(No Model.)

E. A. SPERRY.

FUSE BLOCK FOR ELECTRIC CIRCUITS.

No. 476,570. Patented June 7, 1892.

Fig. 1.

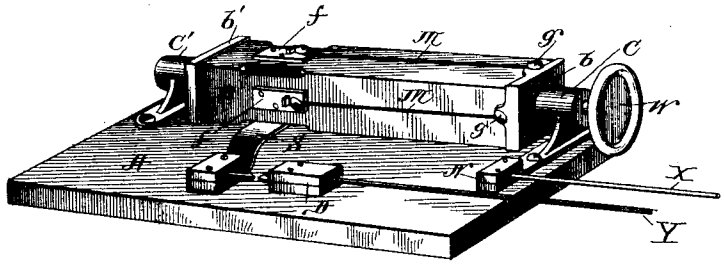


Fig. 2.

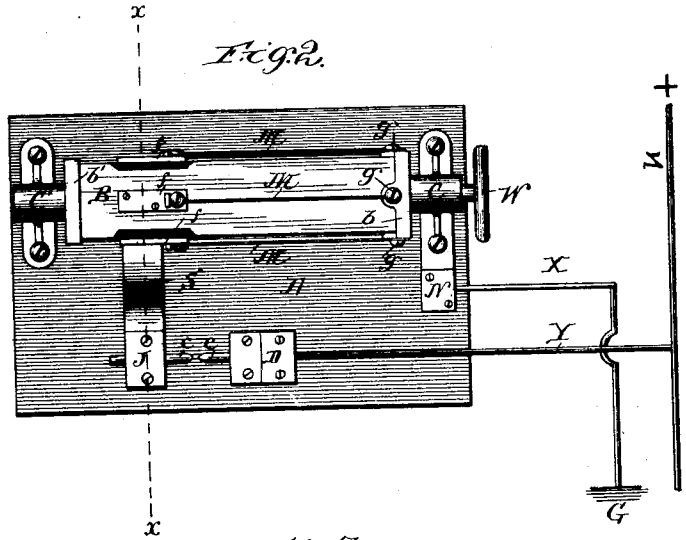
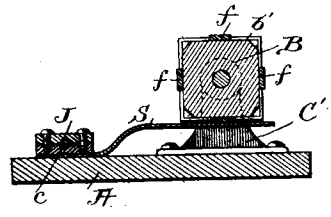


Fig. 3.



Witnesses.

Wm. M. Rheem

Elmer C. Johnson

Inventor.

Elmer A. Sperry

By Buckingham & Ewart

Attorneys.

UNITED STATES PATENT OFFICE.

ELMER A. SPERRY, OF CHICAGO, ILLINOIS.

FUSE-BLOCK FOR ELECTRIC CIRCUITS.

SPECIFICATION forming part of Letters Patent No. 476,570, dated June 7, 1892.

Application filed March 19, 1891. Serial No. 385,581. (No model.)

To all whom it may concern:

Be it known that I, ELMER A. SPERRY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Fuse-Blocks for Electric Circuits, of which the following is a specification, reference being had to the accompanying drawings, in which similar letters of reference indicate like parts in all the figures.

The well-known use of a fuse-wire in electric circuits is to protect the electrical apparatus from the effects of accidental excess of current or to prevent diversion of the current from its normal path by meeting and opening the circuit.

My invention is of especial advantage when used in electric circuits where the excess of current against which it is intended to afford protection is caused by some momentary accidental disturbing influence—as, for instance, in motor-work, where sudden increase in the work may either stop the motor or so reduce its speed as to lower the counter electro-motive force sufficiently to permit the passage of such a volume of current as to endanger the conductors, and, for a further instance, in the case of a lightning-arrester, where the dynamo-current may follow the static discharge to the ground and become diverted from its intended course. In such cases it is of advantage to have a fuse-wire in the circuit adapted to melt in any excess of current and open the circuit, and also in such cases it is generally true that the momentary or accidental cause of the excess of current is of frequent occurrence, where it happens at all, rendering it necessary to insert a new fuse-wire frequently into the circuit to replace one that has been destroyed in order not to interrupt the progress of the motor-work in the one instance and in the case of the lightning-arrester to provide immediately for another discharge. To provide means for doing this quickly and with entire safety to the operator is the object of my invention; and I accomplish the object by the use of the device shown in the drawings, in which—

Figure 1 is a perspective view of my improved fuse-block. Fig. 2 is a plan view. Fig. 3 is a section of Fig. 1 through the dotted line *x x*.

In the figures, A is a base of insulating material, having mounted thereon two standards C′ and C.

B is a block of insulating material provided with metallic end hubs *b′* and *b*, which are journaled in the standards C′ and C, respectively. Upon the hub *b* and integral therewith are the binding-terminals *g g g g*, disposed one on each side of the block B and in electric communication with the standard C through the journal therein. There are also disposed on the block B, one on each side thereof, the four binding-terminals *f f f f*, insulated from the plate *b* and from each other.

N is a binding-terminal for the line-wire and is formed integral with the standard C.

J is also a binding-terminal for the line-wire and is in electric contact with the spring S, which is adapted to press against the terminal *f* on the under side of the block B.

I construct terminals *f* with flat surfaces and give them considerable width in the direction tangential with the rotation of the block, so that the pressure of the spring S against the face tends to adjust the block D to the position of best contact between the spring and the terminal and to retain it there, as shown in Fig. 3.

In connecting my improved fuse-block for use with a lightning-arrester I use, also, the terminal D and place in the terminals J and D the carbon points *c c*. The terminal N is then connected with the ground G and the terminal D with one of the line-wires Z by the wire Y, as is usual and well known.

If I desire to use my improved fuse-block simply in circuit, I connect the line-wires to the terminals J and N.

M M M M are fuse-wires extending between the terminals *g* on the hub *b* and the separate terminals *f*.

W is a hand-wheel mounted on the journal of the block B and adapting it to manual rotation.

In the use of my improved fuse-block by the rotation of the block B the fuse-wires M may be brought successively into circuit through the successive contacts of the terminals *f* with the spring S, the circuit being from the terminal J through the brush S, the terminal in contact therewith, the fuse-wire attached to such terminal to the hub C, and thence

through the standard C to the terminal N. If now the fuse-wire in circuit should become destroyed through excess of current, a simple quarter-rotation of the fuse-block B brings into circuit the succeeding fuse-wire and at the same time throws out of circuit the terminals of the destroyed fuse, enabling the attendant to insert a new one in place thereof without danger to himself.

The block B is chamfered slightly at the corners in the path of the brush S to prevent undue deflection thereof when the block is rotated.

What I claim as new, and desire to secure by Letters Patent, is—

1. A revoluble block of insulating material having a hub in contact with a conductor, terminals *f*, mounted upon the block and insulated from each other and adapted by a rotation of the block to be brought successively into contact with the spring in contact with the terminal, as J, fuse-wires connecting the hub to the terminals *f*, and a hand-wheel, as W, on the shaft of the block, adapting it to manual rotation, in combination with a supporting-base.

2. In combination with a base of insulating material, a revoluble fuse-block mounted thereon, flat-faced terminals, as *f*, mounted on the fuse-block, terminals, as N and D, mounted on the base, one of which is connected with the ground and the other to the line-wire, fuse-wires mounted upon the block connecting the terminals *f* with the terminal N, and a terminal, as J, mounted upon the block in proximity to the terminal D for static discharge, and a spring S, attached to the terminal J, adapted to press in succession against the terminals *f* and adjust the position of the block to that of best contact between the spring and the terminals *f* and to maintain it there.

Executed this 12th day of March, 1891.

ELMER A. SPERRY.

Witnesses:
ELMER E. JOHNSON,
W. R. GOODMAN.