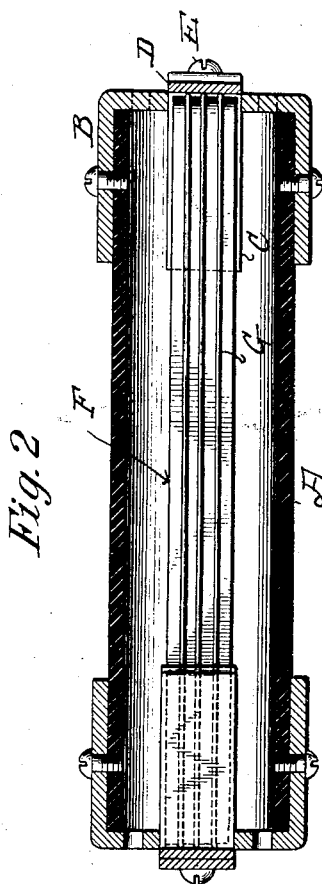
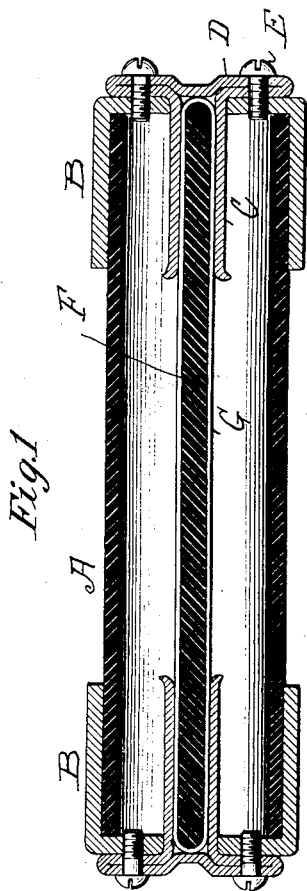
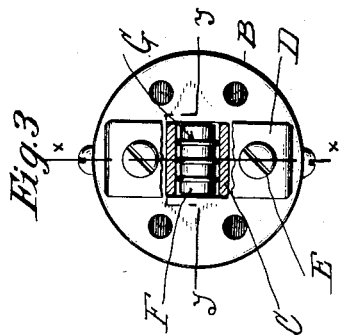


T. E. MURRAY.
ELECTRIC FUSE.
APPLICATION FILED MAR. 28, 1914.

1,132,674.

Patented Mar. 23, 1915.



Witnesses:
May T. Murray
Pauline M. Abel

Inventor
Thomas E. Murray
By His Attorney
Lamb & Benjamin

UNITED STATES PATENT OFFICE.

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

ELECTRIC FUSE.

1,132,674.

Specification of Letters Patent.

Patented Mar. 23, 1915.

Application filed March 28, 1914. Serial No. 827,861.

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 of the cartridge type, and has for its object to simplify and cheapen the construction.

The invention consists in the construction more particularly pointed out in the claims, whereby both the fuse and the holding clips are wholly inclosed in the case and whereby said clips and fuse can be removed from said case without taking off the end caps.

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 similar section on the line *y, y* of Fig. 3. Fig. 3 is an elevation with the middle portion broken away to show the end of the fuse carrier.

Similar letters of reference indicate like parts.

The cylindrical case A is of fiber or other insulating material, and is provided with metal end caps B. In each cap is an opening to receive a metal clip. Said clips are formed integrally by bending a strip of metal so as to produce a double two-armed head portion D and protruding parallel arms C. The arms C are introduced into the case through the cap openings, and the head D lies against the outer face of the cap to which it is secured by screws E.

The fuse strip carrier F is a bar of insulating material having preferably rounded ends. The fuse strip G is endless and forms a band extending along both sides of the bar and around the curved ends. There may be a plurality of such strips, parallel to one another, as shown in Figs. 2 and 3. The bar is made of such length as that its ends may be seated between the pairs of arms

C on the clips, which make contact with said fuse strip, or strips. The clips are removable from the end caps, by taking out the screws E, and thus easy access to the carrier F is had for substitution of a new fuse strip, or strips, after blowing.

I claim:

1. A case, end caps thereon having openings, a fuse carrier, and T-shaped clips having their separated arms entering said openings and receiving the ends of said fuse carrier and their cross bars extending over the outer faces of said caps and closing said openings.

2. A case, end caps thereon having openings, a fuse carrier, and T-shaped clips integrally formed of bent sheet metal having their separated arms entering said openings and receiving the ends of said fuse carrier and their cross bars extending over the outer faces of said caps and closing said openings.

3. A case, end caps thereon having openings, a bar of insulating material, a fuse strip wound in a plurality of parallel turns longitudinally upon said bar, and T-shaped clips having their separated arms entering said openings, contacting with said parallel turns and having their cross bars extending over the outer faces of said caps and closing said openings.

4. A case, end caps thereon having openings, an elongated fuse carrier, an endless fuse longitudinally inclosing said carrier, and T-shaped clips having their separated arms entering said cap openings and their cross bars extending over the outer faces of said caps and closing said openings: the said fuse at the ends of said carrier contacting with said clip arms and cross bars.

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

THOMAS E. MURRAY.

Witnesses:

GERTRUDE T. PORTER,
MAY T. MCGARRY.