Feb. 23, 1926.

1,573,914

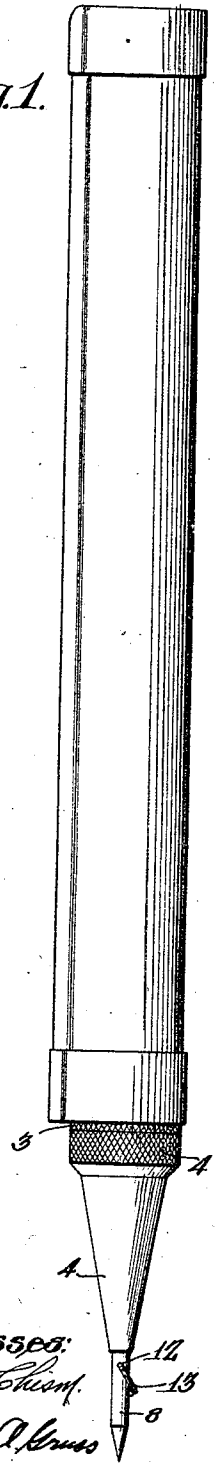
A. CIMOROSI

FUSE

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2 Sheets-Sheet 1

Fig. 1.



Witnesses:
Walter Chism.
George A. Gruss

Fig. 2.

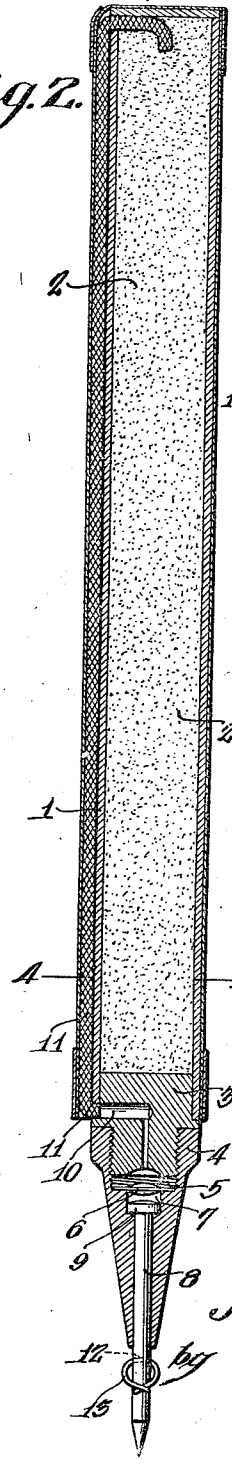
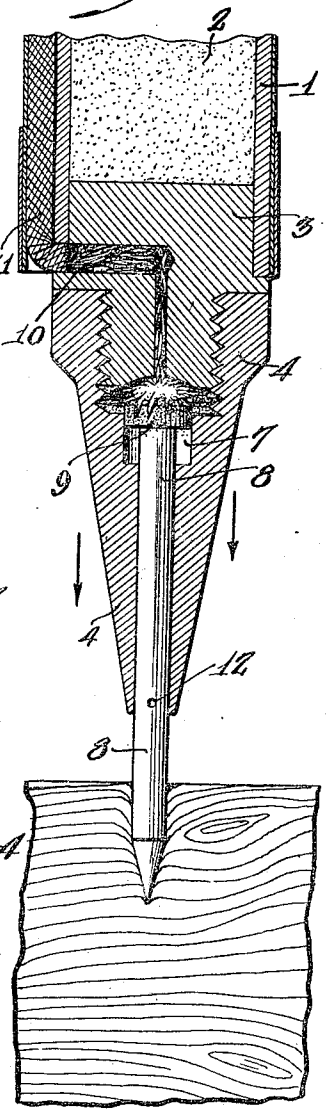


Fig. 3.



Inventor:
Alberto Cimorosi.
Joshua R. H. Potts
his Attorney

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A. CIMOROSI

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Fig.4.

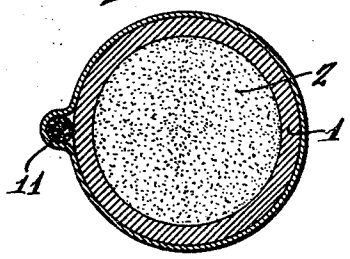


Fig.5.

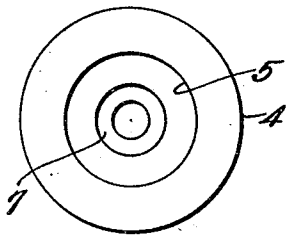


Fig.6.

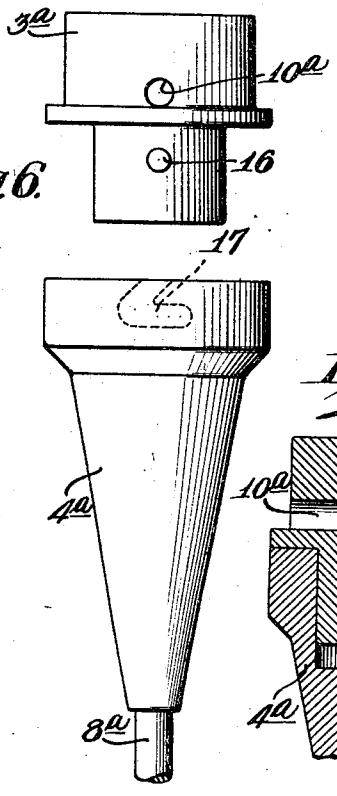


Fig.7.

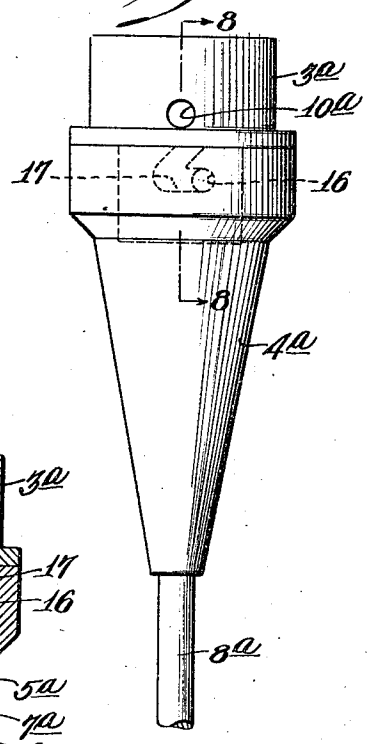
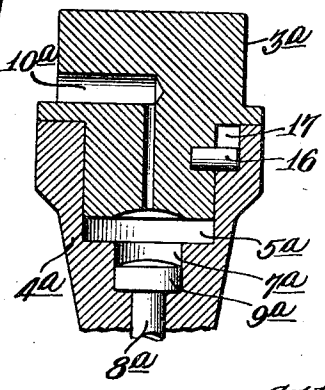


Fig.8.



Witnesses:
Walter Chism.
George A. Gruss

Inventor
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by Joshua R. H. Potts
his Attorney.

Patented Feb. 23, 1926. 1,573,914

UNITED STATES PATENT OFFICE.

ALBERTO CIMOROSI, OF ELKTON, MARYLAND.

FUSE.

Application filed June 9, 1925. Serial No. 35,871.

To all whom it may concern:

Be it known that I, ALBERTO CIMOROSI, a subject of the King of Italy, residing at Elkton, in the county of Cecil and State of Maryland, have invented certain new and useful Improvements in Fuses, of which the following is a specification.

My invention relates to fuses and its objects are to provide a fuse which will be automatically ignited by the impact received when thrown against an object; which may be readily assembled, and which may be locked to prevent accidental ignition from impacts received in handling. These objects, and other advantageous ends which will be described hereinafter, I attain in the following manner, reference being had to the accompanying drawings in which—

Figure 1 is a side elevation of a fuse made in accordance with my invention,

Figure 2 a central section through the fuse shown in Figure 1 illustrating the plunger in another position,

Figure 3 an enlarged fragmentary view of Figure 2 illustrating the igniting action of the fuse,

Figure 4 a section on line 4—4 of Figure 2,

Figure 5 a top plan view of an element shown in Figure 1,

Figure 6 a fragmentary view of a modified form of the igniting elements shown in Figure 1 showing them detached,

Figure 7 a similar view showing the elements attached, and

Figure 8 a section on line 8—8 of Figure 7.

Referring to the drawings, and especially to Figures 1 to 5, the fuse includes a tube 1, filled with a readily ignitible material 2 which will produce a readily visible flame, preferably colored. The tube is mounted upon a stud 3 to which is threaded a plunger guide 4 having a cavity 5, adapted to receive an igniting cap 6, and a cavity 7 adapted to slidably receive the head 9 of a plunger 8. The ignition cap is of the type which explodes by impact and is preferably of the detonator type. Stud 3 has a passage 10 leading from cavity 5 and a fuse 11 leads outside the tube from passage 10, to and into the other end of the tube. Plunger 8 extends outside its guide 4, is pointed at its outer end and has a transverse hole 12 adapted to receive a ring 13 or other removable stop element which normally locks the plunger against inward movement.

In Figures 6 to 8 I have shown a fuse like that shown in Figures 1 to 5 except the means for connecting the stud and the plunger guide and I have given the corresponding parts like reference numerals with the exponent "a". In this form, the connection between the stud and the guide is made by a pin 16 extending from the stud into a slot 17 in the guide.

The fuse is assembled by fixing the tube to the stud, charging the tube with the combustible, connecting the fuse with the passage in the stud and with the combustile material at the flame end of the tube, placing the plunger in its guide, placing an ignition cap in the cap cavity, placing the locking element in the plunger and securing the plunger to the stud.

For use, as a railway signal for instance, the locking element is removed from the plunger and the fuse thrown, plunger foremost, to the ground. The point of the plunger will be imbedded in the earth and hold the fuse in a substantially upright position, its impact will force the plunger head against the ignition cap and the cap against the stud, thereby exploding the cap. The flame due to the explosion will ignite the fuse and the fuse will ignite the combustible material in the flame end of the tube.

The stop element precludes accidental impact of the plunger against the explosive cap until demand for use of the fuse arises.

While I have described my invention as taking a particular form, it will be understood that the various parts may be changed without departing from the spirit thereof, and hence I do not limit myself to the precise construction set forth, but consider that I am at liberty to make such changes and alterations as fairly come within the scope of the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. A fuse including a tube; combustible material in the tube; a rigid stud connected to one end of the tube and having a passage leading outside the tube; a plunger guide detachably connected with the stud and providing a cavity adapted to receive an explosive cap; a plunger slidable in the guide and having a head adapted to engage the

cap, and a fuse connected with the passage in the stud and with the combustible material at the flame end of the tube.

2. A fuse including a tube; combustible material in the tube; a rigid stud connected to one end of the tube and having a passage leading outside the tube; a plunger guide detachably connected with the stud and providing a cavity adapted to receive an explosive cap; a plunger slidable in the guide and having a head adapted to engage the cap, and a fuse connected with the passage in the stud leading outside the tube and connected with the combustible material in the flame end of the tube.

3. A fuse including a tube; combustible material in the tube; a rigid stud connected to one end of the tube and having a passage leading outside the tube; a plunger guide detachably connected with the stud and providing a cavity adapted to receive an explosive cap; a plunger slidable in the guide and having a head adapted to engage the cap; a fuse connected with the passage in the stud and with the combustible material at the flame end of the tube, and means for locking the plunger against accidental movement.

4. A fuse including a tube; combustible material in the tube; a rigid stud connected to one end of the tube and having a passage leading outside the tube; a plunger guide detachably connected with the stud and providing a cavity adapted to receive an explosive cap; a detonating cap, explosible by impact, in the cavity; a plunger slidable in the guide and having a head adapted to engage the cap, and a fuse connected with the passage in the stud and with the combustible material at the flame end of the tube.

In testimony whereof I have signed my name to this specification.

ALBERTO CIMOROSI.