No. 796,271. PATENTED AUG. 1, 1905.

K. WIESER.

DEVICE FOR SECURING METALLIC PROTECTING CAPS TO FUSES.

APPLICATION FILED JUNE 16, 1904.

Fig. 1.

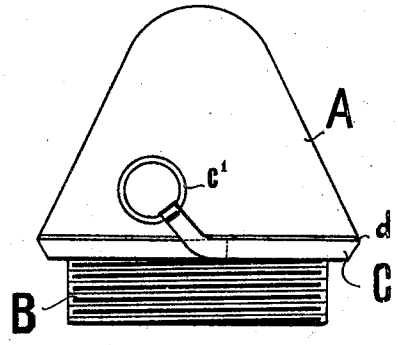


Fig. 2.

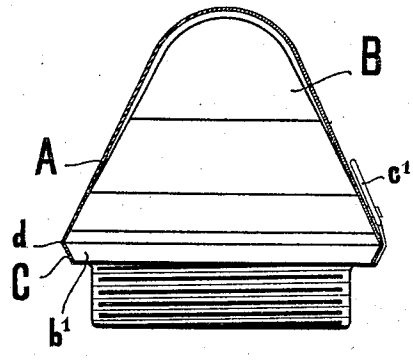


Fig. 3.

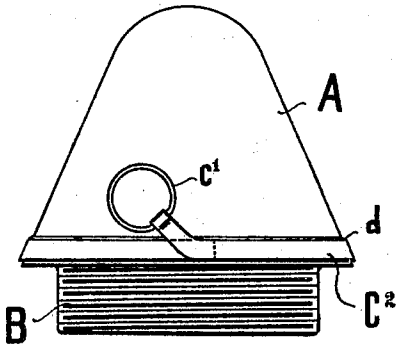


Fig. 4.

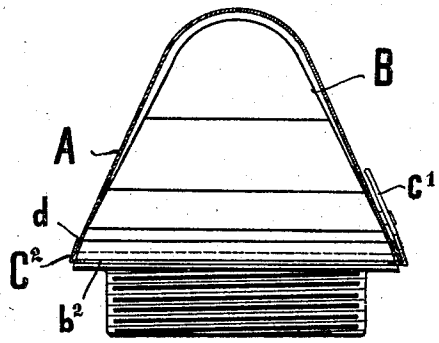


Fig. 5.

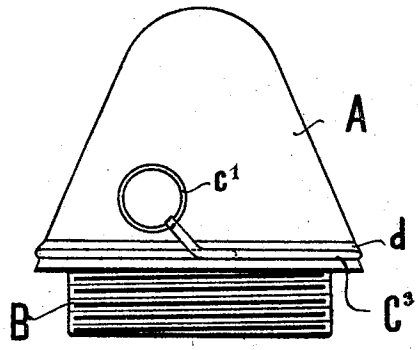
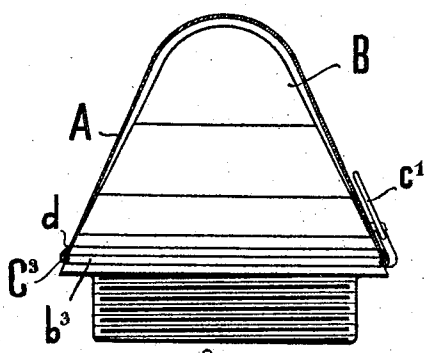


Fig. 6.



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DEVICE FOR SECURING METALLIC PROTECTING-CAPS TO FUSES.

No. 796,271. Specification of Letters Patent. Patented Aug. 1, 1905.

Application filed June 16, 1904. Serial No. 212,901.

To all whom it may concern:

Be it known that I, KARL WIESER, a subject of the Emperor of Germany, and a resident of Rüttenscheid, near Essen-on-the-Ruhr, Germany, have invented certain new and useful Improvements in Devices for Securing Metallic Protecting-Caps to Fuses, of which the following is a specification.

This invention relates to devices for securing metallic protecting-caps to the fuse independently of the projectile in such a manner as to make it possible to store and convey the capped fuse separated from the projectile. If in such devices a metallic ring adapted to be torn off is used for securing the protecting-cap to the fuse, great difficulties arise in connecting such ring with the fuse-body, as it is impossible to obtain any sufficiently durable connection by using adhesives (such as shellac, &c.) by reason of the limited space. Furthermore, when the outer parts of the fuse are made of aluminium it seems impossible to solder the ring to the fuse-body. The present invention has for its object to overcome the said difficulties by engaging the removable metallic ring which forms the connection between the cap and the fuse-body with an undercut in the fuse-body.

In the annexed drawings, Figure 1 is a side view of one embodiment of my invention, the cap being placed on the fuse. Fig. 2 is a side view of the fuse with the cap, the latter in section. Figs. 3, 4, 5, and 6 are views similar to Figs. 1 and 2, but showing other embodiments of my invention.

The protecting-cap is preferably constructed of sheet metal and has an oval shape conforming to that of the fuse.

In the embodiment represented in Figs. 1 and 2 the lower part (the fuse-shoulder) of the fuse B is provided with a conical slope b', which is covered by a narrow ring C of sheet metal. One end of the ring C is bent upwardly and terminates in a loop c'. The ring is at its upper edge soldered (at d) to the protecting-cap A. The ring and the part of the cap that covers the lower part of the fuse thus keep the cap firmly to the fuse B.

In the embodiment represented in Figs. 3 and 4 a narrow groove b^2 is cut in the outer face of the fuse-shoulder at its lower terminus. The sheet-metal ring C^2 is in this instance of L-shaped section, one of its arms engaging the groove b^2, while the other arm is soldered to the cap, (at d.) The upwardly-bent end of the ring C^2 terminates in a loop c', and also in this instance the protecting-cap A is held firmly to the fuse B by means of the groove b^2 and the ring-arm engaging the same.

In the embodiment shown in Figs. 5 and 6 a groove b^3 is turned in the outer face of the fuse-body near its lower extremity. The groove b^3 is of semicircular section, and a wire ring C^3, one end of which terminates in a loop c', rests in this groove. The ring C^3 is also in this instance soldered to the edge of the protecting-cap (at d) and secures the same firmly to the fuse B.

In order to separate the protecting-cap from the fuse, the loop c' of the ring C (C^2 C^3) is grasped, and the ring is separated from the cap and from the fuse by a pull tangential to the periphery of the fuse. During the last part of the separating movement of the ring the resistance of the solder is greater than the force that holds the cap and the remaining portion of the ring to the fuse. Consequently the separation of the ring from the fuse results in the removal of the cap, and no special manipulation for this purpose is required.

As the cap proper need not be torn open, the separation can be easily and rapidly effected, and the cap can be constructed of rather strong sheet metal. The possibility of making the cap of strong sheet metal is very important, as thin-walled protecting-caps cannot stand transportation. By reason of the direct connection of the ring with the fuse no parts of the protecting-cap or of the securing means remain on the fuse when the cap is torn off, and a bad influence on the flight of the projectile is thus avoided.

I desire it to be understood that I may make various changes in form, proportion, and minor details without departing from the spirit of my invention.

Having described my invention, what I claim is—

1. In a fuse, the combination with the fuse-body having an undercut near the lower extremity thereof, of a protecting-cap adapted to fit over the fuse and a band secured by a weakened connection to and surrounding the

lower edge of said cap and engaging said undercut to form a means for securing the cap to the fuse.

2. In a fuse, the combination with the fuse-body having a circumferential undercut near the lower extremity thereof, of a protecting-cap adapted to fit over the fuse, and a band secured by a weakened connection to the cap around the lower edge thereof and engaging said undercut to form a means for securing the cap to the fuse.

3. In a fuse, the combination with the fuse-body having an undercut near the lower extremity thereof, of a protecting-cap constructed of a single piece of sheet metal and adapted to fit over the fuse, and a band secured by a weakened connection to and surrounding the lower edge of said cap and engaging said undercut to form a means for securing the cap to the fuse.

4. In a fuse, the combination with the fuse-body having a circumferential undercut near the lower extremity thereof, of a protecting-cap constructed of a single piece of sheet metal and adapted to fit over the fuse, and a band secured by a weakened connection to the cap around the lower edge thereof and engaging said undercut to form a means for securing the cap to the fuse.

5. In a fuse, the combination with the fuse-body having a circumferential undercut near the lower extremity thereof, of a protecting-cap constructed of a single piece of sheet metal and adapted to fit over the fuse, and a band secured by a weakened connection to the cap around the lower edge thereof, and engaging said undercut to form a means for securing the cap to the fuse, said band having a free end extending outside of the cap and terminating in a loop for tearing off the band.

6. In a fuse, the combination with the fuse-body having a circumferential undercut near the lower extremity thereof, of a protecting-cap constructed of a single piece of sheet metal and adapted to fit over the fuse, and a sheet-metal band soldered to said cap along its lower edge and engaging said undercut to form a means for securing the cap to the fuse.

The foregoing specification signed at Düsseldorf this 31st day of May, 1904.

KARL WIESER.

In presence of—

PETER LIEBER,

WILLIAM ESSENWEIN.