

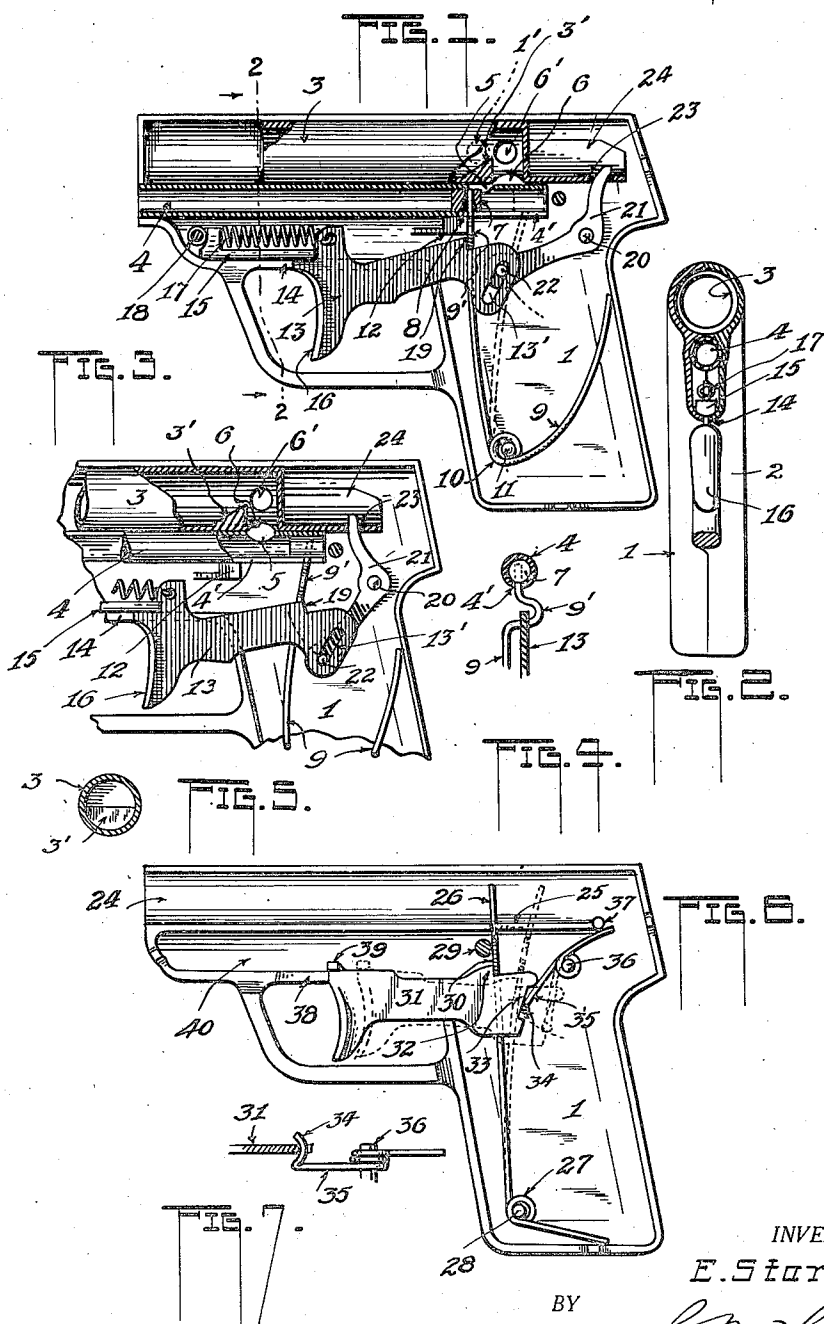
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E. STARBUCK

TOY PISTOL

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TOY PISTOL.

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To all whom it may concern:

Be it known that I, ERNEST STARBUCK, a citizen of the United States, residing at Peoria, in the county of Peoria and State of Illinois, have invented new and useful Improvements in Toy Pistols; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to toy pistols, having to do particularly with a pistol for shooting or projecting beans, peas, and like articles.

One of the objects of the invention is to provide a pistol of this type that will be simple in construction, very effective and that is not likely to get out of order.

A further object is to provide a pistol of a magazine type so constructed that the projectiles can be fed into the barrel one by one for discharge without becoming jammed and without in any way interfering with the smooth positive operation at all times.

Another object is that of providing a new trigger release mechanism of simple effective construction.

In the appended drawing forming part hereof

Figure 1 is a side elevation of the interior of the pistol of my invention, one half of the body having been removed for such showing.

Figure 2 is a transverse section of Figure 1 on line 2—2.

Figure 3 is a view similar to Figure 1 showing certain of the parts of the interior mechanism in another position.

Figure 4 is a transverse section of a certain trigger arrangement.

Figure 5 is a transverse section of an ammunition magazine.

Figure 6 is an elevation of one half of the body of a toy pistol of a different form from that shown in the first three figures.

Figure 7 is a plan of a trigger and spring arrangement shown in Figure 6.

In the first Figures 1, 2 and 3 the numerals 1 and 2 designate the body portions of a pistol shaped after the well known automatic type of revolver. It is made in two halves as shown in Figure 2, one of the said

halves 1 holding the entire operating mechanism, the other half 2 serving as a cover.

The upper portion of the body is preferably cylindrically curved forming a closed cavity in which a magazine tube 3 is slidable in a longitudinal direction.

Just beneath the tube 3 is a barrel 4 from which projectiles are discharged, such barrel being either part of the body 1, 2 or an inserted tube which is preferable because providing a smooth bore. As a separate part the tube may be secured in place in any desired manner. Near its inner or rear end the barrel or tube 4 is furnished with a hole 5 in that part of its wall adjacent the magazine-tube 3, the latter also having a hole 6 to be brought in register with said hole 5.

Slidable in the barrel 4 is a piston-like member 7 provided with a transversely extending aperture 8 to receive the end of one leg of a spring 9 coiled at 10 upon a post 11 in the handle of the device, the other leg of the spring bearing against one of the handle-walls substantially as shown, the said leg of said spring engaging the member 7 normally lying against a stop 12, there being a slot 4' in the tube 4 permitting movement of the spring to operate said member 7.

13 is a trigger slidable in a slot 14, Figure 2, between the two halves 1, 2, there being an extended head portion 15 lying within the body serving as a guide for said trigger. 16 is a finger grip portion for the trigger, and a spring 17 is attached to the latter and to a rivet 18 which holds the trigger in its normal position. The rear portion of the trigger is flat and has a slot 13' set diagonally of its line of movement which is parallel to the longitudinal line of the barrel 4 or substantially so. Said rear portion is furnished with a shoulder 19 adapted to engage an outwardly bent portion 9' of the spring 9, Figure 4 as the normal position thereof.

Pivoted between its ends upon a post 20 is a lever 21, one arm thereof carrying a stud 22 engaging in the slot 13'. The other arm of the lever lies in an opening 23 in an extension 24 of the magazine-tube 3 as shown and is designed to impart movement to the latter as will appear.

In addition to the opening 6 of the tube 3, said tube has an opening 6' in its side

wall adapted to be carried into register with an opening 1' in the body 1 through which the projectiles whether beans, peas, shot or the like may be inserted into said tube or magazine 3.

Within the latter just forward of the opening 6 thereof is an abutment 3' having a rear surface substantially perpendicular to the axis of the said tube. The forward surface of the abutment is preferably angled forwardly and downwardly to the bottom of the tube as clearly shown, Figure 5 showing the abutment as it would be seen from the rear of the pistol, that figure being a cross section of the tube just rearward of said abutment.

Figures 6 and 7 show a simplified form of the pistol or wherein the magazine feature is not present.

As before, the body is designated by 1 the barrel from which the projectiles are discharged being shown at 24. The lower wall of the barrel is open in the form of a slot at 25 and receives on leg 26 of a spring 27 coiled upon a post 28 the other leg of said spring again engaging one of the walls of the body.

Said leg 26 extends into the barrel, lying across the space therein and designed to eject the projectile, a rivet 29 serving as a stop for said leg, the latter having a bend 30 corresponding to 9' of the other or earlier figures.

The trigger is denoted by 31. It has a shoulder 32 to engage the bend 30 and has a notch 33 within which lies an upturned extremity 34 of a spring 35 coiled upon a post 36, the other end of the spring engaging a stop at 37 for example.

Said trigger is guided within a slot 38 left between the body portions and a cross head 39, for instance, lies within a hollow portion 40 of the body much the same as described, and illustrated in Figure 2. The said upturned extremity 34 is preferably bent or curved as shown in Figure 7 in order to create a recess for receiving the trigger. When thus formed the spring has no tendency to slip from the trigger and thereby permanent engagement of the two is assured.

The continuous lines in Figures 1 and 5 show the normal position of the parts or those positions occupied thereby when the springs are not flexed by drawing the trigger, while Figure 3 shows the position of the parts just in the act of "firing", which is likewise true of the broken line position in Figure 5.

In Figure 1, it will be noted, the openings 5 and 6 of the tubes 4 and 3 respectively are not in register and therefore the projectiles in the magazine tube 3 are retained therein. Now, in drawing upon the trigger the leg of the spring 9 is carried

back to firing position, the piston like member 7 exposing the opening 5, Figure 3, the lever 21 at the same time advancing the tube 3 to carry the opening 6 thereof into register with the said opening 5 permitting a projectile to drop into the tube 4 in the path of the member 7 whereupon the release of the spring takes place.

As the trigger is pulled the pin 22 of the lever moves along the slot 13' gradually depressing that end of said trigger until said pin having reached the bottom of the slot forces the trigger downward withdrawing the shoulder 19 from the bend 9' of the spring, releasing the latter, the projectile being thus discharged, said spring coming to rest against the stop 12.

When this occurs the member has returned to a position beneath the opening 5 of the tube 4 preventing a second projectile leaving the magazine. Now, as the trigger is released, and returned to its normal position by the spring 17, the lever 21 is moved back to normal position at the same time returning the magazine tube, the opening 6 being thus carried out of registry with opening 5.

The member 7 acts to prevent a second projectile from entering the tube or barrel 4 as explained, which is quite important from the fact that projectiles cannot be dropped out of the pistol nor can one of them get behind the spring 9 to be in the way nor can they enter the body 1. Since, also the openings 6' and 1' in the magazine tube 3 and body 1 respectively are normally out of register the projectiles are thus also retained.

The abutment 3' in the tube 3 forms a lodgment for the projectile, being spaced from the rear wall of the said tube but slightly more than the diameter of the projectile. This provides for retaining two of the projectiles one on top of the other so that when the lower one is dislodged the one above it drops into firing position. In use the muzzle of the pistol is raised after each discharge causing the projectile to move rearwardly to each time supply the uppermost one behind the abutment to the end that firing will be 100 per cent perfect. A further advantage in the use of the abutment is that every one of the projectiles, even to the last, will find lodgment behind said abutment and there remain while firing the one beneath it, there being no "misses" if the pistol is raised after each discharge.

It is found that said abutment yields good results even when used in the cavity occupied by the tube 3, eliminating the latter, the said abutment lying forward of the opening 5 of the barrel 4.

In the simpler form, Figure 6, the same objects are attained with regard to the lateral movement of the trigger 31 by means

of the spring 35 as it swings in its arc as shown by broken lines, and in this simpler form the extension 34 that engages the trigger, since bent as described and shown, makes for positive and permanent engagement with the latter where the slot 13' of Figures 1 and 3 is not used.

I claim:

1. A toy pistol including with its barrel a spring extending at one end thereinto adapted to eject a projectile, a trigger to engage the spring to place it under stress, a movable magazine for holding the projectiles adapted to feed one projectile into the barrel in each movement thereof, and a member engaging both the magazine and the trigger adapted to simultaneously move the trigger to release it from the spring and to impart movement to said magazine during the movement of said trigger to initiate the feeding of projectiles into said barrel.

2. A toy pistol including in its construction a spring for expelling a projectile therefrom, a trigger slidably mounted in the body of the pistol adapted to engage the said spring to place tension upon and release the same, said trigger adapted to tilt in the plane of the said body, and a member mounted on the body adapted to have arcuate movement and to engage a part of the trigger in said arcuate movement for tilting the same to remove it from engagement with the spring.

3. A toy pistol including in its construction a magazine for storage of projectiles closed at its rear end, and having an outlet at its bottom near its rear end for discharge of projectiles and also having an abutment erected upon the inner lower surface of such magazine adjacent to and forward of such outlet.

4. A toy pistol including in its construction a magazine for storage of projectiles closed at its rear end and having an outlet

at its bottom for the projectiles one by one, and also having an abutment erected within the magazine adjacent to and forward of such outlet, spaced from said closed end a distance substantially of the diameter of a projectile.

5. A toy pistol including in its construction a magazine for storage of projectiles closed at one end and having an abutment therein spaced from the closed end a distance equal to the diameter of a projectile forming a passageway for such projectiles, and an outlet in the magazine wall between the abutment and said closed end, the forward side of the abutment being inclined downwardly to the surface on which the abutment is erected.

6. A toy pistol including in its construction a body with a barrel for the discharge of a projectile therethrough, a movable magazine adjacent the barrel, said barrel and magazine each having an opening in its wall for the passage of a projectile from the latter to the former, said openings being normally out of register, a spring projecting into the barrel adapted to be placed under tension adapted to eject a projectile, a trigger engaging the spring adapted when operated to place said spring under tension, a member pivoted in the body engaging at one end the said trigger and at its other end engaging the magazine and adapted in its movement due to the operation of the trigger to move the latter vertically to disengage it from the spring and to simultaneously impart longitudinal movement to the magazine to bring the openings of the said magazine and barrel into register.

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

ERNEST STARBUCK.

Witnesses:

JUDSON STARR,
L. M. THURLOW.