Feb. 25, 1936. G. H. NORTH ET AL 2,031,785

FIREARM

Filed Feb. 11, 1935

Fig. 1.

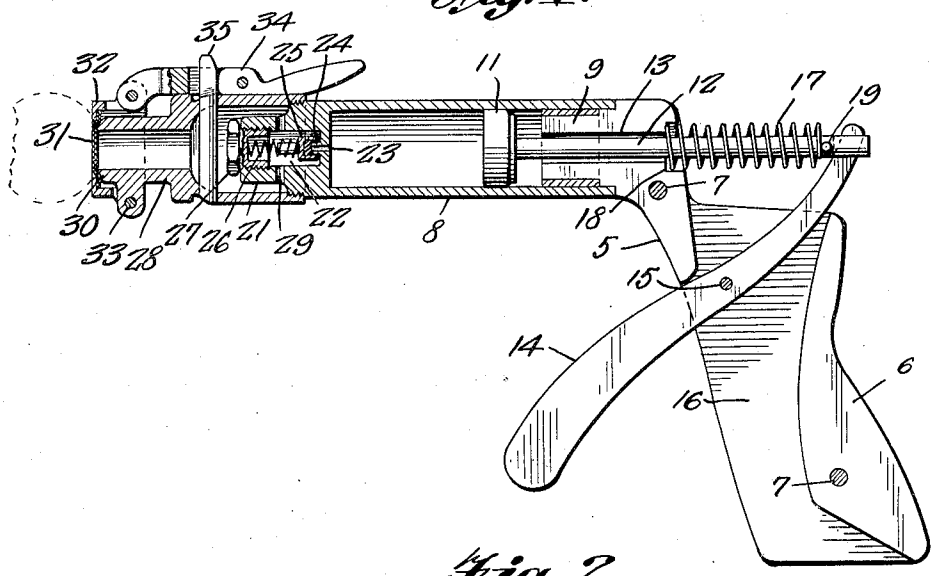


Fig. 2.

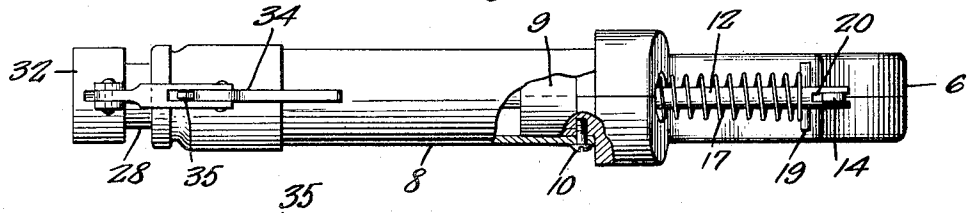


Fig. 3.

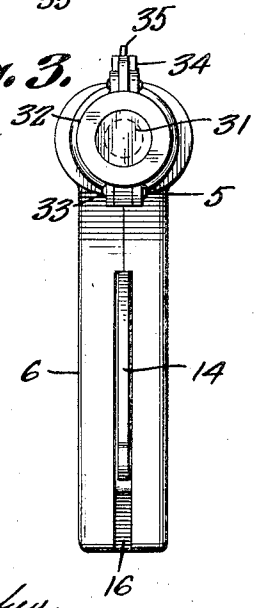
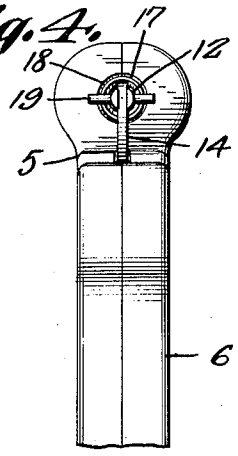


Fig. 4.



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WITNESS

Patented Feb. 25, 1936 2,031,785

UNITED STATES PATENT OFFICE

2,031,785

FIREARM

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Application February 11, 1935, Serial No. 6,064

7 Claims. (Cl. 46—194)

The invention relates to a firearm and more especially to a toy pistol.

The primary object of the invention is the provision of a pistol of this character, wherein through the use of an expanding cap when subjected to air pressure it will be caused to burst and with a detonating effect simulating the explosion of a torpedo or that of a real firearm, thereby lending excitement and amusement to the user of the pistol, it being designed especially for use by children.

Another object of the invention is the provision of a pistol of this character, wherein the trigger of the same operates an air pump for exerting air under pressure against a cap, the same being preferably made from thin rubber and when expanding bursts with exploding effect for rendering a noisy report on the firing of the pistol.

A further object of the invention is the provision of a pistol of this character, wherein the cap which is the exploding medium is made secure to the barrel of the pistol to be subjected to air under pressure for the exploding of the same.

A still further object of the invention is the provision of a pistol of this character, which is extremely simple in construction, thoroughly reliable and efficient in its operation, safe, readily and easily operated, simulating a real firearm, strong, durable, and inexpensive to manufacture.

With these and other objects in view, the invention consists in the features of construction, combination and arrangement of parts as will be hereinafter more fully described, illustrated in the accompanying drawing, which discloses the preferred embodiment of the invention and pointed out in the claims hereunto appended.

In the accompanying drawing:

Figure 1 is a vertical longitudinal sectional view through the pistol constructed in accordance with the invention.

Figure 2 is a top plan view partly broken away.

Figure 3 is a front elevation.

Figure 4 is a rear end elevation.

Similar reference characters indicate corresponding parts throughout the several views in the drawing.

Referring to the drawing in detail, the pistol comprises a stock 5 constructed to form a handle 6, this stock being made in complemental halves and when matched with each other are joined together by cross fasteners 7. The stock carries a pump barrel 8 in the form of a cylinder open at one end and closed at its opposite end, the open end of the cylinder being telescoped upon an extension 9 therefor of the stock and made secure by a fastener 10. This cylinder in appearance is simulative of the barrel of a real pistol.

Working within the cylinder is a piston 11 its stem 12 being projected through a way 13 therefor in a rearward direction to be operated upon by a trigger 14 pivoted at 15 in the stock 5, the latter in the halves thereof being cut away at 16 to allow free operation of the trigger. Surrounding the stem 12 is a coiled expansion spring 17 it being seated at 18 in the stock and its other end engaging a cross pin 19 carried by said stem, the latter being bifurcated at 20 at the intersection of the cross pin for accommodating the trigger 14 which plays against the said pin. This spring 17 retracts the piston 11 rearwardly in the barrel 8.

The forward closed end of the barrel 8 has a reduced tip 21 provided with a central air delivery chamber 22 communicating with the barrel 8 by a central passage 23 surrounded by a valve seat 24 for engagement by a return check valve 25 within the chamber 22, this valve being tensioned by a spring 26 adjustable by a plug 27 fitting the tip 21.

Threaded on the barrel 8 next to the reduced end or tip 21 thereof is a discharge nozzle forming a muzzle 28. On actuating the piston 11 air under pressure is forced through the passage 23 to the chamber 22 and thence by the lateral openings 29 in the tip 21 into the nozzle or muzzle 28. This muzzle at its outer end is formed with a cap seat 30 for an expansible bursting cap 31 held sealed against the seat 30 by a clamping collar 32 pivoted at 33 for swinging movement. The collar swingingly carries a cam acting latch 34 engageable with a keeper 35 carried by the muzzle or nozzle 28. The clamping collar 32 is of cup form to permit the placing of the cap 31 therein so that when the collar is brought into clamping position the cap will be seated at 30 against the outer open end of the nozzle or muzzle 28 and sealed thereagainst.

When the pistol is fitted with the cap 31 and it is desired to fire the said pistol an operator actuates the trigger 14 causing the pumping of air through the muzzle 28 for the expanding of the cap 31 and the bursting of the same. On the bursting of the same detonation is had simulating an explosion of a torpedo or fream as a noisy report results when the cap is bursted.

What is claimed is:

1. A pistol of the character described, comprising a stock forming a handle, a piston cylinder carried by said stock, a piston working within the cylinder, a trigger pivoted to the handle

and operating said piston, a reduced tip on said cylinder for discharging air therefrom, a return check valve within said tip, a discharge nozzle carried by the cylinder at the tip thereof, and means for the clamping of an explosive cap upon the nozzle for explosion under pressure of air from the tip.

2. A pistol of the character described, comprising a stock forming a handle, a piston cylinder carried by said stock, a piston working within the cylinder, a trigger pivoted to the handle and operating said piston, a reduced tip on said cylinder for discharging air therefrom, a return check valve within said tip, a discharge nozzle carried by the cylinder at the tip thereof, means for the clamping of an explosive cap upon the nozzle for explosion under pressure of air from the tip and means for holding the piston retracted within the cylinder and tensioned when operated by the trigger.

3. A pistol of the character described, comprising a barrel, clamping means at the outer end of the barrel and a rubber disk fitted in the clamping means for the ballooning therethrough of said disk when subjected to pressure from within the barrel.

4. A pistol of the character described, comprising a barrel, clamping means at the outer end of the barrel, a rubber disk fitted in the clamping means for the ballooning therethrough of said disk when subjected to pressure from within the barrel and means for creating pressure within the barrel and directing such pressure against the disk.

5. A pistol of the character described, comprising a barrel, clamping means at the outer end of the barrel, a rubber disk fitted in the clamping means for the ballooning therethrough of said disk when subjected to pressure from within the barrel, means for creating pressure within the barrel and directing such pressure against the disk and means within the barrel for checking return pressure therein when the same is directed against the disk.

6. In a toy pistol, a handle, a trigger, a barrel comprising a cylinder, a piston and piston rod therein actuated by said trigger and connected thereto, and means to retain a rubber disk over the open end of said cylinder barrel, whereby the air compressed in the cylinder by the piston will expand the rubber disk into a balloon beyond the end of the cylinder and rupture it to cause an explosion.

7. In a toy piston, a handle, a trigger, a barrel comprising a cylinder, a piston and piston rod therein actuated by said trigger and connected thereto, means to retain a rubber disk over the open end of said cylinder barrel, whereby the air compressed in the cylinder by the piston will expand the rubber disk into a balloon beyond the end of the cylinder and rupture it to cause an explosion, and a check valve in said cylinder adapted to retain the air between the check valve and the resilient disk and delivered by each stroke of the piston.

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