May 15, 1923. 1,455,741

E. J. T. WENNERSTRÖM

FUSE

Filed June 9, 1922

Fig. 1.

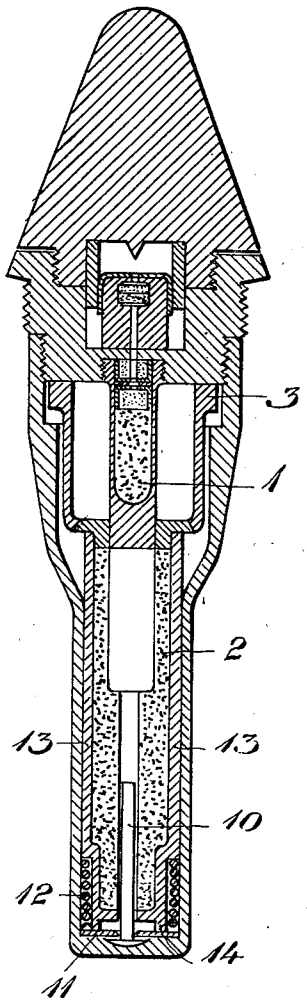
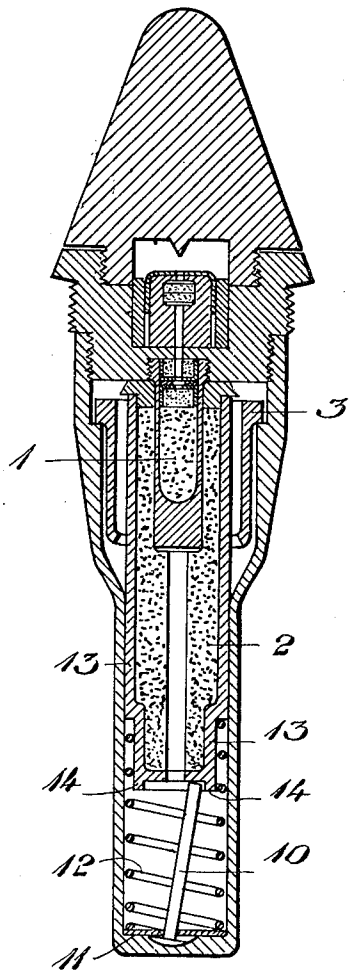


Fig. 2.



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FUSE.

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To all whom it may concern:

Be it known that I, ERNST JOHAN TORSTEN WENNERSTRÖM, subject of the King of Sweden, residing at Bofors, Sweden, have invented certain new and useful Improvements in Fuses, of which the following is a specification.

The present invention has for its object an improvement in fuses in which, the primer and detonator shell initially occupy a safety position relative to each other, and more especially to a locking device, which after the primer has been brought into a firing position in relation to the detonator shell, locks the primer or the detonator for maintaining them in such a position.

Locking devices are already known and consist generally of balls, movably arranged in the upper part of the casing containing the spring for propelling the primer or the detonator shell. In such an arrangement it is evident the spring-casing must be longer than the compressed spring, whereby the length of the fuses is increased.

According to the present invention a very simple locking device is obtained, which does not necessitate any increase in the size of the fuse. The invention is characterised by the fact that that part, which after the primer and the detonator shell have been brough into firing position in relation to each other, is to be locked, in the safety position encloses an axial bolt which after the primer or the detonator shell has been brought into firing position falls wholly outside the said part and by centrifugal force is caused to move laterally outward, forming a shoulder for the part and preventing it from moving back to safety position.

In the accompanying drawing the invention is illustrated.

Fig. 1 is a vertical section through a fuse with the detonator in a safety position before the discharge of the gun and Fig. 2 is a similar section showing the position of the different parts after the discharge of the gun.

Referring to the drawings, 1 designates the primer and 2 the detonator shell, said shell being maintained in safety position relatively to the primer, that is to say, with the primer entirely out of the cavity in the shell, by means of a locking ring 3, as shown in Fig. 1. As soon as the shell is discharged from the gun, the detonator shell, together with its locking ring 3, is thrown backward against the tension of the spring 12, due to the force of inertia, whereupon the spring 12 exerts its tension on the detonator shell and forces it forward through the locking ring to the position shown in Fig. 2. This movement releases a bolt 10 the body of which is housed within a longitudinally extending opening at the center of the detonator shell, said bolt being held against forward movement by means of a plate 11 through which it passes, said plate forming an abutment for the lower end of the spring 12. As soon as the detonator shell has moved forward sufficiently far to release the bolt from the central opening thereof, said bolt will fall toward the side of the shell until its free end contacts with the inner side of an annular boss or flange 14 formed at the lower end 13 of the detonator shell, as shown in Fig. 2. It will be readily seen that with the bolt in this position the shell is held against returning to its initial position.

Having now particularly described the nature of my invention and the manner of its operation, what I claim is:

1. A fuse, comprising a pair of firing members one movable relatively to the other for exploding a charge, said members initially occupying a safety position relative to each other, means releasable under the force of inertia for bringing said members into firing position, and an axially extending bolt housed within one of said members when in safety position, said bolt being adapted to be withdrawn from said member and abut the rear end thereof when the members are in firing position thereby to prevent the return of the members to safety position.

2. A fuse, comprising a primer and a detonator shell initially occupying a safety position relative to each other, means releas-

able under the force of inertia for moving said detonator shell into firing position relatively to the primer, and an axially extending bolt housed within said detonator shell when in safety position, said bolt being adapted to be withdrawn from the detonator shell and abut the rear end thereof when the primer and detonator shell are in firing position thereby to prevent the return of the detonator shell to safety position.

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

ERNST JOHAN TORSTEN WENNERSTRÖM.

Witnesses:

G. CARLIN,

C. GUSTAVSON.