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J. L. SEWARD

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AIR GUN

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FIG. 1.

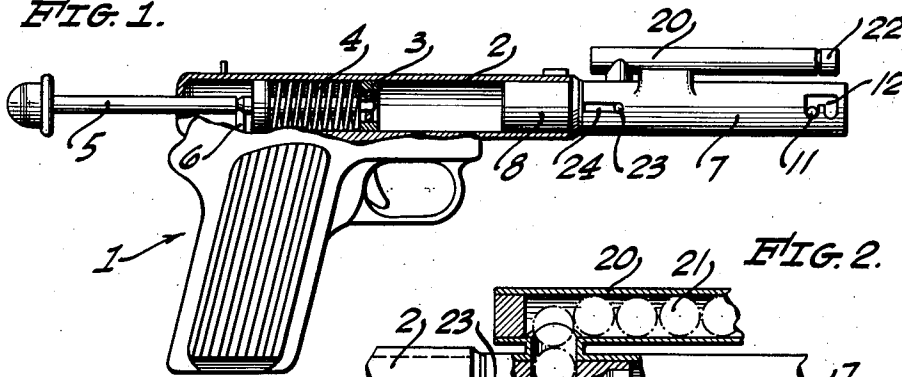


FIG. 2.

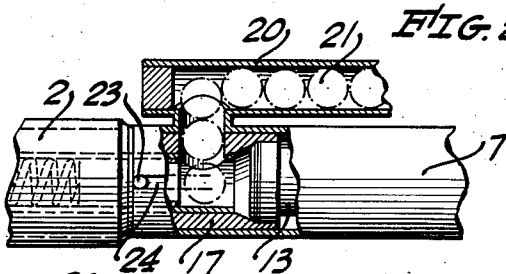


FIG. 3.

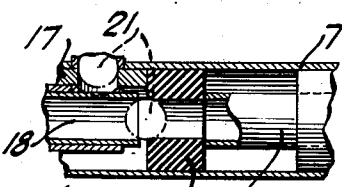
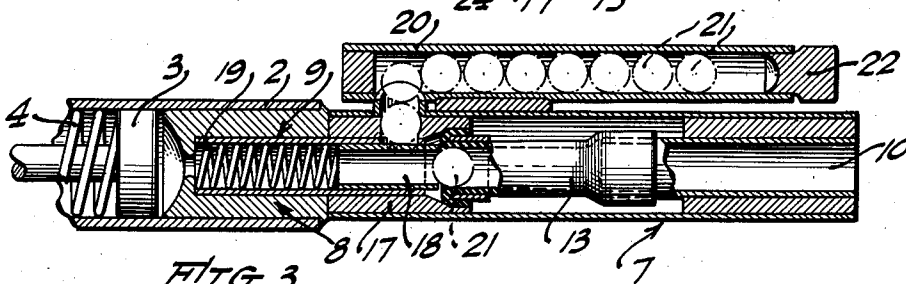


FIG. 5.

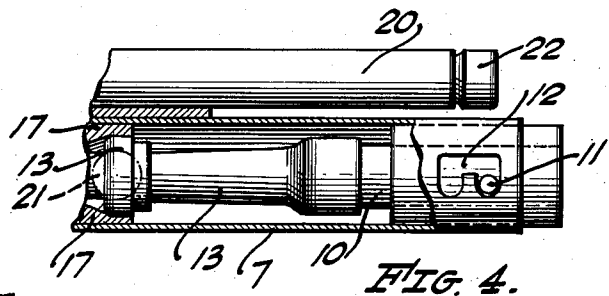


FIG. 4.

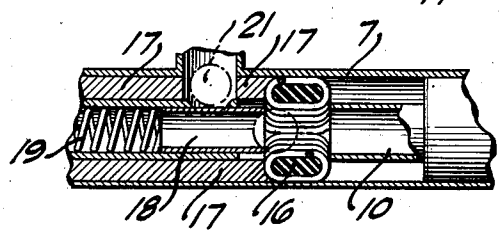


FIG. 6.

INVENTOR.
JOHN LEE SEWARD,
BY
N. A. Wickman
ATTORNEY.

UNITED STATES PATENT OFFICE

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AIR GUN

John Lee Seward, Long Beach, Calif.

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3 Claims. (Cl. 124—15)

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This invention relates to a toy gun of the compressed air type which will shoot a small projectile such as a dried pea.

An object of my invention is to provide a novel projectile shooting toy gun including a magazine which holds a plurality of small projectiles, each of which can be fed into the gun at a time.

Another object of my invention is to provide a novel projectile shooting toy gun in which each projectile is fed into the gun on manual movement of a feed sleeve.

Still another object of my invention is to provide a novel projectile toy gun which includes a restrictor in the barrel, this restrictor being adjustable to hold the projectile until air pressure has been exerted against the projectile by the gun.

A feature of my invention resides in the novel means to manually adjust the restrictor in the barrel of the gun so that a greater or less force will be required to eject the projectile.

Still another feature of my invention is to provide a novel toy gun of the character stated in which the restrictor consists of a flexible element such as rubber or plastic or a covered spring.

Other objects, advantages and features of invention may appear from the accompanying drawing, the subjoined detailed description and the appended claims.

In the drawing:

Figure 1 is a side elevation of my toy gun with parts broken away to show interior construction.

Figure 2 is a fragmentary side elevation of the barrel of the gun with parts broken away to show the feeding mechanism.

Figure 3 is a fragmentary longitudinal sectional view of the gun barrel showing the projectile in position to be ejected.

Figure 4 is a fragmentary longitudinal sectional view of the outer end of the gun barrel showing the restrictor.

Figure 5 is a fragmentary longitudinal sectional view of the gun barrel showing a modified form of restrictor.

Figure 6 is a fragmentary longitudinal sectional view of the gun barrel showing still another modified form of restrictor.

Referring more particularly to the drawing the toy gun 1, is of the compressed air type and consists of an air chamber 2, in which a piston 3, moves under the pressure of the spring 4. The piston 3, is retracted manually by means of the rod 5, which projects from the back of the gun and this rod is releasably engaged by the trigger controlled pawl 6.

As thus far described the construction of the

gun is quite usual and the details of the aforesaid construction form no part of my invention other than the combination of the subsequently described mechanism with an air gun.

A barrel 7 is fixedly mounted on the outer end of the cylinder 2 and forms an extension of this cylinder. The barrel 7 is preferably mounted in the cylinder 2 by means of a block 8, which has a reduced bore 9 therein to increase the velocity of the air. A tube 10 is mounted in the barrel 7, and is adjusted longitudinally in the barrel in the following manner.

A pin 11 projects from the tube 10 and this pin fits in the bayonet slot 12 to any one of several adjusted positions. A restrictor 13 is fixedly attached to the inner end of the tube 10, and this restrictor may consist of a rubber tube as shown in Figures 2-4 inclusive or it may be a sponge rubber block 14 as shown in Figure 5, or a metallic spring 16 surrounding a rubber ring as shown in Figure 6. The tube 10 in its longitudinal movement elongates the restrictor thus constricting the passage therethrough or compresses the restrictor as in the case of the sponge rubber block 15 which also restricts the orifice through the block.

One end of the restrictor 13 is secured to the tube 10 while the other end thereof is fixedly attached to the feed block 17. This feed block is fixedly mounted in the rear end of the barrel 7. A feed sleeve 18 is constantly urged outwardly by the spring 19 which lies within the bore 9.

A magazine 20 is mounted on top of the barrel 7 and a number of projectiles 21 (which may be dried peas) are fed into the magazine. The cork 22 closes the outer end of the magazine and retains the projectiles. The feed sleeve 18 is retracted manually by means of the pin 23 which moves in the slot 24 in the barrel 7. When the sleeve 18 is retracted a pellet 21 can drop into the tube 10 as shown in Figure 2. When the pin 23 is released the spring 19 presses the tube 18 forwardly and moves the pellet into the restrictor 13 as shown in Figure 3. The projectile is now ready to be ejected and the piston 3 is pulled backwardly after which the trigger is pulled and air pressure acting against the projectile restrained in the restriction of the restrictor 13 will force the projectile out through the tube 10. The projectile is held against the restrictor in the same manner in Figures 5 and 6, that is, the same sleeve 18 presses the pellet into the restrictor element. If it is desired to shoot the pellet with greater force the restrictor element 13 is further constricted by manually adjusting the tube 10.

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The operation of my toy gun is as follows: The magazine 20 is filled with dried peas, and the cork 22 then closes the outer end of the magazine. The piston 3 is now pulled backwardly in the cylinder 2, thus drawing a charge of air into the gun. The restrictor 13, 15, or 16, is adjusted as required by the user by moving the pin 11, into the desired notch 12. The pin 23 is now pulled rearwardly by the operator, thus permitting one pea to drop into the rear end of the tube 10, and release of the pin 23 will push this pea against the inner end of the restrictor. The gun is now fired, and the pea is ejected from the end of the tube 10, by the force of the air compressed ahead of the piston 3.

Having described my invention I claim:

1. In a gun operated by compressed air, said gun having a compressed air chamber, a barrel extending from the chamber, an expansible annular restrictor mounted in said barrel, against which a projectile can rest, and means engaging the restrictor to adjust the diameter of the same, a magazine for projectiles mounted on the barrel, said magazine opening into the barrel between said chamber and the inner end of the restrictor, a spring pressed sleeve in the barrel, said sleeve engaging the projectile to press and hold the projectile against the restrictor, and manual means on the sleeve projecting from the barrel to retract said sleeve.

2. In a gun operated by compressed air, said gun having a compressed air chamber, a barrel extending from the chamber, an expansible annular restrictor mounted in said barrel, against which a projectile can rest, and means engaging the restrictor to adjust the same, a magazine for projectiles mounted on the barrel, said magazine opening into the barrel between said chamber and the inner end of the restrictor, a spring

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pressed sleeve in the barrel, said sleeve engaging the projectile to press the projectile against the restrictor, and manual means to retract said sleeve to feed a projectile into the barrel, said manual means comprising a pin extending from the sleeve, said barrel having a slot therein through which the pin projects.

3. In a gun operated by compressed air, said gun having a compressed air chamber, a barrel extending from the chamber, an expansible annular restrictor mounted in said barrel, against which a projectile can rest, and means engaging the restrictor to contract the same, a magazine for projectiles mounted on the barrel, said magazine opening into the barrel between said chamber and the inner end of the restrictor, a spring pressed sleeve in the barrel, said sleeve engaging the projectile to press the projectile against the restrictor, said barrel having a slot therein adjacent the sleeve, and a pin extending from said sleeve and through said slot.

JOHN LEE SEWARD.

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