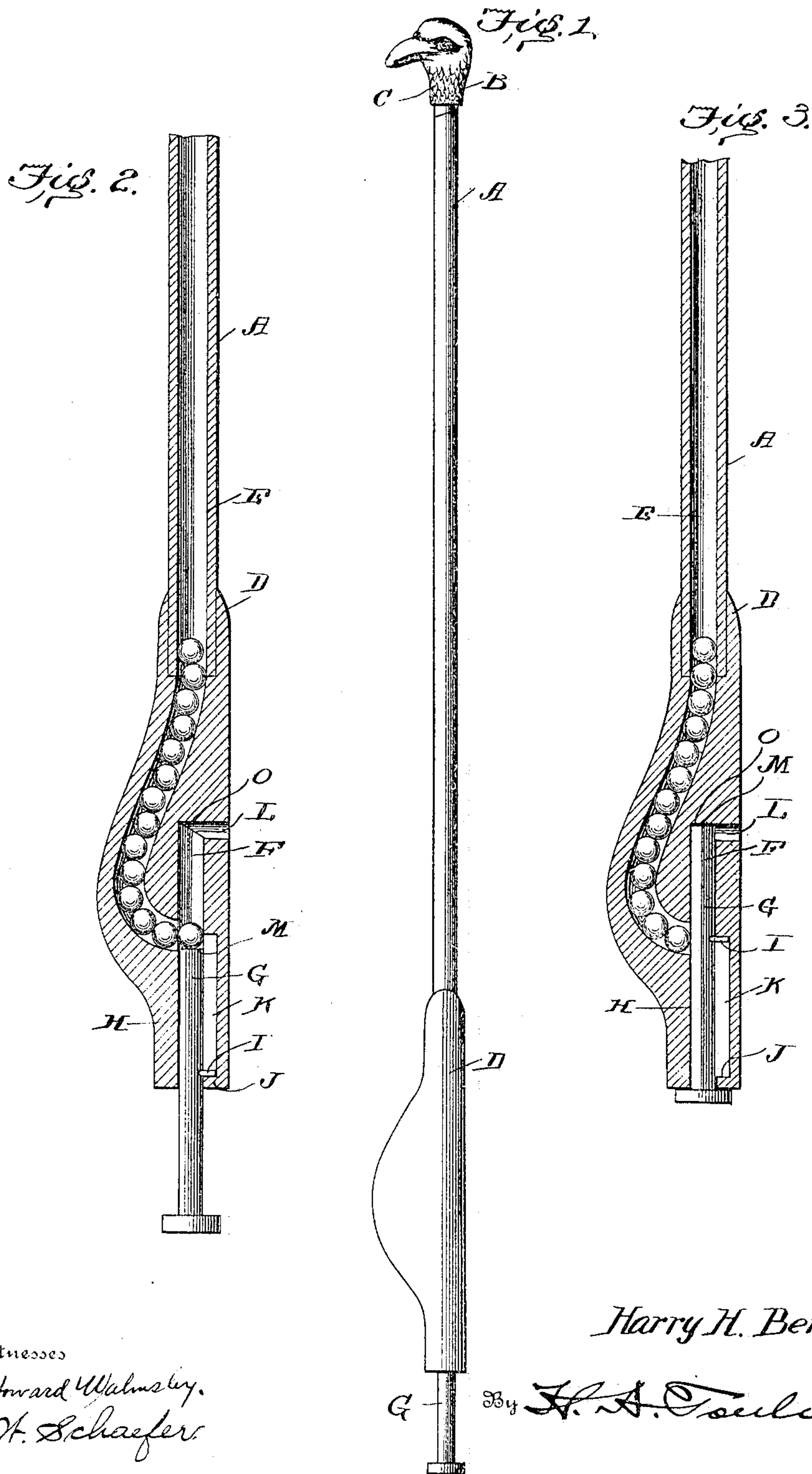


No. 801,567.

PATENTED OCT. 10, 1905.

H. H. BERNHARD.
REPEATING TORPEDO CANE.
APPLICATION FILED FEB. 4, 1904.



Witnesses
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UNITED STATES PATENT OFFICE.

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REPEATING TORPEDO-CANE.

No. 801,567.

Specification of Letters Patent.

Patented Oct. 10, 1905.

Application filed February 4, 1904. Serial No. 191,922.

To all whom it may concern:

Be it known that I, HARRY H. BERNHARD, a citizen of the United States, residing at Chico, in the county of Butte and State of California, have invented certain new and useful Improvements in Repeating Torpedo-Canes, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to a repeating torpedo-cane; and the object of the invention is to obtain extreme simplicity and fewness of the parts in the organization of the device.

In its broadest form the invention consists in a repeating exploder or cane comprising a body portion having a magazine therein, a passage-way freely communicating with the magazine intermediate the ends of the passage-way, an anvil located at one end of the passage-way, and a firing-pin adapted to reciprocate in the passage-way.

The invention further consists in a repeating exploder or cane comprising a body portion or explosion-head having therein a conduit or passage forming an extension of the magazine proper and so deflected or curved as to lead transversely into the passage-way in which the firing-pin reciprocates, while said firing-pin performs the double office of a valve and hammer or firing-pin, controlling the admission of the explosives into the passage-way in which it moves and serving to effect the explosion thereof.

The invention further consists in deflecting the magazine extension-passage of the explosion-head laterally outward with respect to the longitudinal central axis of the cane, thus rendering it possible to locate the explosion passage-way, in which the firing-pin reciprocates in axial alinement with the body of the cane, the magazine extension being curved inward below its outward curvature, so as to enter the explosion passage-way between the ends thereof.

In the accompanying drawings, forming a part of this specification and on which like reference characters indicate corresponding parts, Figure 1 is a side elevation of my device entire. Fig. 2 is a longitudinal sectional view of a portion of the cane and of the explosion-head with the firing-pin ready to be driven to effect an explosion; and Fig. 3, a like view with the parts in the exploding position, the firing-pin then acting as a valve to control the explosives.

The letter A designates the cane proper, which for purposes of my invention is preferably constructed of a steel tube having a suitable handle B and a screw or other cap C to close the orifice for feeding the explosives into the magazine. To the lower end of the cane proper or tube I secure in any convenient manner the explosion-head D, which consists of a cast-metal body having a magazine extension-passage E, into which the explosives feed by gravity from the magazine proper. This head extends sufficiently to one side to permit of the magazine-passage being first curved laterally outward and then curved inwardly, so as to effect a substantially lateral discharge of the explosives into the explosion passage-way F. A firing-pin G is adapted to slide up and down in this passage-way and in the bore H, or, what is the same thing, is adapted to have the explosion-head reciprocated over it. A stop-pin I on the firing-pin prevents its becoming dislodged by contacting with the shoulder J at the bottom of the seat or slot K in one side of the bore H, which seat or slot accommodates the pin I when the head and firing-pin are changing relative positions. At one side of the passage-way F a vent L is provided for the emission of the products of explosion. The top of the firing-pin constitutes an explosive anvil M, while the upper wall O of the passage-way F constitutes the other anvil, and between these anvils the explosives are conducted for explosion.

It will now readily be seen that when the firing-pin is allowed to drop into the position shown in Fig. 2 it permits one explosive to roll down on its top, where it is held by the adjacent wall of the head D. When the parts change position by striking the firing-pin on the ground or other fixed object and it passes the mouth of the magazine extension-passage E, it acts as a valve to hold back the remaining explosives. Thus the firing-pin literally performs the office of a valve and the office of assisting in exploding the torpedo, cartridge, or shell constituting the explosive. The device is automatic in the sense that as soon as the cane is lifted to clear the firing-pin it will drop to the position shown in Fig. 2, and thus recharge the explosion passage-way F.

The device is simple, is composed of essentially but three parts, and is very effective in its intended work—that of rapidly repeating

the firing of these explosives for purposes of amusement and for use in parades of a political or demonstrative character. I may add that one of the special features of my invention is the form and character of the explosion-head shown and described, whereby the explosives are led from the magazine of the cane down through the head, laterally somewhat and thence centrally, so as to enter practically crosswise into the explosion passage-way and over and upon the firing-pin.

It will be observed that in the form of my invention shown, which is that preferred, the firing-pin and the explosion passage-way in which it reciprocates are in axial alinement with the body of the cane, so that the thrust of the blows received by the lower end of the structure in causing the explosion is transmitted to the cane proper in a line which is central with relation thereto and which thus enables the structure to best withstand the thrust. This axial arrangement of the firing-pin and its passage-way is effected by the curvature of the magazine extension-passage first laterally outward and then inward in the manner described.

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

1. A repeating exploder, comprising a body portion having a magazine therein, a passage-way freely communicating with the magazine intermediate the ends of the passage-way, an anvil located at one end of the passage-way, and a firing-pin adapted to reciprocate in the passage-way.

2. In a repeating torpedo-cane, the combination, with a cane proper, a magazine, an explosion-head carried by the cane, a magazine extension-passage in said head laterally deflected at its lower end, and an explosion passage-way into which said magazine extension-passage opens, of a firing-pin mounted in the head and adapted to present an explosive to the point of firing and act as a valve to con-

trol the other explosives during that action, substantially as described.

3. In a repeating torpedo-cane, the combination, with a cane proper, a chamber constituting a magazine, an explosion-head carried by the cane and having a magazine extension-passage laterally deflected at its lower end, and an explosion passage-way into which said extension - passage opens, of a firing-pin mounted in said head and adapted to receive an explosive over the same when in one position, and to act as a valve for the other explosives when operating to fire the admitted explosive, substantially as described.

4. In a repeating torpedo-cane, the combination, with a cane proper, and a magazine, of an explosion-head carried by said cane and having a magazine extension-passage therein which is laterally deflected at its lower end, said explosion-head having a vertical passage-way in alinement with the cane proper, into which passage-way the magazine extension opens between its ends, an anvil located at one end of said passage-way, and a firing-pin adapted to reciprocate in said passage-way, substantially as described.

5. In a repeating torpedo-cane, the combination, with a cane proper having a hollow interior to constitute a magazine, of an explosion-head carried by said cane and having a magazine extension-passage curved first laterally outward and then inward, said head having an explosion passage-way in axial alinement with the body of the cane proper, into which passage-way the magazine extension opens between its ends, an anvil located at one end of said passage-way, and a firing-pin adapted to reciprocate in said passage-way, substantially as described.

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

HARRY H. BERNHARD.

Witnesses:

CREED GWYNN,
J. W. KERNS.