

W. SIMPSON.
 DETONATING PISTOL.
 APPLICATION FILED APR. 22, 1907.

2 SHEETS—SHEET 1.

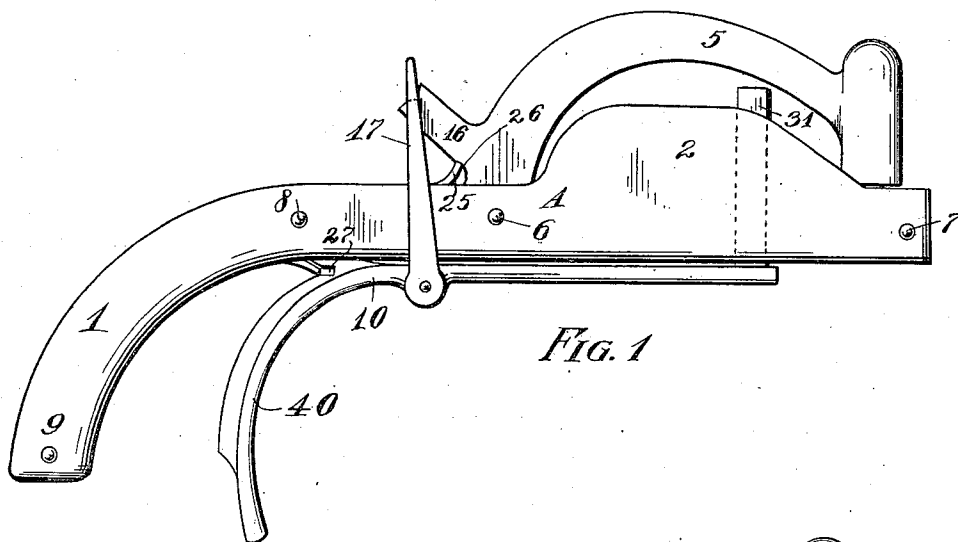


FIG. 1

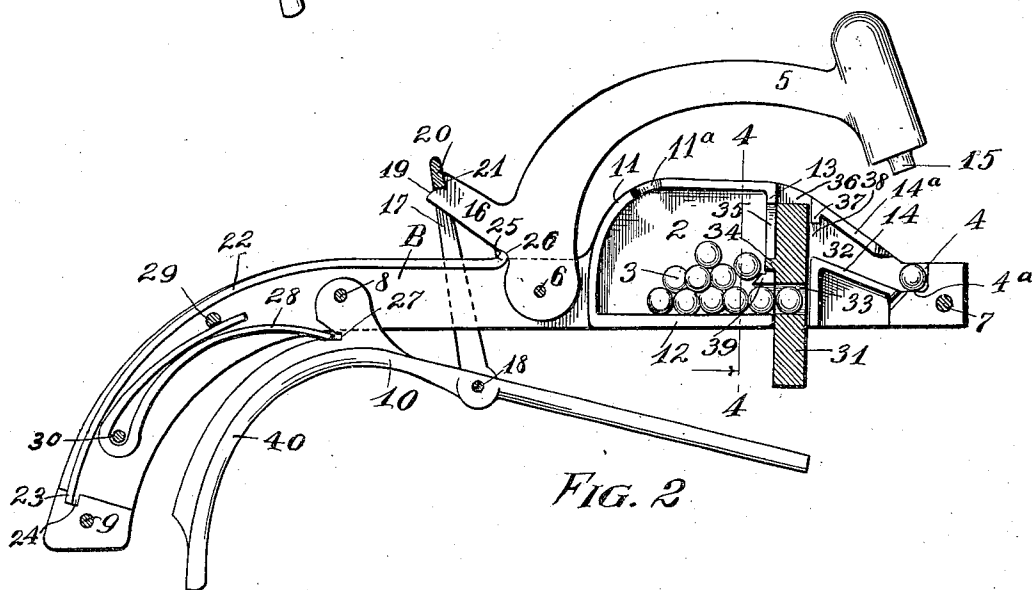


FIG. 2

WITNESSES:

Forrester & West,
 Nathan F. Fetter.

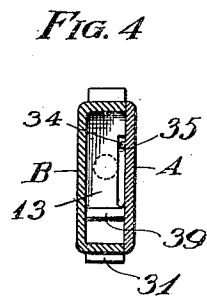
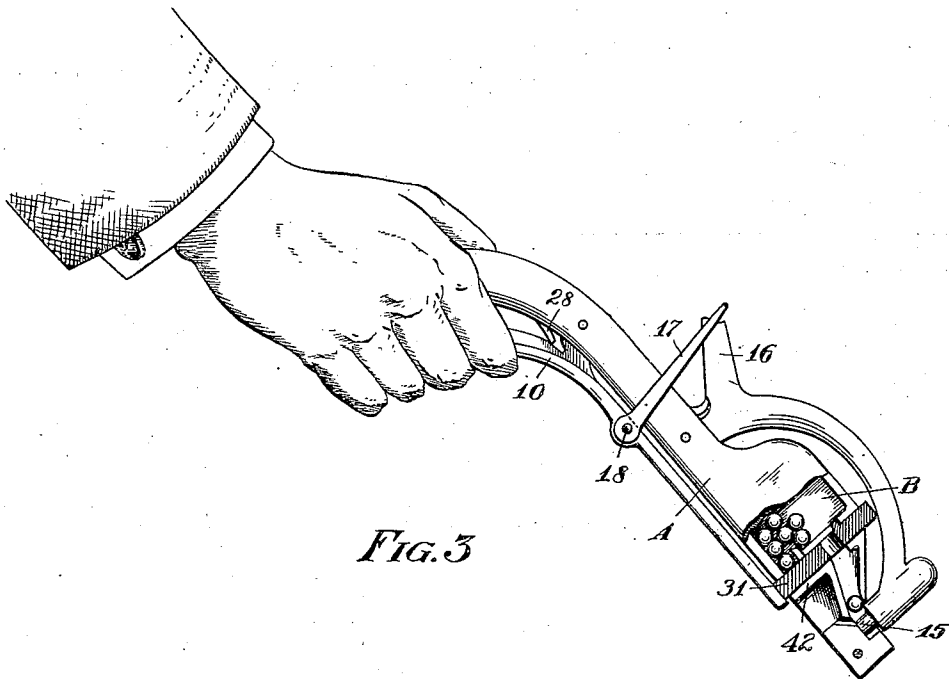
INVENTOR,
 William Simpson
 BY Bates, Fouts & Hull,
 ATTYS.

No. 879,919.

PATENTED FEB. 25, 1908.

W. SIMPSON.
DETONATING PISTOL.
APPLICATION FILED APR. 22, 1907.

2 SHEETS—SHEET 2.



WITNESSES:

Brennan B. West,
Nathan F. Fretter.

INVENTOR,

William Simpson

BY Bates, Fouts & Hull,
ATTYS.

UNITED STATES PATENT OFFICE.

WILLIAM SIMPSON, OF BEREA, OHIO, ASSIGNOR TO JOHN H. FOX, OF BEREA, OHIO.

DETONATING-PISTOL.

No. 879,919.

Specification of Letters Patent.

Patented Feb. 25, 1908.

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To all whom it may concern:

Be it known that I, WILLIAM SIMPSON, a citizen of the United States, residing at Berea, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Detonating-Pistols, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

My invention relates to detonating devices for torpedoes, and has for its object to provide a device of this character in the shape of a double-acting pistol which will automatically feed the torpedoes to the detonating chamber, and which will be simple, efficient and safe in operation.

In the drawings, Figure 1 represents a side elevation of my invention. Fig. 2 represents a similar view with one of the side plates removed, the slide being shown in section. Fig. 3 represents a view in side elevation, parts being broken away, and the slide being elevated. Fig. 4 represents a sectional detail on line 4—4 of Fig. 2.

The pistol comprises generally the handle or stock 1 which is preferably made of metal and with which is formed the magazine 2 for the reception of torpedoes 3. In front of the magazine and at the front of the pistol there is provided a detonating chamber or recess 4, having an anvil 4^a to which the torpedoes are fed from the magazine and wherein they are detonated by means of the hammer 5 which is pivoted to the rear of the magazine, at 6.

The handle or stock, the magazine, and the detonating chamber or recess are preferably provided by and between two metallic plates A and B which are detachably connected by means of screws 6, 7, 8 and 9,—the screw 6 serving as a pivot for the hammer 5, and screw 8 as the pivot for the trigger 10. The plate B is provided with walls 11, 12 and 13 extending to and forming with the plate A the magazine for torpedoes, and also with the partition 14, forming an inclined surface down which the torpedoes are supplied to recess or chamber 4. Wall 11 has an aperture 11^a for the insertion of torpedoes into the magazine.

The hammer 5 is provided at the front end thereof with a detonating head 15, which is adapted to strike and detonate the torpedoes supplied to the chamber or recess 4. It is provided with an arm 16, preferably integral

therewith and projecting upwardly and rearwardly from the rear portion thereof in such position as to be engaged by a loop or bail 17, which is pivotally connected to the trigger 10 at 18. The end of arm 16 is provided with a notch which is generally V-shaped, said notch extending inwardly from the end of the arm. The lower surface 19 of said notch forms a bearing for the cross bar 20 of the bail 17, and is somewhat rounded to facilitate the disengagement of such surface by the bail when the hammer has been raised to the maximum required distance above the anvil 4^a in the detonating chamber. The inclination of the upper surface 21 of said notch is such that when the hammer has reached the desired position above the anvil, it engages the cross bar 20 and assists in disengaging said bar from the surface 19.

22 denotes a spring, the lower end 23 of which fits into a notch 24 in the end of the handle or stock and the upper end 25 of which engages a notch 26 formed at the junction of arm 16 with the body of the hammer 5 and rearwardly of the pivot 6.

The trigger 10 is provided with a notch 27 therein below the pivot 8 for engagement by the end of spring 28. This spring may be made in the form of a loop as shown in Fig. 2, the end of the upper member of which bears against a pin 29, a pin 30 extending through the loop proper, and, together with the pin 29 and the inclosure formed by the handle, serving to retain said spring in place.

The trigger 10 extends beyond the pivot 18 a sufficient distance to engage and lift the slide 31 which serves to feed torpedoes from the magazine to the inclined passageway 32 formed between plates A and B and partitions 14 and 14^a. The thickness of this slide is substantially equal to the diameter of a torpedo and said slide is provided with an aperture 33 for the reception of a torpedo and with a pin 34 fitting into a slot 35 formed in the wall 13, whereby said slide is guided and retained in operative relation to the magazine and the vertical passageway 36 which extends transversely of the pistol. A short downwardly extending partition 37 carried by plate B serves to guide the upper end of the slide as it rises and forms with the rib or partition 14 a port 38 through which torpedoes carried by the slide 31 may be discharged into the passageway 32. To prevent torpedoes from piling and pack-

ing around the aperture 33 and thus interfering with the feed of torpedoes to the detonating chamber, I have provided a short partition or dam 39, preferably carried by plate B, the rear face of which may be beveled as shown to tend to deflect the torpedoes above the partition away from those immediately below the same and thus relieve the torpedoes adjacent to the slide 31 from the weight and obstruction of the torpedoes immediately above. The dam 39 is so short as to prevent the accumulation of any torpedoes thereupon. The torpedoes are intended to be fed by gravity into the slide and from the slide into the passageway 32, and the pistol will be operated in the inclined position as shown in Fig. 3.

With the parts in the position shown in Fig. 3, the operator has just fired the pistol and has relaxed his grip on the trigger. The spring 28 has forced the rear end of the trigger downwardly and the front end upwardly, carrying the slide 31 upwardly and discharging the torpedo from the aperture 33 into the passageway 32. The operator closes his hand upon the grip 40 of the trigger 10 and thereby causes the bail 17 to press downwardly upon the arm 16 and tilt the hammer 5, as shown in Fig. 2. This moves the front end of the trigger downwardly and allows the slide 31 to fall to the position shown in Fig. 2. In this figure, the cross bar 20 of the bail is shown as engaged by surface 21. A slight further movement of the grip 40 causes the disengagement of the bail, whereupon the spring 22 forces front end of the hammer downwardly and causes its head 15 to detonate the torpedo which is upon the anvil 4^a. Upon the operator releasing his grip upon 40, the spring 28 forces the trigger into the position shown in Fig. 1. The forward end of the trigger in taking this position engages slide 31 and lifts the same, together with the torpedo contained in aperture 33, to the position shown in Figs. 1 and 3, enabling the torpedo to be discharged down the inclined passageway 32 as far as the lower end of the rib 14^a, the further movement of the torpedo being prevented by the end of hammer 5. Owing to the inclined position and the elevation of the pivotal point 18, the bail 17 drops by gravity into engagement with the notch on the end of arm 16, and the device is ready to be operated as before. It will be noted that the upper end of the slide 31 forms a cut-off between the chamber 4 and the slot 35 in the partition 13 and prevents any flame from reaching the torpedoes in the magazine 2.

The location of the detonating chamber at the front of the pistol removes the point of explosion from proximity to the operator's hand and thus prevents injury to the latter. Furthermore, the fact that the pistol has to be pointed downwardly in order to feed tor-

pedoes from the magazine into the aperture of the slide and thence into the detonating chamber minimizes the danger of injuring the eyes of the operator. Should the operator point the pistol upwardly, the torpedo in the chamber 4^a will roll into the passageway 38, being retained therein by rib 14^a and will not be exploded by the hammer, should the latter be operated, but will return to its place on the anvil when the pistol is lowered.

Having thus described my invention, I claim:

1. In a detonating pistol, the combination of a magazine having in the lower front portion thereof a port, a short partition extending rearwardly from said port and forming with the bottom of the magazine a passageway of a width to accommodate a single torpedo, a slide reciprocably mounted in a transverse passageway in front of said port and having an aperture therein for a torpedo, a detonating chamber in front of said slide, a hammer having a detonating head for detonating torpedoes in said chamber, a trigger, and an operative connection between said trigger and said hammer, said trigger having an extension adapted to engage said slide, there being an inclined passageway extending from the upper portion of the transverse passageway to the detonating chamber.

2. In a detonating pistol, the combination of a magazine having in the lower portion thereof a discharge port, a partition above and at the rear of said port and forming with the bottom of the magazine a passageway leading to said port, the width whereof will accommodate a single torpedo, a slide mounted in a transverse passageway in front of said port, said passageway having a port therein above the said discharge port, a detonating chamber in front of the latter port, there being an inclined passageway extending between said port and chamber, a hammer having a detonating head adapted to explode torpedoes in said chamber, a trigger, and an operative connection between said trigger and hammer, said trigger being adapted to operate said slide, substantially as specified.

3. In a detonating pistol, the combination of a magazine having in the lower portion thereof a discharge port, a partition above and at the rear of said port and forming with the bottom of the magazine a passageway leading to said port, the width whereof will accommodate a single torpedo, a slide mounted in a transverse passageway in front of said port, said passageway having a port therein above the said discharge port, a detonating chamber adjacent to the front end of the pistol, there being an inclined passageway extending between said port and chamber, a hammer having a detonating head adapted to explode torpedoes in said chamber, and a trigger, said trigger being adapted to operate said slide, substantially as specified.

4. In a detonating pistol, the combination of a magazine, a detonating chamber, a slide interposed between said magazine and chamber and adapted to supply torpedoes from the former to the latter, a hammer having a detonating head adapted to explode torpedoes in said chamber, said hammer being pivoted at the rear of said magazine and having an operating arm or extension, a trigger pivoted rearwardly of said hammer and having a bail adapted to engage said arm or extension, said trigger also having a portion adapted to engage and operate said slide, substantially as specified.
5. In a detonating pistol, the combination of a magazine, a detonating chamber, means for automatically supplying torpedoes from said magazine to said chamber, a hammer having a detonating head adapted to explode the torpedoes in the said chamber, said hammer having an arm projecting rearwardly therefrom, a trigger pivoted rearwardly of said hammer and having a grip portion adjacent to the handle or stock of the pistol, a connection between the portion of the trigger which is in front of the pivot thereof and said arm, and a spring for operating said hammer, substantially as specified.
6. In a detonating pistol, the combination of a magazine, a detonating chamber, a hammer pivoted to said pistol and having a head adapted to explode torpedoes in said chamber, said hammer having an arm projecting rearwardly therefrom and beyond the pivot thereof, a trigger pivoted rearwardly of said hammer and having a grip portion adjacent to the handle or stock, a connection between said hammer arm and the trigger, said connection being pivoted to the trigger in front of its pivot, the parts being arranged to automatically disengage the connection from the arm when the hammer has been elevated to a predetermined distance, a spring for operating such hammer, and means including the trigger for supplying torpedoes to the detonating chamber, substantially as specified.
7. In a detonating pistol, the combination of a detonating chamber, a hammer having a detonating head adapted to detonate the torpedoes in said chamber, a spring tending to force said head into engagement with torpedoes in said chamber, a trigger, and a connection between said trigger and hammer, said connection comprising a bail pivoted to the trigger and a notched projection carried by the hammer for said bail, the parts being arranged to automatically disengage the bail from the notch when the hammer has been elevated a predetermined distance by the operation of the trigger, substantially as specified.
8. In a detonating pistol, the combination of a detonating chamber, a hammer having a detonating head adapted to detonate the torpedoes in said chamber, a spring tending to force said head into engagement with torpedoes in said chamber, a trigger, a connection between said trigger and hammer, said connection comprising a bail pivoted to the trigger and a notched projection carried by the hammer for said bail, the parts being arranged to automatically disengage the bail from the notch when the hammer has been elevated a predetermined distance by the operation of the trigger, a magazine, and means actuated by the trigger for supplying torpedoes from the magazine to the chamber, substantially as specified.
9. In a detonating pistol, the combination of a detonating chamber, a hammer having a detonating head, said hammer having a rearwardly projecting arm provided at the end thereof with a notch the lower surface whereof is convexly curved, a trigger pivoted rearwardly of said arm and having a grip portion in operative relation to the handle or stock of the pistol, a bail or link pivoted to said trigger in front of its pivotal connection with the pistol and having the upper end thereof adapted to be fitted into said notch, a spring adapted to operate said hammer when the latter is released by said bail, and a spring for said trigger, substantially as specified.
10. In a detonating pistol, the combination of a magazine and a detonating chamber, a slide for supplying torpedoes from said magazine to said chamber, a hammer pivoted to said pistol and having a detonating head for exploding torpedoes in said chamber, said hammer having a rearwardly projecting arm provided with a notch, the lower surface whereof is convexly curved, a spring tending to force the head of said hammer into said chamber, a trigger having a grip portion adjacent to the stock or handle of the pistol and pivoted to the rear of said hammer, said trigger having an extension of sufficient length to engage said slide, and a bail pivoted to said extension intermediate between the trigger pivot and the hammer pivot and adapted to be applied to said notch, substantially as specified.
11. In a detonating pistol, the combination of a magazine, a detonating chamber, a hammer for detonating the torpedoes in said chamber, a trigger, means including said trigger for supplying torpedoes from the magazine to the chamber, and connections whereby the hammer and the torpedo-supplying means may be operated alternately by said trigger, substantially as specified.
12. A detonating pistol, having at the front end thereof a detonating chamber, a magazine located rearwardly of said chamber and a passageway extending between said magazine and chamber and having a port, a hammer pivoted to said pistol at the rear of said magazine and adapted to detonate torpedoes in said chamber, a trigger, and

means operated by said trigger for supplying torpedoes from the magazine to said port, substantially as specified.

13. A detonating pistol having at the front end thereof a detonating chamber, a magazine located at the rear of said chamber, a hammer pivoted to said pistol, a trigger, a gravity-operated bail pivoted to said trigger and adapted to engage said hammer to cock the latter by the movement of the trigger, and means for supplying torpedoes from the magazine to the chamber, substantially as specified.

14. In a detonating pistol, the combination of a detonating chamber, a magazine at the rear of said chamber, a hammer pivoted at the rear of said magazine and having a head adapted to explode torpedoes in said chamber, a trigger having a gripping portion adjacent to the grip of the pistol and adapted to be grasped by the hand of the operator, said trigger having an extension, means including said extension for supplying torpedoes from the magazine to the detonating chamber, and a connection between said trigger and hammer for cocking the hammer by the movement of the trigger, substantially as specified.

15. In a detonating pistol, the combination of a detonating chamber, a magazine at the rear of said chamber, a hammer having an extension at the rear of said magazine, a trigger having a gripping portion in proximity to the grip or butt of the pistol in position to be grasped by the hand of the operator, said trigger having an extension, means operated by said extension for supplying torpedoes from the magazine to the detonating chamber, and a connection between said trigger and the hammer extension whereby the movement of the trigger when grasped by the hand of the operator will cock the hammer, substantially as specified.

16. In a detonating pistol, the combination of a detonating chamber, a magazine at the rear thereof and provided at the lower front end thereof with an aperture, a slide for supplying torpedoes from said aperture to said detonating chamber, a hammer having an extension at the rear of said magazine, a trigger having a grip portion adjacent to the butt or grip of the pistol and having an extension adapted to engage said slide, and a gravity-operated connection between said hammer and said trigger, substantially as specified.

17. In a detonating pistol, the combination of a magazine, a detonating chamber, a hammer, a trigger, a connection between the trigger and the hammer for operating the latter by the movement of the former in one direction, means for supplying torpedoes from the magazine to the chamber, and a connection between the trigger and said means whereby the said means may be operated in

a direction to supply torpedoes from the magazine to the chamber by the movement of the trigger in the reverse direction, substantially as specified.

18. In a detonating pistol, the combination of a magazine, a detonating chamber, a hammer, a trigger, a connection between the hammer and the trigger, a movable device for supplying torpedoes from the magazine to the detonating chamber, and a connection whereby the said device is moved in a direction to supply torpedoes from the magazine to the chamber by the trigger only after the hammer has been operated by the trigger, substantially as specified.

19. In a detonating pistol, the combination of a magazine, a detonating chamber, a hammer for detonating torpedoes in said chamber, a spring for said hammer, a trigger, a connection between said hammer and trigger, a movable member adapted to feed torpedoes from the magazine to the chamber, and a connection between the trigger and said member whereby said member is operated only after the spring has operated the hammer, substantially as specified.

20. In a detonating pistol, the combination of a detonating chamber, a magazine, a movable member adapted to supply torpedoes from the magazine to the detonating chamber, a hammer, a trigger having an extension adapted to engage said member, a connection between the trigger and the hammer for cocking the latter by the movement of the former, and a spring tending to operate said trigger in a direction to actuate said member, substantially as specified.

21. In a detonating pistol, the combination of a detonating chamber, a magazine, a movable member adapted to supply torpedoes from the magazine to the detonating chamber, a hammer, a trigger having an extension adapted to engage said member, a breakable connection between the trigger and the hammer for cocking the latter by the movement of the former, and a spring tending to operate said trigger in a direction to actuate said member, substantially as specified.

22. In a detonating pistol, the combination of a detonating chamber, a magazine at the rear thereof, a movable member adapted to supply torpedoes from the magazine to the chamber, a hammer, a trigger having a projection adapted to engage the movable member and operate the same in a direction to supply torpedoes from the magazine to the chamber, a connection between the trigger and hammer for operating the latter by the movement of the former, and a spring tending to force said projection into engagement with said member, substantially as specified.

23. In a detonating pistol, the combination of a detonating chamber, a magazine at

the rear of said chamber, a trigger having an operating portion adjacent to the grip of the pistol and having a forwardly projecting extension, a hammer, a connection between
5 the trigger and the hammer, and means including such extension for feeding torpedoes from the magazine to the detonating chamber, substantially as specified.

10 24. In a detonating pistol, the combination of a detonating chamber, a trigger having an operating portion adjacent to the grip of the pistol and a forwardly projecting extension, a movable member for supplying

torpedoes from the magazine to the detonating chamber and positioned to be operated
15 by said extension, a hammer, a connection between the hammer and the trigger, and a spring tending to force said extension into operative relation to said member, substantially as specified.

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

WILLIAM SIMPSON.

Witnesses:

T. J. POOLE,
C. E. FOX.