

1,016,646.

Fig. 2.

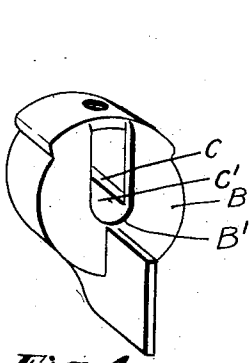


Fig. 4.

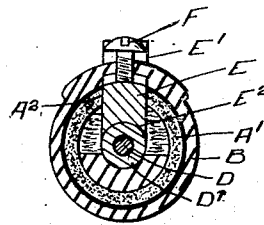


Fig. 5.

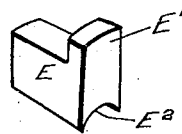
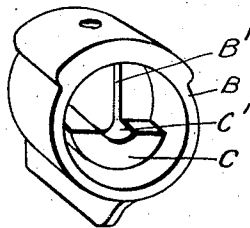


Fig. 6.

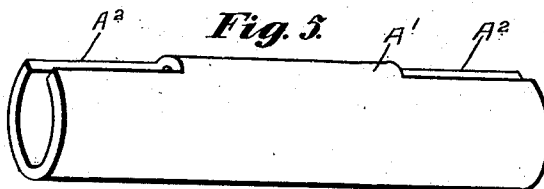


Fig 7.

WITNESSES.
R. H. Davis
H. Preston

INVENTOR
F.W.A. Schneider

By
Thos. B. Fetherstonhaugh
Atty.

UNITED STATES PATENT OFFICE.

FREDERICK WILLIAM AUGUST SCHNEIDER, OF TORONTO, ONTARIO, CANADA.

ELECTRIC CARTRIDGE-FUSE.

1,016,646.

Specification of Letters Patent.

Patented Feb. 6, 1912.

Application filed June 6, 1911. Serial No. 631,601.

To all whom it may concern:

Be it known that I, FREDERICK WILLIAM AUGUST SCHNEIDER, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Electric Cartridge-Fuses, of which the following is the specification.

My invention relates to improvements in electric cartridge fuses, and the object of the invention is to devise a form of fuse of this class, which should the fuse be burned out it may be replaced with facility without destroying the cartridge itself and also obviate the expense of buying complete new cartridge fuses.

A further object is to make the fuse readily separable, so that it can be easily inspected.

My invention consists of a cartridge fuse comprising the cylindrical shell having end notches, end caps for the same provided with end slots opposite the notches in the cartridge and a grooved plug at each end fitted into the end of the cartridge opposite the notch, the fuse fitting at each end into the groove of the plug, and a retaining block provided with a groove to fit the end of the fuse opposite the groove in the plug and designed to fit into the end slot of the cap and end notch of the cartridge proper and be held therein by a screw the parts being otherwise constructed and arranged in detail as hereinafter more particularly explained.

Figure 1, is a perspective view showing my improved cartridge fuse. Fig. 2, is a longitudinal section through the cartridge. Fig. 3, is a cross section through the cartridge and end cap. Fig. 4, is a perspective detail looking at the outer end of the cap. Fig. 5, is a view of the end cap looking at it from the inside. Fig. 6, is a perspective detail of the retaining block. Fig. 7, is a view of the cylindrical portion of the cartridge.

In the drawings like letters of reference indicate corresponding parts in each figure.

A is a cartridge fuse of which A' is the shell or cylindrical portion of the cartridge, which is made in the usual manner of non-insulating material, such as red fiber, and is provided with end notches A².

B are the end caps, the cylindrical portion

of which fits over the cylindrical portion of the ends of the shell A'.

C are plugs fitting within the shell A' at the end and abutting the ends of the end caps. The plugs are provided with grooves C'.

D is the fuse, which is made as usual of lead or other suitable material and is provided with end collars D' preferably of comparatively harder metal than the fuse proper D, such as brass. The ends of the collars D' of the fuse D extend through the rounded lower end of the slot B' formed at the end of the caps B.

E are detachable plugs provided with end lips E', whereby they may be readily removed. The plugs E are provided with a groove E² at the lower side which closely fits the upper end of the collar D' at the end of the fuse D being of the same arc as the collar. I provide set screws F for holding the detachable plugs E in position against the collar, so as to insure a perfect contact between the end of the fuse and the cap.

It will be noticed that the lip E' extends up through the top edge of the slot B'. The face caps B are shown in Fig. 1 provided with knife ends B³, which are used, of course, in some instances where the main circuit wires extend to jaws in which the knife form of connection is used. In many types of cartridge fuses the knife ends B³ are not utilized, especially in the smaller type of electric cartridge fuses.

G is a filling of asbestos fiber or other suitable material extending around the fuse D and filling the cartridge between the plugs.

Having now described the principal parts involved in my invention I shall briefly describe its operation and utility. Should the fuse be burned and it is desired to substitute a new fuse all it is necessary to do is loosen the set screws F and withdraw the detachable plugs E and pour out the filling G and remove the fuse and substitute another one in its place. The plug E is then placed back in position and the set screws F tightened up again.

It will, of course, be necessary to loosen one end plug E and remove the other in order to insure the removal of the fuse. It will also be readily seen that if it should be desired to inspect my cartridge fuse this

may be done with facility by removing one of the end plugs and loosening the other and cap and pouring out the contents G.

What I claim as my invention is:

5. 1. The combination with the non-conducting shell having end notches and the caps having end slots, of plugs in the cap provided with a groove, a fuse having ends fitting in the grooves in the plugs and detachable means for holding the fuse in contact with the plugs as and for the purpose specified.
- 10 2. The combination with the non-conducting shell having end notches and the caps having end slots, of plugs in the caps provided with a groove, a fuse having ends fitting in the grooves in the plugs, and detachable plugs provided with a grooved side to fit against the ends of the fuses and means
- 15 for holding the detachable plugs in place as and for the purpose specified.
- 20 3. The combination with the non-conducting shell having end notches and the caps

having end slots, of plugs in the cap provided with a groove, a fuse having ends fitting in the grooves in the plugs, and detachable plugs provided with a grooved side to fit against the ends of the fuse, and end lips projecting beyond the wall of the cap, and means for holding the detachable plugs in place, as and for the purpose specified.

4. The combination with the non-conducting shell having end notches and the caps having end slots, of plugs in the cap provided with a groove, a fuse having ends fitting in the grooves in the plugs, and detachable plugs provided with a grooved side to fit against the ends of the fuse, and end lips projecting beyond the wall of the cap, and set screws for holding the detachable plugs in place as specified.
- 35
- 40

FREDERICK WILLIAM AUGUST SCHNEIDER.

Witnesses:

B. BOYD,

H. PRESTON.

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