T. E. MURRAY.

ELECTRIC FUSE.

APPLICATION FILED OCT. 12, 1918.

1,339,965. **Patented May 11, 1920.**

Fig: 1.

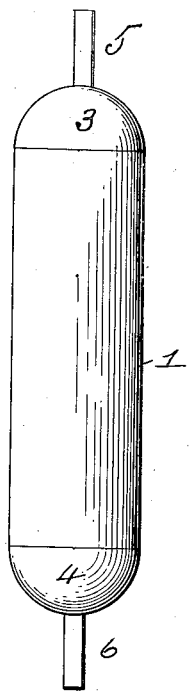


Fig: 4.

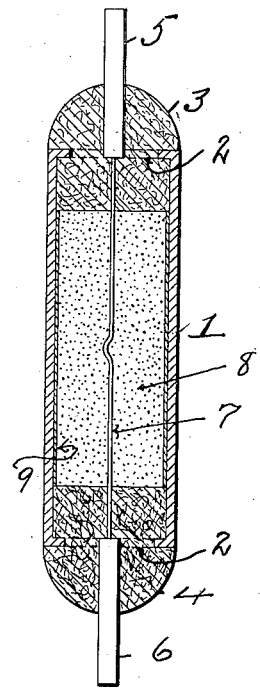
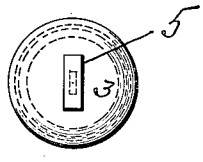


Fig: 2.



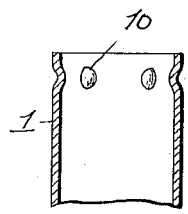


Fig: 3.

Inventor
Thomas E. Murray
By his Attorney
Paul Benjamin

UNITED STATES PATENT OFFICE.

THOMAS E. MURRAY, OF NEW YORK, N. Y.

ELECTRIC FUSE.

1,339,965. Specification of Letters Patent. Patented May 11, 1920.

Application filed October 12, 1918. Serial No. 257,844.

To all whom it may concern:

Be it known that I, THOMAS E. MURRAY, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented a certain new and useful Improvement in Electric Fuses, of which the following is a specification.

The invention is an electric fuse, and consists in the construction more particularly hereinafter described. In U. S. Letters Patent No. 1,286,063, granted to me November 26, 1918, I have set forth and claimed the method of making said fuse.

In the accompanying drawings—

Figure 1 is an elevation of the fuse case. Fig. 2 is an end view thereof. Fig. 3 shows a modification of the means for attaching the middle portion of the fuse case to the plaster of Paris ends thereof. Fig. 4 is a longitudinal section of the fuse case.

Similar numbers of reference indicate like parts.

The fuse case comprises a hollow tubular body portion 1, having at its ends inturned flanges 2. The extremities of the body portion 1 are closed by plaster of Paris plugs 3, 4, in which the flanges 2 are embedded. Metal rods 5, 6, which form the fuse terminals, are embedded in the end plugs 3, 4. Between said terminals extends the fuse strip 7, passing through the plugs 3, 4 and through a mass 8 of comminuted refractory material, such as dry plaster, which fills the space within the tubular body portion 1 and between the plugs 3, 4. If desired, the tubular body portion 1 may be provided with a paper lining 9.

Instead of making flanges 2 at the ends of the tubular body portion 1, I may form struck up projections 10 on the inner side of said body portion near the extremities thereof, which projections engage with the plaster of Paris plugs.

It is to be especially noted that the joints between fuse strip and terminal rods are completely embedded in the plaster end plugs, and so protected; also that the plugs extend beyond the extremities of the casing, thus guarding said extremities and preventing any possible short-circuiting of the fuse, as may happen when the casing is closed or covered at its ends by metallic caps: that the casing and plugs are united simply by inwardly turned projections on the casing, such as the flanges 2 or struck up projections 10, and also that the casing ends register in outside diameter with the shoulders on the plugs, so that the exterior of the fuse presents a smooth finish. In making the fuse case the plaster forming the plugs is inserted in a soft or plastic state and the flanges are embedded therein, so that when the plaster sets they are firmly held.

I claim:

1. An electric fuse, comprising a tubular casing, a fuse strip therein, terminal rods connected to the ends of said strip, and two bodies of insulating material completely embedding the joints between said rods and said strip and closing the ends of said casing.

2. An electric fuse, comprising a tubular casing, a fuse strip therein, terminal rods connected to the ends of said strip, and two bodies of insulating material molded around the joints between said rods and said strip and respectively fitting in the ends of said casing.

3. An electric fuse, comprising a fuse strip, terminal rods connected to the ends thereof, two bodies of insulating material inclosing the joints between said rods and said strip, and shouldered at their facing ends, and an envelop inclosing said strip and receiving said bodies and seated at its ends against said shoulders.

4. A fuse strip, terminal rods connected to the ends thereof, two bodies of insulating material inclosing the joints between said rods and said strip, the said bodies being shouldered at their facing ends and convex at their outer ends, and a tubular envelop inclosing said strip and receiving said bodies and seated against said shoulders, the outer periphery of said envelop registering with the outer adjacent surfaces of said bodies.

5. An electric fuse, comprising a tubular casing, plugs of insulating material closing the ends of said casing and protruding beyond said ends, terminal rods entering said plugs, and a fuse strip in said casing connected to said rods; the said rods extending partly through said plugs, whereby the joints between the ends of said fuse strip and said plugs become wholly inclosed in said insulating material.

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

THOMAS E. MURRAY.

Witnesses:

GERTRUDE T. PORTER,

MAY T. MCGARRY.