T. E. MURRAY.

ELECTRIC FUSE.

APPLICATION FILED DEC. 23, 1916.

1,252,141. Patented Jan. 1, 1918.

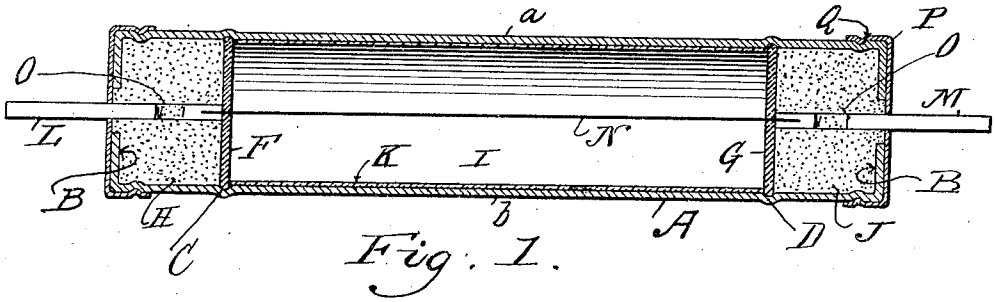


Fig. 1.

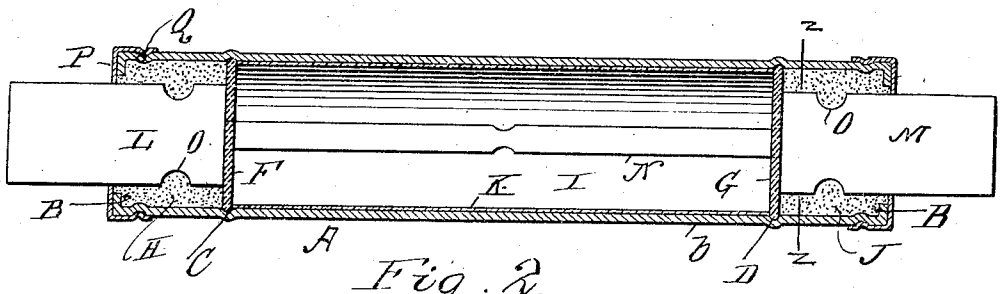


Fig. 2.

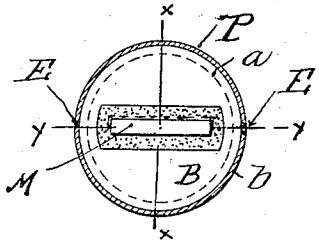


Fig. 3.

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UNITED STATES PATENT OFFICE.

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ELECTRIC FUSE.

1,252,141. Specification of Letters Patent. Patented Jan. 1, 1918.

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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 a tubular fuse case formed of struck up sheet metal, and preferably, as herein described, in two interchangeable half tubular sections produced by stamping, pressing or striking up said metal, and united preferably by electrical welding at their edges.

In the accompanying drawings—

Figure 1 is a longitudinal section of my fuse on the line *x*, *x* of Fig. 3. Fig. 2 is a longitudinal section on the line *y*, *y* of Fig. 3. Fig. 3 is a transverse section on the line *z*, *z* of Fig. 2.

Similar letters of reference indicate like parts.

The case is of sheet metal, having a tubular wall A and end walls B integral therewith. I produce said case in two semi-tubular sections *a*, *b*, by stamping, pressing or striking up the metal of each section. At the same time, I may form in said sections grooves C, D near the end walls. I unite the said sections, after placing their edges together, by electrically welding the joint E, Fig. 3.

Within the case and seated in the grooves C, D are partitions F, G of insulating material, which divide the interior of the case into three compartments H, I, J. Compartment I is preferably provided with a lining K of paper or other insulating material. Entering compartments H and J, through openings in the end walls B, are flat rods L, M of copper or other conducting material, which rods here extend to the partitions F, G. Attached at its ends to rods L, M and passing through partitions F, G is the fuse strip N.

Between the rods L, M and the openings in end walls B is a clearance, through which liquid plaster or other fluid insulating material may be poured to fill the compartments H, J and also said clearance—the plaster in the clearance thus insulating the rods from said end walls. In order that the rods may be more firmly held in place, I form notches O in their edges, in which the plaster, after solidifying, engages. I provide each end of the case with a flanged cap P of fiber, paper or the like, having an opening in which the rod L or M fits closely, and also having in its flange an internal rib Q which enters a corresponding circumferential groove in the case, which groove may be formed in the same way and at the same time that the grooves C, D for partitions F, G are formed.

It is to be noted that I here produce a fuse case of the cartridge type wholly of sheet metal, and, therefore, one which is not ruptured or injured by the blowing of the fuse strip, and which of itself protects adjacent objects from the effects of the explosion. It is also very strong, and may be handled without danger of breakage.

The unit of manufacture is the half tubular section, and as these sections are exactly alike and interchangeable, they may be stamped out in any numbers—any two sections being united to form the complete case. Such stamping is cheap and quick. The electrical welding of the two sections is done in a small fraction of a second.

I claim:

1. As a new article of manufacture and sale, an interchangeable unit for fuse case construction consisting of a semi-tubular wall, and two end walls integral therewith, the said parts being stamped, pressed or struck up from sheet metal.

2. A fuse case, comprising a tubular wall and end walls integral therewith, formed of sheet metal and extending transversely across the ends of said tubular wall, there being an opening between the approximating edges of said end walls.

3. A fuse case, comprising a tubular wall and end walls integral therewith, formed of sheet metal and in two longitudinal half sections united at their edges and the said end walls extending transversely across the ends of said tubular wall, there being an opening between the approximating edges of said end walls.

4. A fuse case, comprising a tubular wall and end walls integral therewith, formed of sheet metal and in two longitudinal half sections united at their edges, the said sections being united at their edges by an electrically welded joint and the said end walls extending transversely across the ends of said tubular wall, there being an opening between the approximating edges of said end walls.

5. A fuse case, comprising a tubular wall and end walls integral therewith, formed of sheet metal, transverse partitions of insulating material in said case, conducting rods entering said case through openings in said end walls, a fuse strip connected at its ends to said rods, and a filling of insulating material between said partitions and said end walls.

6. A fuse case, comprising a tubular wall and end walls integral therewith, formed of sheet metal, transverse partitions of insulating material in said case, conducting rods entering said case through openings in said end walls, there being a clearance between said rods and the edges of said openings, a fuse strip connected at its ends to said rods, and a filling of insulating material in said clearance and between said partitions and said end walls.

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

THOMAS E. MURRAY.

Witnesses:

GERTRUDE T. PORTER,

MAY T. MCGARRY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."