(No Model.)

T. A. EDISON.

FUSE BLOCK.

No. 438,305. Patented Oct. 14, 1890.

Fig. 1.

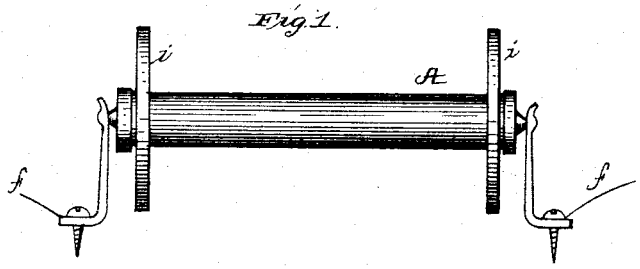


Fig. 2

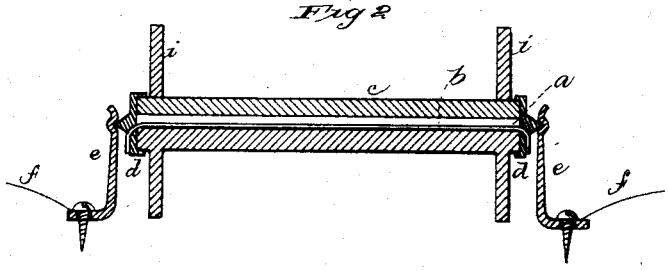


Fig. 3

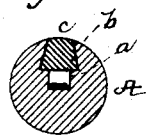
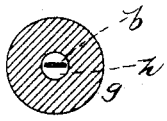


Fig. 4.



ATTEST:

E. C. Rowland

L. W. Riddle

INVENTOR:

Thomas A. Edison

By Dyer & Seely

Attys

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

THOMAS A. EDISON, OF MENLO PARK, NEW JERSEY.

FUSE-BLOCK.

SPECIFICATION forming part of **Letters Patent No. 438,305, dated October 14, 1890.**

Application filed October 14, 1885. Serial No. 179,866. (No model.)

To all whom it may concern:

Be it known that I, THOMAS A. EDISON, of Menlo Park, in the county of Middlesex and State of New Jersey, have invented a certain new and useful Improvement in Lightning-Arresters, (Case No. 644,) of which the following is a specification.

My invention relates to fusible safety-catches or lightning-protectors for telephones, telegraph, and similar circuits, in which the fusible wire is placed in an inclosing shell or chamber of insulating material; and my object is to prevent or diminish the liability to surface creeping of lightning or other powerful current along the outside of such shell or chamber.

To this end, my invention consists in providing flanges of insulating material on the outside of the shell or chamber, so as to increase the surface distance between the terminals of the safety-catch.

My invention is illustrated in the accompanying drawings, in which—

Figure 1 is a view in elevation of a safety-catch receptacle embodying my invention; Fig. 2, a vertical longitudinal section of the same; Fig. 3, a transverse section of the receptacle, and Fig. 4 a transverse section of a modified form thereof.

A is a cylindrical piece of insulating material, having a longitudinal slot or groove *a*, in which is placed the strip of metal foil *b* or other piece of readily-fused metal. The slot is closed by a longitudinal plug *c*, preferably of the same material as A. Instead of this I may employ a continuous cylinder *g*, Fig. 4, of insulating material, with a hole *h* through it for the fusible strip. In either case I form or provide the insulating-receptacle with flanges or shoulders *i*, which are of insulating material, being preferably made in one piece with the receptacle. The flanges are continuous, entirely encircling the receptacle, and where the plug *c* is used it passes under the flanges through the slot *a*. There may be any desired number of these flanges.

Heretofore there has always been danger of the electricity passing along the surface of the insulating-case, especially if the same is damp; but this danger is obviated by my invention.

To connect the fusible strip in circuit, a metal cap *d* is placed upon each end of the receptacle, and to these caps the ends of the strip *b* are soldered. The receptacle is then inserted between springs or free circuit-terminals *e e*, which bear firmly upon the caps and to which the circuit-wires *f f* are connected. The springs are secured to any suitable support.

The passage of an abnormal electric current fuses the safety-catch and breaks the circuit, as will be understood.

What I claim is—

1. The combination, with an insulating-receptacle having one or more external insulating-flanges, of a safety-catch supported therein, the terminals of which extend to either end of the receptacle, and free circuit-terminals co-operating therewith, substantially as described.

2. The combination, with a receptacle having one or more external flanges, of a safety-catch supported therein and conducting-caps at either end of the receptacle to which said catch is connected, substantially as described.

This specification signed and witnessed this 14th day of January, 1885.

THOS. A. EDISON.

Witnesses:

WM. H. MEADOWCROFT,

T. G. GREENE, Jr.