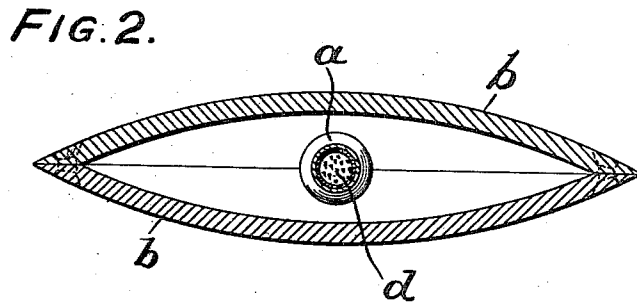
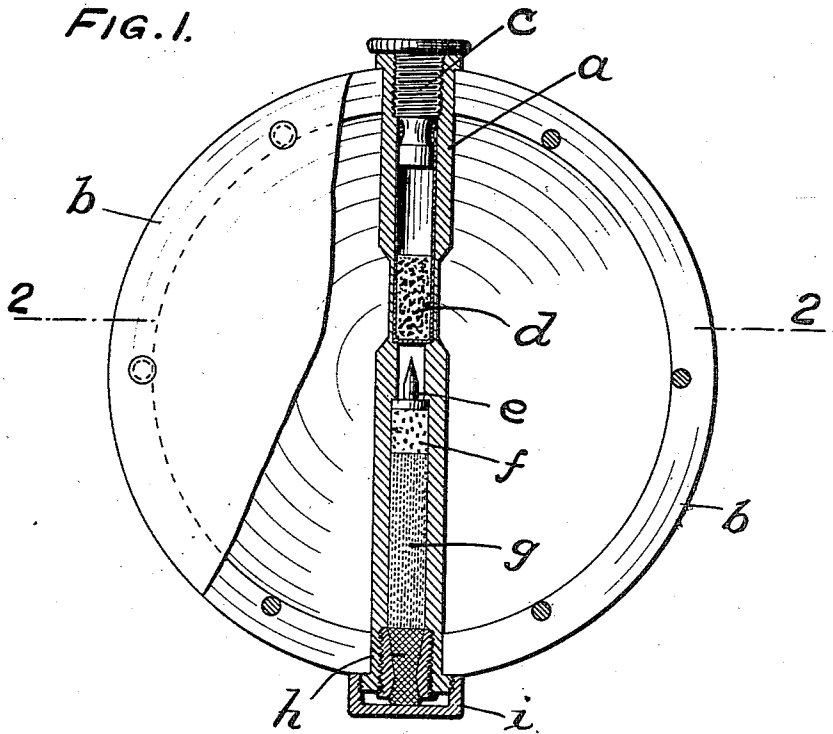


E. SOKOLOWSKI.
DETONATOR FOR HAND GRENADES.

APPLICATION FILED JAN. 13, 1912. RENEWED SEPT. 9, 1912.

1,041,894.

Patented Oct. 22, 1912.



WITNESSES:

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DETONATOR FOR HAND-GRENADES.

1,041,894.

Specification of Letters Patent.

Patented Oct. 22, 1912.

Application filed January 13, 1912, Serial No. 671,115. Renewed September 9, 1912. Serial No. 719,444.

To all whom it may concern:

Be it known that I, ERNST SOKOLOWSKI, a subject of the Emperor of Germany, residing at Hamburg, Germany, have invented a new and useful Improvement in Detonators for Hand-Grenades, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

The subject matter of this invention is a detonator for hand grenades, consisting of a tube into which is rigidly placed from one side a pin with a small propelling charge and behind this a column of a slowly burning igniting mixture and an igniter with a protecting screw cover, while from the other side a screw is introduced to which the detonating cap is fastened shortly before the grenade is used.

The purpose of this invention is to render possible that the caps be carried separately from the grenades, due to the fact that in accordance with certain railroad regulations it is not permitted to ship caps in contact with charges exceeding 20 gr.

I will now describe the embodiment of my invention shown in the accompanying drawings, in which—

Figure 1 is an elevation principally in central section of a hand grenade embodying my invention. Fig. 2 is a cross section on line 2—2, Fig. 1.

The tube *a*, made for instance of brass, runs through the two parts *b* of a discus grenade provided with suitable openings in such manner that after these two parts have been riveted together the tube is tightly surrounded by the same. Into this tube *a* the cap screw *c* to which the cap *d* is fastened, is introduced shortly before the grenade is used.

At the place where the cap rests, the walls of the tube *a* may be weakened so as to facilitate the propagation of the detonation upon the surrounding explosive charge of the projectile. Toward the center, the inside diameter of the bore of the tube *a* becomes narrow, expanding in the direction of the other side. This part serves for the purpose of receiving the pin *e* which, by means of a small propelling charge *f*, after the same has been ignited, is driven into the cap, thus detonating the latter. On the other side of the propelling charge is the

igniting mixture *g*, which burns with a determined slow speed. The speed of burning of this mixture is regulated by means of pressing. For the purpose of igniting the igniting mixture *g*, a short column of another igniting mixture *h* is provided, this latter igniting mixture being ignited in any desired manner from the outside, after the screw cover *i*, which protects same, has been removed before the grenade is thrown.

Having now fully described my invention, what I claim and desire to protect by Letters Patent is:

1. A detonator for hand grenades, comprising a tube, a detonating cap adapted to be inserted and secured in said tube, a firing pin normally held in fixed position, a propelling charge for driving the pin into the cap, and an igniting mixture for igniting the propelling charge.

2. A detonator for hand grenades, comprising a tube, a detonating cap adapted to be inserted and secured in said tube, a firing pin normally held in fixed position, a propelling charge for driving the pin into the cap, an igniting mixture for igniting the propelling charge, and an igniter for igniting the igniting charge.

3. A detonator for hand grenades, comprising a tube, a detonating cap adapted to be inserted and secured in said tube, a firing pin normally held in fixed position, a propelling charge for driving the pin into the cap, an igniting mixture for igniting the propelling charge, an igniter for igniting the igniting charge, and a protecting cover for the igniter.

4. A detonator for hand grenades, comprising a tube, a firing pin, a propelling charge for the pin, and an igniting charge for igniting the pin propelling charge, the tube and cap being so constructed that the cap can be inserted and secured in position in line with the pin after assemblage of the detonator and grenade.

5. A detonator for hand grenades, comprising a tube, a firing pin, a propelling charge for the pin, an igniting charge for igniting the pin propelling charge, the tube and cap being so constructed that the cap can be inserted and secured in position in line with the pin after assemblage of the detonator and grenade, and an igniter for igniting the igniting charge.

6. A detonator for hand grenades, com-

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19. A detonator for hand grenades, comprising a tube, a detonating cap adapted to be inserted and secured in said tube, a firing pin normally held in fixed position, a propelling charge for driving the pin into the cap, and an igniting mixture for igniting the propelling charge, the wall of the tube at the detonating cap point being weakened, the inner wall of the tube being tapered and the firing pin secured at the taper point.

20. Detonator for hand grenades consisting of a tube into which is rigidly placed from one side a pin with a small propelling

charge and behind the same a column of a slowly burning igniting mixture, and an igniter together with a screw cover protecting same, while into the other side a screw with a detonating cap fastened to same is screwed in shortly before the grenade is used.

In testimony of which invention, I have hereunto set my hand, at Hamburg, on this 29 day of Nov., 1911.

ERNST SOKOLOWSKI.

Witnesses:

ERNEST H. L. MUMMENHOFF,
IDA CHRIST. HAUFERMAN.