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C. L. BUNTEN

TOY PISTOL

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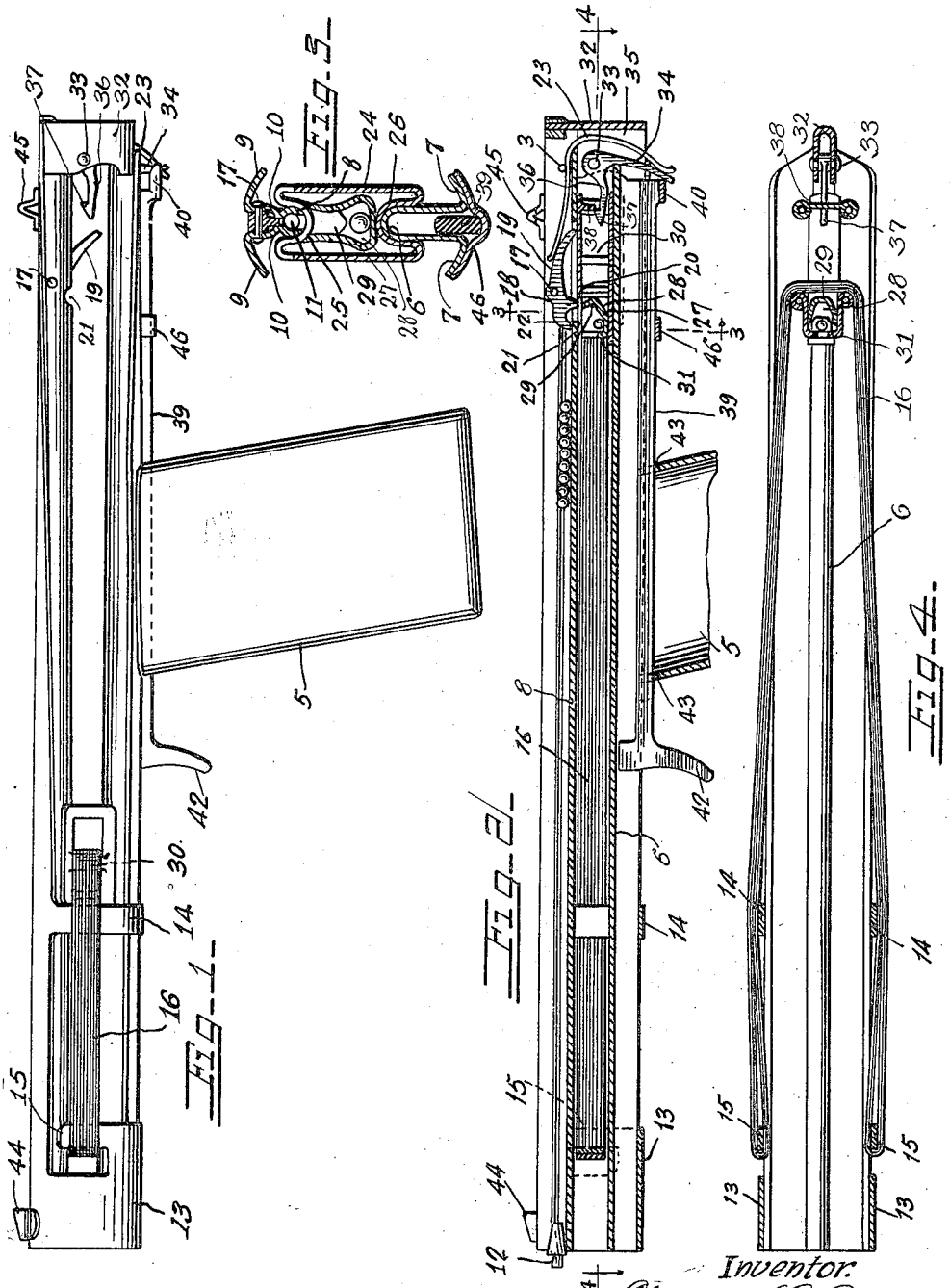

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UNITED STATES PATENT OFFICE.

CLAUDE L. BUNTEN, OF RAWLINS, WYOMING.

TOY PISTOL.

Application filed January 8, 1923. Serial No. 611,269.

To all whom it may concern:

Be it known that I, CLAUDE L. BUNTEN, a citizen of the United States, and resident of Rawlins, in the county of Carbon and State of Wyoming, have invented a new and useful Improvement in a Toy Pistol, of which the following is a specification.

My invention relates to toys, and more particularly to a toy gun which I have illustrated in the form of a magazine pistol.

Among the objects of my invention is the provision of a toy gun of this character that is provided with a magazine so that it may be used as a repeater and thereby shoot a number of shot or pellets successively without the necessity of reloading after each shot. Another object of my invention is the provision of a novel carrier into which the shot or pellets are deposited prior to the projecting of the same from the toy one by one. A further object resides in providing a novel trigger mechanism in connection with a toy gun. Another object is the provision of a novel arrangement of guide rods or guides which are so constructed that one of them provides a container or magazine in which the shot or pellets are stored, and these two guides are so arranged that they will retard or stop the outward movement of the carrier without jar when the same is approaching the limit of its outward movement. Further objects reside in providing a novel toy pistol or gun that is readily fabricated from sheet metal, is easy to operate and may be quickly set and fired. Also, I have in view the provision of a toy that is of simple construction so that it may be readily manufactured for a moderate price, and the element for moving the carrier or holder and causing the projection of a shot or pellet is of simple form, preferably an elastic rubber band of the well known type so that it may be readily replaced. I prefer to carry out my invention in accomplishing the aforesaid objects in substantially the manner hereinafter fully described, and as more particularly pointed out in the claims, reference now being made to the accompanying drawings that form a part of this specification, in which

Fig. 1 is a vertical side elevation of my toy pistol embodying my invention.

Fig. 2 is a central longitudinal section thereof, the handle or grip being broken away.

Fig. 3 is a vertical transverse section drawn to an enlarged scale, and taken on line 3—3, Fig. 2.

Fig. 4 is a horizontal section taken on line 4—4, Fig. 2.

In the drawings, similar reference characters designate like parts wherever they occur throughout the several views, and by referring, first, to Fig. 1, it will be observed the structure preferably comprises a handle or grip 5 of any convenient shape so that it may be easily grasped by the hand, which handle is arranged laterally intermediate the ends of the barrel portion of the pistol. The handle or grip 5, as well as most of the other elements of my device, are formed of sheet metal, or the like, of a suitable gauge for rigidity and convenience in manufacture.

Suitably secured to the upper portion of handle or grip 5 is the lower guide member of the barrel element, which, as seen in detail in Fig. 3 consists of a piece of elongated metal bent longitudinally to provide a corrugation 6 of U-shape in cross section. The side walls of this corrugation 6 are disposed vertically, as seen in Fig. 3, with the connection portion of the U uppermost or inverted. The edge portions of this piece of metal are bent longitudinally outwardly and upwardly, as at 7, to provide outwardly extending flanges that stiffen the barrel to give the same a rounded off appearance. The opposite guide member, which is disposed above guide 6, consists of an elongated piece of metal also bent longitudinally between its edges to provide a corrugation 8 which is positioned opposite corrugation 6, and the upper edge portions of the U formed by this strip of metal are bent outwardly and downwardly, as at 9 in Fig. 3, toward flanges 7 of the lower guide.

Intermediate its height corrugation 8 is provided with longitudinal indentations 10 upon its opposite walls so that the edges of the indentations approximately meet or abut each other, and the space between the same and the central bent portion of corrugation 8 provide a magazine 11 in which the shot or pellets are deposited and from which they are fed to the discharging mechanism in the manner hereinafter described. For the purpose of retaining the shot or pellets in the magazine the outer end is closed by a removable plug 12 (Fig. 2). Adjacent its outer end the metal forming the upper

guide is provided with oppositely disposed lateral pieces 13 that are bent downwardly and around the surfaces of the lateral portions 7, 7, of the opposite or lower guide, and are secured thereto so as to maintain the outer portions of the guides in the desired spaced relation to each other. Intermediate its ends the upper guide member is provided with oppositely arranged lateral pieces 14 that are similarly bent downwardly and under flanges 7 of the lower guide in the form of a band or strap which acts as a stop for the rubber band which propels the carrier or projection, as will hereinafter more fully appear.

A post 15 is provided upon each of the lateral extensions 13, heretofore mentioned, to receive the looped ends of an elastic or rubber band 16 which, intermediate its ends, is passed through or engaged with the carrier, also to be hereinafter described. Pivotally mounted upon a pintle 17 passing through the side walls of the upper guide member is a feed dog 18, of the bell crank class, having a rearwardly and downwardly extending arm 19 that is normally projected through a slot 20 in the lower portion of the wall of corrugation 8, and preferably to the rear of a discharge opening 21 in said wall through which the shot or pellets are discharged, one by one. The forward portion of feed dog 18 is provided with a notch 22 of suitable dimensions to receive and discharge one of the pellets or shot through discharge opening 21 in the guide so as to deposit it in the carrier or projector. In order to position the dog so as to receive a shot or pellet the same is pressed downwardly at its rear by means of one end of a spring 23, the opposite end of which is downwardly disposed to engage a bell crank arm of a carrier latch. In this position the rear lip of notch 22 will act as a stop and close opening 21 against further discharge of the shot or pellets. As noted in Fig. 2 the relative location of the latch dog and the discharge opening is such that the pellets or shot will not be gravitated from opening 21 until the carrier or projector has reached a position similar to that shown in Fig. 2 where it is engaged by the trigger mechanism and held in its retracted or pulled-back position, in which position notch 22 with the pellet therein is opposite discharge opening 21.

The carrier structure comprises a cage 24 of suitable dimensions, and its upper and lower portions are bent inwardly to provide channels 25 and 26, respectively, that ride upon the respective corrugations 8 and 6, substantially in the manner shown in section in Fig. 3. The carrier 24 is preferably made of a sheet of metal bent in substantially the shape shown in Fig. 3 with the side portion thereof cut out in substantially the manner shown in Figs. 1 and 2, the metal forming the top and bottom being left intact to provide grooves or channels 25 and 26 and afford a smooth guidance upon corrugations 8 and 6. The upper wall 25 is cut back from its forward edge (Fig. 2) and below the same is a pocket or holder 27 into which the shot or pellets are deposited when discharged through opening 21. This pocket is formed to have a seat for the pellet at the rear thereof and above the bottom into which the pellet is carried by inertia when the carrier is propelled forwardly for the discharge thereof. This is accomplished by providing an upwardly inclined portion, as at 28, at the rear of which is a forwardly inclined rear or back wall 29 to prevent the shot or pellets being accidentally discharged rearwardly, and to form a member against which the shot impinges while the carrier is traversing its path to a position to discharge the shot or pellet.

As noted in Fig. 2 of the drawings, the pocket for the shot or pellet is provided with an upstanding flange or wall 31 at the front end thereof at a height below the position of the shot or pellet when the carrier or slide is in action or moving forwardly under which conditions the pellet or shot will ride up incline 28 against rear wall 29 of the pocket. When the slide has reached the limit of its forward movement its sudden stoppage will discharge the shot axially from the muzzle end of the pistol and over wall 31 just described. The purpose of this wall is to prevent the shot or pellet from being accidentally lost after being deposited in the pocket and prior to the discharge from the toy.

The angle of the pocket and the inclination of its rear portion 28 may be of such dimensions as may be desired for the particular construction, and I have ascertained that an angle of 45° inclination and a pocket of 90° angle is most effective.

The carrier or runner is provided upon opposite sides with a vertical transverse connecting piece 30 between which and the rear end of the carrier is inserted the elastic rubber band so that when the carrier or slide is drawn rearwardly the elastic band 16 will be stretched, and when the carrier or slide is released by the trigger it will move forward to discharge the shot or pellet. The top wall of the carrier, forming channel 25, is of such length that it prevents the depositing of the shot or pellet through opening 21 in the magazine and from thence to the pocket, until the carrier has been moved to the rear and is engaged by the latch member of the trigger. This prevents a shot or pellet being discharged through opening 22 into the carrier prior to the latter being latched, which, in the event the person using the toy should per-

mit the carrier to slip from the fingers while being retracted, the shot would not be discharged or propelled therefrom.

At the rear of the barrel of the pistol the guides are connected by a piece of metal 32 that surrounds the rear ends of the guides and forms a box-like enclosure for the breech end of the pistol. Mounted upon a pintle 33 is a bell crank latch, one arm 34 thereof extends downwardly below the lower guide and is engaged by an end of spring 23. The other arm 36 of the bell-crank is provided with a latch tooth 37 that is engageable with a transverse piece 38 on the carrier, preferably at the rear end thereof so that when the carrier is moved rearwardly to set the toy tooth 37 will ride under cross-piece 38 and latch the carrier against forward movement until the structure has been released by the trigger finger piece.

The rear end of the upper wall of the carrier is preferably the element which operates and trips the feed dog to deposit a shot or pellet in the pocket at the moment the carrier has been latched. Mounted in the lower guide so as to reciprocate longitudinally in corrugation 6 is a trigger rod 39 that is elongated and at its rear end is provided with an extension 40 that suitably engages with the lower portion of the depending arm 34 of the bell-crank latch. The forward end of trigger rod 39 is provided with a suitably shaped transverse finger piece 42, and intermediate its ends the trigger bar passes through recesses 43 formed in opposite walls of handle or grip 5, and is also guided by a strap 46 secured transversely to the undersurfaces of flanges 7 of the lower guide.

It is obvious that when the carrier has been latched and the shot or pellet deposited in the pocket thereof the pistol may be aimed by means of the forward and rear sights 44 and 45, respectively, and when in this position finger piece 42 is retracted which moves arm 34 of the bell-crank rearwardly against spring 35 and releases the latch tooth 37 from cross-bar 38 of the carrier. The elastic band 16 then draws the carrier forwardly in a rapid manner and is stopped by cross strap 14 connecting the guides. The speed of the carrier causes the pellet in the pocket to ride up incline 28 and position itself against rear wall 29 of the pocket in a position above the shallow wall 31 at the front of the pocket and the sudden stoppage of the carrier permits the momentum theretofore created to discharge the pellet from the pocket over wall 31 and out of the muzzle end of the pistol.

In order to take up wear and to provide additional means for stopping or retarding the forward movement of the carrier, I prefer to converge the guides toward the muzzle end of the pistol so as to increase the friction or drag upon the carrier as it reaches the forward end of the movement. This, of course, may also be accomplished by forming corrugations 6 and 8 of gradually increasing diameter toward the muzzle of the pistol, but I prefer the first mentioned method as it is much more convenient to manufacture.

What I claim is:

1. A toy comprising a barrel having a pair of vertically spaced guides, a reciprocable carrier movably mounted between said guides and provided with an open pocket, means for impelling said carrier forwardly in said guides, a shot magazine formed longitudinally in the upper guide, means for releasing shot, one at a time from said magazine whereby said shot gravitate, to the pocket in said carrier, a latch engageable with said carrier at the rearward limit of its movement, and means for releasing said latch from said carrier whereby the latter is moved forwardly by said impelling means for discharging the shot from the pocket in said carrier.

2. A toy comprising a barrel having a pair of vertically spaced guides, a reciprocable carrier movably mounted between said guides and provided with an open pocket, an elastic element operatively connecting said carrier to the forward portion of said barrel for impelling said carrier forwardly in said guides, a shot magazine formed longitudinally in the upper guide, means for releasing shot one at a time from said magazine whereby said shot gravitate to the pocket in said carrier, a latch engageable with said carrier at the rearward limit of its movement, and means for releasing said latch from said carrier whereby the latter is moved forwardly by said elastic element for discharging the shot from the pocket in said carrier.

3. A toy comprising a barrel having a pair of vertically spaced guides, a reciprocable carrier movably mounted between said guides and provided with an open pocket, means for impelling said carrier forwardly in said guides, a shot magazine formed longitudinally in the upper guide and having a discharge aperture adjacent the rear end of said barrel, a feed dog actuated by said carrier to release shot one at a time through said aperture to gravitate into the pocket in said carrier when the latter has moved inwardly past said aperture, a latch for releasably retaining said carrier in its rearward position immediately upon passing said aperture, and a trigger for releasing said latch.

4. In a shooting toy a barrel structure, a carrier reciprocable thereon, elastic means for moving said carrier forwardly, and a projectile receiving pocket on said carrier;

said pocket including a transverse front wall and an inclined wall up which the projectile is moved during the forward movement of the carrier and from which the projectile is discharged clear of the transverse wall by the stoppage of the carrier.

5. A toy of the shooting type, a carrier and a projectile receiving pocket thereon including a vertical transverse wall, and an inclined wall extending rearwardly from the lower portion thereof, whereby the projectile is moved upwardly on said inclined wall during the forward movement of the carrier and is discharged clear of the front wall upon the stoppage of the carrier.

6. In a toy gun, a projectile carrier and guides therefor comprising spaced members provided with facing corrugations serving respectively as a magazine for the projectiles and a trigger housing.

7. In a toy gun, a reciprocable projectile carrier and spaced guides therefor converging towards the muzzle end of the structure.

8. In a toy gun a reciprocable projectile carrier, spaced guides therefor converging towards the muzzle end of the structure, and an elastic band connecting said carrier with the muzzle portion.

Signed at Rawlins, county of Carbon and State of Wyoming, this 26th day of December 1922.

CLAUDE L. BUNTEN.

Witnesses:
R. S. BLOOD,
L. E. ARMSTRONG.