lateral grooves *g g* and enlarged openings extending downward through the lateral integral extensions I′, so as to constitute supports for electrical conducting angle-pieces C C C C, having their inner ends so bent as to fit into grooves between the parts I and I′ I′, as clearly shown in Fig. 3, *n n n n* being screw-nuts and *s s s s* screws adapted to pass through openings *g* in the conducting angle-pieces C C C C, the arrangement being such that when the screws *s s* are in position the outer ends of the angle-pieces C C C C are parallel with each other, as shown in Figs. 1 and 3.

e e e e are binding-screws secured to lateral lugs at the bottom of the angle-pieces C C adapted to secure in position detachable fuse-wires F F′, as clearly shown in Figs. 3 and 4.

I^2 represents an insulating switchboard or panel base, and L L L′ L′ the rectangular ends of current mains or leads secured thereto in the usual manner.

C′ C′ C′ are angular-shaped yielding contact-springs provided each with a downwardly-extending dowel-pin *c*, adapted to extend into the current feeder or main L or L′, and *d d d* are screws adapted to secure the yielding contact-springs firmly in place, as will be obvious on inspection of Fig. 2, these several yielding contact-springs being so located, as shown, that when the detachable part I I′ of the fuse-block is put in place the conducting angle-pieces C C will form good electrical contact between the yielding ends thereof.

It will be apparent that the angular-shaped yielding contact-springs C′ C′ may be applied

to the ends of existing forms of current mains or leads L L′ by simply drilling holes for the dowel-pins *c* in said leads and securing such parts to the ends of the leads by binding-screws *d d*, which take the place of existing binding-screws now used for stationary fuses between the adjacent ends of said leads, thereby adapting this part of my improvement for ready use in existing systems without any material change. When the detachable part is in position the circuit is through the lead L, yielding contact-spring C′, angle-piece C, fuse F, angle-piece C, yielding contact-spring C′, and lead L, the return-circuit being through the other lead L′, yielding contact-spring C′, angle-piece C, fuse F′, angle-piece C, yielding contact-spring C′, and main or lead L′.

Figs. 5, 6, and 7 illustrate a modified and preferred form of my invention in which the insulating-block I and its lateral integral extensions I′ I′ are constructed with two vertically-arranged grooves or openings *f f* in each of the parts I′ I′, the lateral grooves *g g* being substantially like those already described in connection with Figs. 1 and 3. The conducting angle-pieces C C are made of a single piece of material and of the conformation illustrated in perspective view in Fig. 7, the arrangement being such that the overturned ends C^2 are provided with screw-threads C^3, adapted to receive the ends of the screws *s s* in the same manner as do the nuts *n n* in the modified form shown in Figs. 3 and 4, the arrangement for conducting the fuses F and F′ by screws *e e* being substantially as before described. In this modified form it will be seen that the inner ends of the angle-pieces C C C C are insulated from each other by the intervening masses of insulating material between the vertically-arranged grooves or openings *f f*.

The manner of using the modified form illustrated in Figs. 5, 6, and 7 will be apparent in view of the description heretofore made in connection with the forms shown in Figs. 1 to 4, inclusive.

It is apparent therefore that with the structures thus described the insulating portion of the detachable part may be cast of porcelain, hard rubber, glass, or any equivalent non-conducting material, and that the central portion I thereof will act not only as a handle but as an insulating medium between the conducting parts thereof, and also that the conducting portions of this detachable part may be readily put in place or removed therefrom, and that the fuses F and F′ may be put in place after the detachable part is removed by simply withdrawing the binding-screws *e e e e*, the arrangement of the entire structure being such that when in use the fuses are in a concealed position.

I am aware that it is not broadly new to provide a panel or switchboard with fuse-blocks having a detachable part which carries the fuse, the arrangement being such that the fuse may be put in place after it (the detachable part) has been entirely removed from its normal position, and I make no claim hereinafter broad enough to include such a structure.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. A fuse-block consisting of a body part of insulating material provided with lateral extensions having vertically-arranged grooves in their opposite faces and angular contact-pieces provided with means for securing them in said grooves, in combination with fuses joining said contact-pieces together in pairs, substantially as described.

2. A fuse-block consisting of a body part of insulating material provided with lateral extensions having vertically-arranged grooves in the opposite faces thereof and contact-pieces provided with means for securing them in said grooves in pairs and in alinement with each other, in combination with fuses secured to said contact-pieces below the bottom sides of the lateral extensions, substantially as described.

3. A fuse-block consisting of a body part of insulating material provided with lateral extensions having vertically-arranged grooves in their opposite faces, in combination with angular contact-pieces and mea s for securing said contact-pieces in the grooves in pairs, together with fuses detachably secured to said pairs of contacts, the body part of said fuse-block being adapted to act as a handle and of sufficient area to insulate the fuses from each other, substantially as described.

4. A fuse-block consisting of a body part of insulating material having lateral integral extensions provided with grooves in their opposite faces, angular contact-pieces provided with means for securing them in said grooves and in alinement with each other in pairs, and fuses joining said pairs of contact-pieces, in combination with yielding contact-springs secured to the ends of current mains or leads in pairs and adapted to receive the beforementioned pairs of angular contact-pieces, the body part of the fuse-block being of sufficient area to insulate the fuses and of proper conformation to act as a handle therefor, substantially as described.

5. A fuse-block consisting of a body part C of insulating material provided with lateral integral extensions I′ I′ having grooves *g g*, in combination with angular contact-pieces C C C C and fuses F F′ joining said contact-pieces together in pairs, together with means for securing said angular contact-pieces in said grooves, the body part of said switch-block being of sufficient area to effectually insulate the pairs of contacts from each other, substantially as described and shown.

6. A fuse-block consisting of a body part I of insulating material provided with lateral

extensions I′ I′ having grooves *f f f f*, and lateral grooves *g g g g* and angular contact-pieces C C C C provided with overturned ends adapted to be secured to the lateral extensions by screws *s s s s*, in combination with fuses joining said angular contact-pieces, substantially as described.

In testimony whereof I have hereunto subscribed my name this 2d day of March, 1897.

HENRY A. SINCLAIR.

Witnesses:
C. J. KINTNER,
M. M. ROBINSON.