H. F. NEU.

TORPEDO CANE.

APPLICATION FILED JUNE 8, 1911.

1,025,010.

Patented Apr. 30, 1912.

2 SHEETS—SHEET 1.

Fig. 1

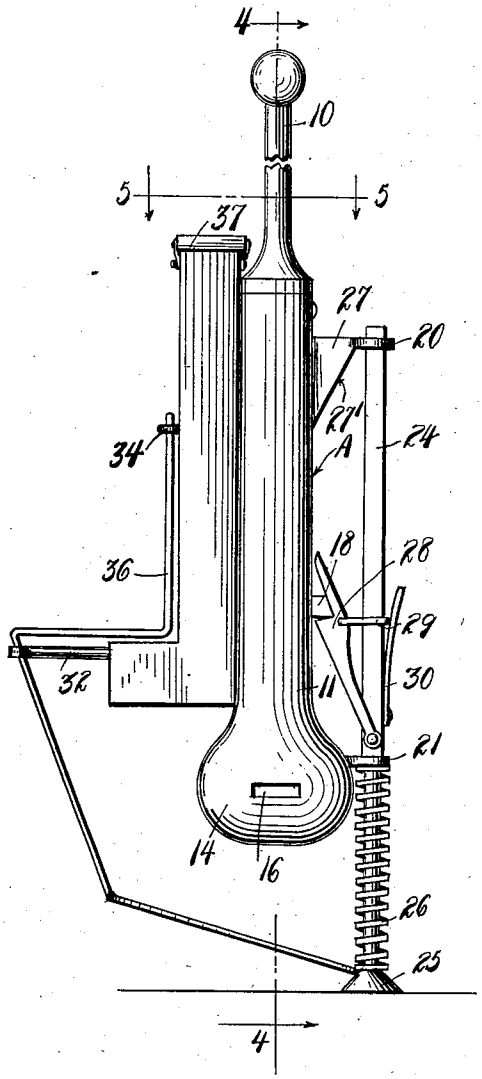


Fig. 2

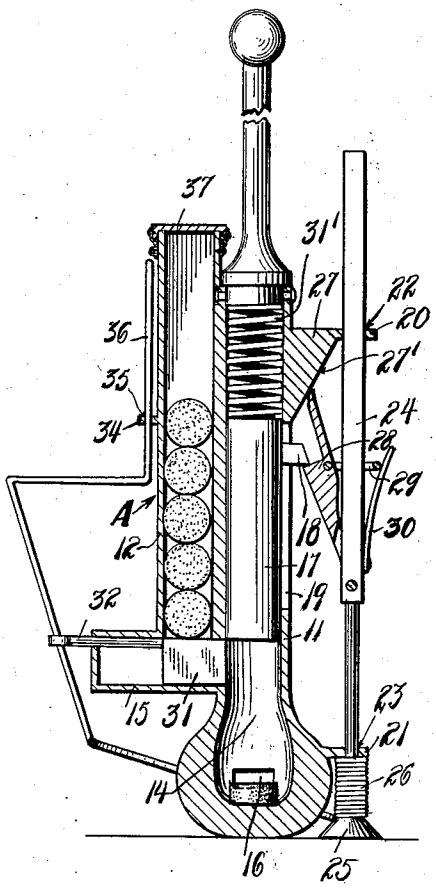
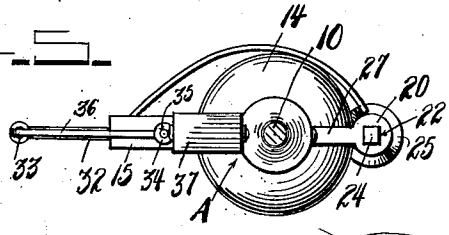


Fig. 3



Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

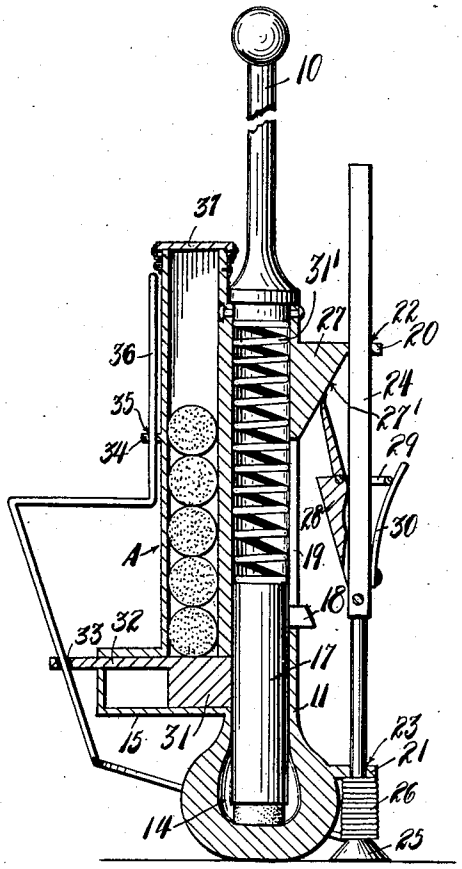
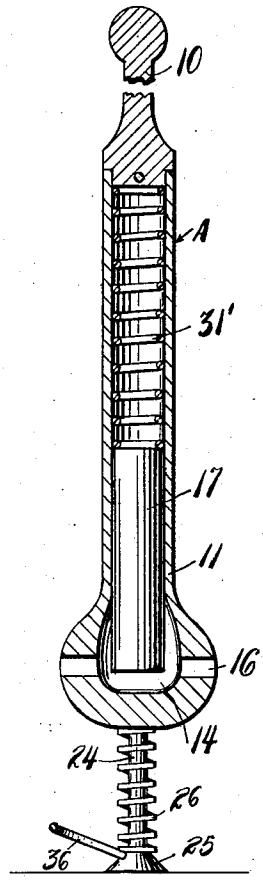


Fig. 4.



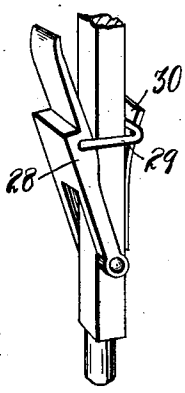


Fig. 5.

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UNITED STATES PATENT OFFICE.

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TORPEDO-CANE.

1,025,010. Specification of Letters Patent. Patented Apr. 30, 1912.

Application filed June 8, 1911. Serial No. 632,002.

To all whom it may concern:

Be it known that I, HERBERT F. NEU, a citizen of the United States, residing at Brookfield, in the county of Waukesha, State of Wisconsin, have invented certain new and useful Improvements in Torpedo-Canes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to torpedo canes, and particularly to that type provided with a magazine for holding a plurality of torpedoes which may be successively fired.

The object of the invention resides in the provision of a torpedo cane which includes novel means adapted to be operated by the pressure of one end of the cane against an obstruction, for successively exploding torpedoes and further operated by the release of said pressure to feed a torpedo from the magazine into the explosive chamber of the cane.

With the above and other objects in view, the invention consists in the details of construction and in the arrangement and combination of parts to be hereinafter more fully described and particularly pointed out in the appended claims.

In describing the invention in detail, reference will be had to the accompanying drawings wherein like characters of reference denote corresponding parts in the several views, and in which—

Figure 1 is an elevation of a cane constructed in accordance with the invention, with an intermediate portion of the cane removed. Fig. 2 a vertical section of what is illustrated in Fig. 1 with the parts in the position they would occupy just previous to the release of the firing hammer to explode a torpedo. Fig. 3 a view similar to Fig. 2 with the parts in the position they would occupy at the moment of firing the torpedo. Fig. 4 a section on the line 4—4 of Fig. 1. Fig. 5 a section on the line 5—5 of Fig. 1, and Fig. 6 a fragmental detail perspective view of the sear and its supporting parts which are utilized to energize the firing hammer.

Referring to the drawings the device is shown as comprising a staff or cane 10 which carries at its lower end a casing A. This casing A has formed therein a hammer chamber 11 and a magazine chamber 12 which extends side by side with their longitudinal axis parallel. The upper end of the hammer chamber 11 is closed by the lower end of the staff which is enlarged and secured to the casing A by means of a pin. The lower end of the hammer chamber 11 terminates in an explosive chamber 14 while the lower end of the magazine chamber 12 communicates with the explosive chamber 14 and is also provided with a lateral extension 15 in horizontal alinement with the opening between the magazine chamber 12 and the explosive chamber 14. Formed in the walls of the explosive chamber 14 are oppositely disposed openings 16 which serve to permit the escape of gas from the said chamber to the atmosphere upon the explosion of a torpedo therein. The lower wall of the chamber 14 serves as an anvil for cöoperation with a hammer 17 mounted for movement in the chambers 11 and 14. This hammer is provided with a lateral extending lug 18 which projects through a longitudinal slot 19 formed in the wall of the casing A. Projecting laterally from the upper and lower ends of the casing A are spaced ears 20 and 21 the former of which is provided with a square opening 22 while the latter is provided with a round opening 23 in alinement with the opening 22. Slidably mounted in the opening 22 is the squared upper end of a rod 24 while a rounded lower end of said rod 24 is slidably mounted in the opening 25. The lower end of this rod 24 terminates in an enlarged portion 25 and a spring 26 encircling said rod between said enlarged portion and the ear 21 serves to normally hold said rod in the position shown in Fig. 1. The inner portion of the ear 20 is enlarged as at 27 and is provided with a diverging face 27′ for a purpose that will presently appear. Pivoted to the rod 24 is a sear 28, which has fixed thereto a yoke 29 encircling the rod 24, this yoke 29 is engaged by a leaf spring 30 secured to the rod 24, which spring constantly tends to force said sear into the position shown in Fig. 1. Disposed in the chamber 11 between the lower end of the staff 10 and the upper end of the hammer 17 is a spring 31′, which constantly tends to force said hammer to firing position. Mounted in the lateral extension 15 of the magazine chamber 12 is a plunger 31 which has an outwardly dis-

posed stem 32 provided with an eye 33. The casing A is provided with an ear 34 extending laterally therefrom between the upper end of the magazine chamber 12 and the lateral extension 15 thereof. This ear is provided with an opening 35 and extending through this opening and the eye 33 are portions of an angular rod 36, the lower end of which rod is secured to the lower end of the rod 24. The portion of the rod 36 which extends through the eye 33 is inclined toward the rod 24 so that as said rod 24 is moved longitudinally in first one direction and then the other the plunger 31 will be reciprocated in the extension 15. The magazine chamber 12 has its upper end closed by means of a suitable cap 37 hinged to the casing A.

The operation of the device is as follows: Assuming the parts to be shown in Fig. 1 and the magazine chamber 12 supplied with torpedoes it is only necessary in order to effect the firing of a torpedo to press the lower end of the rod 24 against a suitable obstruction such as the side walk. Such pressure exerted upon the rod 24 will cause the same to be forced toward the upper end of the cane and carry with it the sear 28. During this movement of the sear 28 it will engage the lug 18 of the hammer 17 and move said hammer toward the upper end of the chamber 11 against the influence of the spring 31. During this upward movement of the hammer 17 the communication between the magazine chamber 12 and the explosive chamber 14 will be opened so as to permit the delivery of a torpedo to the explosive chamber by the plunger 15 which is actuated by the rod 36 simultaneously with the upward movement of the rod 24. At the termination of the movement of the rod 24 under the influence previously referred to, the sear 28 engages the inclined face of the ear 20 and is forced outwardly against the influence of the spring 30 until it is moved out of engagement with the lug 18. As soon as the lug 18 and the sear 28 have been disengaged the hammer 17 is driven by the spring 31′ into the explosive chamber 14 where it strikes and explodes the torpedo previously delivered from the magazine chamber 12. The spring 26 on the lower end of the rod 24 serves to return said rod and the parts carried thereby to the position shown in Fig. 1, when the operation previously described may be repeated.

What is claimed is:

1. In a device of the character described, the combination with a cane, of a casing secured thereto having a magazine chamber and a hammer chamber, the latter of which terminates at one end in an explosive chamber and communicates with said magazine chamber, a hammer mounted for movement in the hammer and explosive chambers normally closing communication between the hammer chamber and the magazine chamber, a spring constantly tending to force said hammer into the explosive chamber, means for moving said hammer against the influence of said spring and then automatically releasing same to said influence to fire a charge contained within the explosive chamber, and means operated during the movement of the hammer against the influence of said spring for delivering an explosive charge from the magazine chamber into the explosive chamber.

2. In a device of the character described, the combination with a cane of a casing secured thereto having an explosive chamber, a hammer mounted for movement in said chamber, a spring constantly tending to move said hammer in one direction, and means actuated by a constant pressure exerted upon the cane for moving said hammer against the influence of said spring and then releasing the hammer to said influence to explode a charge contained within the explosive chamber.

3. In a device of the character described, the combination with a cane, of a casing secured thereto having an explosive chamber and provided with a longitudinal slot in its wall, a hammer mounted in said casing for movement into said explosive chamber to fire a charge contained therein, means constantly tending to move said hammer into said explosive chamber, a lug on said hammer extending through said slot, a rod slidably mounted on said casing, a sear pivoted to said rod, a spring carried by said rod normally holding said sear in engagement with the lug, whereby the sliding of said rod will produce a corresponding movement of the hammer, and means for automatically releasing said sear from engagement with the lug on the hammer at the termination of the movement of said rod in one direction.

4. In a device of the class described, the combination with a cane, of a casing secured thereto having a magazine chamber and a hammer chamber, the latter of which terminates at one end in an explosive chamber which communicates with said magazine chamber, a hammer mounted for movement in the hammer and explosive chambers normally closing communication between the hammer chamber and the magazine chamber, a spring constantly tending to force said hammer into the said explosive chamber, means for moving said hammer against the influence of said spring and then automatically releasing same to said influence to fire a charge contained within the explosive chamber, a plunger mounted in said casing for movement in line with the opening between the magazine chamber and the hammer chamber and across one end of the

magazine chamber, and connections between said plunger and the hammer operating means whereby the plunger is operated toward the passage between the magazine chamber and the hammer chamber when said hammer is moved against the influence of said spring.

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

HERBERT F. NEU.

Witnesses:
E. H. TUCKER,
T. E. PENNYCOOK.