T. E. MURRAY.

FUSE CASE.

APPLICATION FILED APR. 18, 1911.

1,021,549. Patented Mar. 26, 1912.

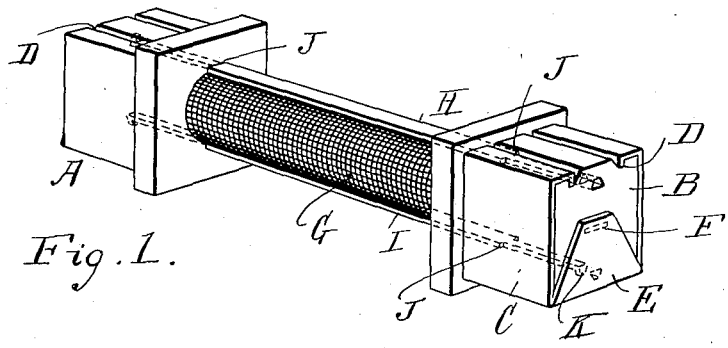

Fig. 1.

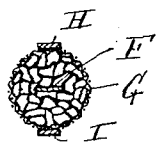

Fig. 2.

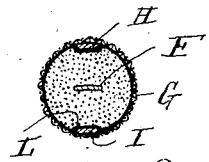

Fig. 3.

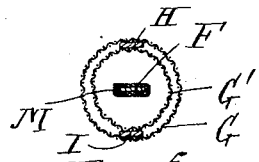

Fig. 5

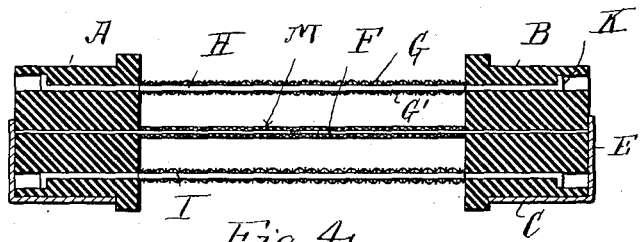

Fig. 4.

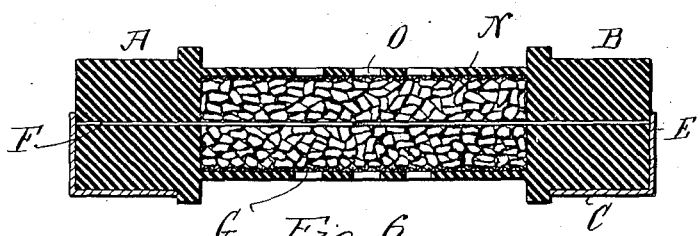

Fig. 6.

Witnesses:
May J. McGarry.
Marie L. Breslin.

Thomas E. Murray
Inventor
By his Attorney Paul Benjamin

TED STATES PATENT OFFICE.

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

FUSE-CASE.

1,021,549. Specification of Letters Patent. Patented Mar. 26, 1912.

Application filed April 18, 1911. Serial No. 621,862.

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 Fuse-Cases, of which the following is a specification.

This invention is a novel application of the principle first embodied in the Davy safety lamp to the prevention of injury to adjacent objects due to the escape of flame from a blowing fuse. As is well known, flame will not pass through wire gauze or similar reticulated metal. I have found that this is true even of the violent and sudden outburst of burning gas due to fuse explosion, and that, therefore, if such flame is intercepted by a screen of reticulated metal, the danger of fire being communicated to woodwork or other ignitible material in the vicinity of the fuse is prevented.

My invention may be applied to electric fuses in many ways—all, however, embodying the aforesaid principle. Thus, for example, the case which incloses the fuse strip may itself be formed of reticulated metal, or said metal may merely form a closure for an opening, or openings, in a case of other material. Some of these ways, the best I now know, are illustrated in the accompanying drawings in which—

Figure 1 is a perspective view showing the case formed of reticulated metal and the securing rods attached to the exterior of the case. Fig. 2 is a cross sectional view of said case. Fig. 3 is a cross sectional view of a modification in which the securing rods are attached to the inside of the tubular case, which is also provided with an inner tube or lining of paper or the like. Fig. 4 is a longitudinal section of a modification in which the case comprises two tubes of reticulated metal disposed one within the other. Fig. 5 is a transverse section of said case. Fig. 6 is a longitudinal section in which the outer tubular case is of solid material with perforations and the inner tubular case of reticulated material.

Similar letters of reference indicate like parts.

A and B are end pieces preferably formed of single blocks of porcelain or other refractory insulating material. On each block is a contact plate C, preferably of sheet copper, bent upward to cover two sides of the block and then flanged over so that its edges enter grooves D in the upper surface of the block. Another part E of each contact plate is bent upward to lie against the end face of the block, and to the parts E of the contact plates the ends of the fuse strip F are electrically connected in any suitable way.

As shown in Figs. 1, 2, 3 and 4, the body portion of the fuse case is made of a rectangle of reticulated or woven metal, such as wire gauze network, preferably bent in tubular form and secured at its edges by solder or any other convenient means. In Figs. 1 and 2, a single sheet G of such metal forms the fuse case, and is secured between the end pieces A, B by means of metal rods H, I soldered to the exterior of said case on opposite sides thereof. Said rods are shouldered at J to bear against the inner faces of the end pieces and extend through openings in said end pieces, being finally secured by bending over their extremities, as shown at K, in Figs. 1 and 4. Within the case and embedding the fuse is placed refractory insulating material in comminuted form, the particles of said material being sufficiently large not to pass through the reticulations of the case.

In Fig. 3 is shown a modification, in which the rods H, I are secured to the inside of the case, which is provided with an inner tube or lining L of paper or the like. In this construction, the particles of the filling may be as fine as desired.

In the form shown in Figs. 4 and 5, two tubular cases of reticulated material G, G′ are exhibited, one being placed within the other, and the supporting rods H, I are disposed between said cases. In this modification I have shown no filling material, the fuse strip F being provided with a covering M of asbestos paper or similar material.

In the modification illustrated in Fig. 6, two tubular fuse cases are also employed, the outer case N being made of any suitable insulating material—preferably refractory, such as porcelain—in which are formed openings O, and the inner case G being of reticulated material. The connecting rods H, I are omitted in this figure.

Upon the explosion of the fuse, in any of the above-described forms, the flame is screened from reaching exterior objects by the wall or closure of reticulated metal,

while the gas pressure is relieved by escape through the interstitial spaces in said wall or closure.

I claim:

1. An electric fuse case comprising end pieces of refractory material, a tube of reticulated material, and securing rods extending between and engaging with said end pieces.

2. An electric fuse case comprising end pieces of refractory material, a tube of reticulated material, and securing rods attached to said tube, extending between and engaging with said end pieces.

3. An electric fuse case comprising two tubes of reticulated metal disposed one within the other.

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

THOMAS E. MURRAY.

Witnesses:
MAY T. MCGARRY,
JNO. A. MCKEON.