E. C. FEY.

SELF COCKING PISTOL.

APPLICATION FILED JUNE 21, 1921.

1,415,326.

Patented May 9, 1922.

Fig. 1.

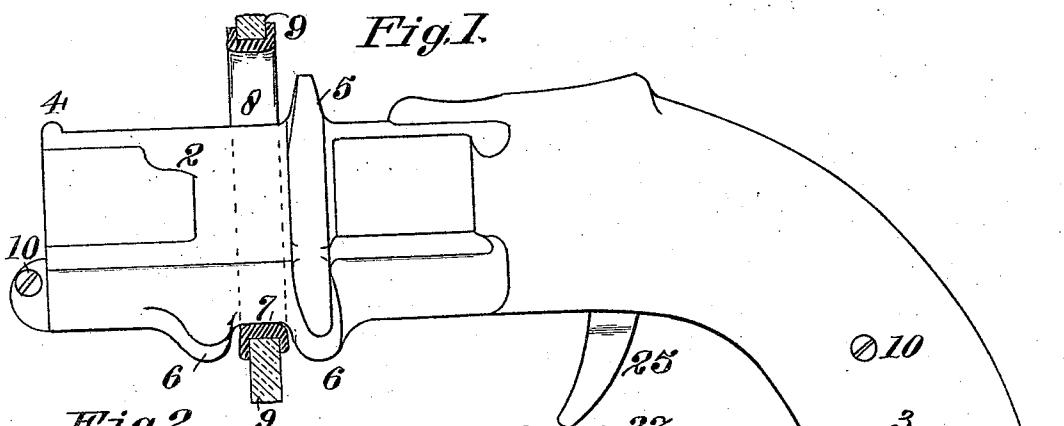


Fig. 2.

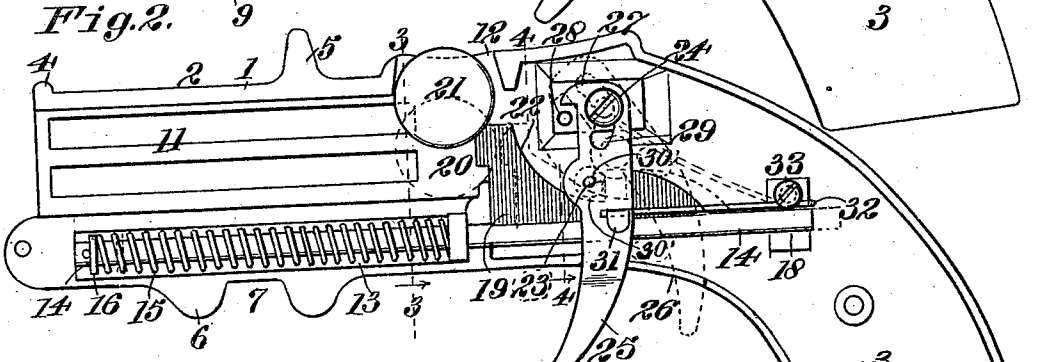


Fig. 3.

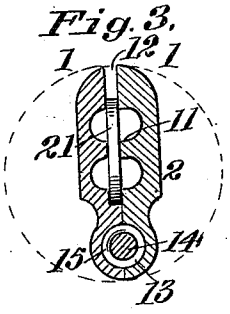


Fig. 4.

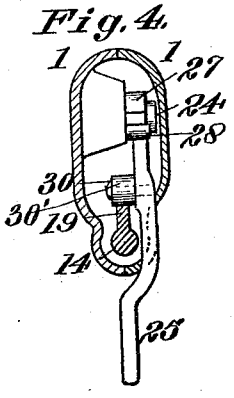


Fig. 5.

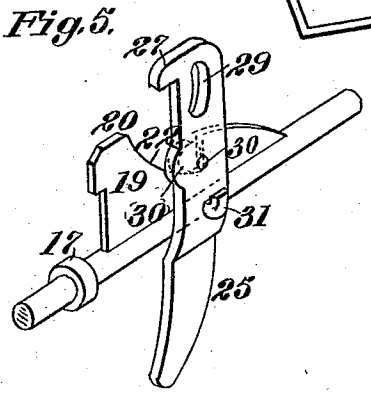
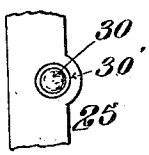


Fig. 6.



Inventor:
E. C. Fey.
By Cushman Watts & Cushman Attorneys.

UNITED STATES PATENT OFFICE.

EDMUND C. FEY, OF SAN FRANCISCO, CALIFORNIA.

SELF-COCKING PISTOL.

1,415,326. Specification of Letters Patent. Patented May 9, 1922.

Application filed June 21, 1921. Serial No. 479,179.

To all whom it may concern:

Be it known that I, EDMUND C. FEY, a citizen of the United States, residing at the city and county of San Francisco and State of California, have invented certain new and useful Improvements in Self-Cocking Pistols, of which the following is a specification.

The present invention relates to a coin or token projecting apparatus resembling a toy pistol, and which is designed for use in connection with amusement and skill devices where the marksman endeavors by the operation of the pistol to shoot a coin or token at a given mark or through a controlling aperture.

The principal object of the present invention is to provide a pistol of this type where the trigger is self cocking, thereby enabling the same to be successfully pulled on the dropping or inserting of successive coins or tokens within the pistol.

A further object is to provide a novel mounting for the pistol enabling an operator to readily aim the pistol without removing the same from its mount, and to provide a construction wherein the manual actuation of the trigger places operating tension on the impeller and releases the same for projecting the coin or token.

With the above mentioned and other objects in view, the invention consists in the novel construction and combination of parts hereinafter described, illustrated in the accompanying drawings, and set forth in the claims hereto appended, it being understood that various changes in the form, proportion, size and minor details of construction within the scope of the claims may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

To more fully comprehend the invention, reference is directed to the accompanying drawings, wherein:—

Figure 1 is a view in side elevation of the preferred embodiment of my invention disclosing the mounting thereof in section.

Figure 2 is a longitudinal central sectional view of the pistol with one of the halves of the body removed.

Figure 3 is a sectional view taken on line 3—3 of Figure 2.

Figure 4 is a similar view taken on line 4—4 of Figure 2, and

Figure 5 is a view in detailed perspective of the trigger and the impeller and the operating connection between the trigger and impeller.

Figure 6 is a view in detail of the trigger and antifriction roller.

Referring more particularly to the several views of the drawings wherein like characters of reference designate corresponding parts, 1 indicates the opposite co-acting half bodies of a longitudinally divided casting formed with a barrel portion 2 and a hand-grip portion 3. The barrel portion is provided with a front sight 4 and a rear sight 5, and the spaced lugs 6 forming between them a substantially annular groove 7 for receiving a mounting bearing 8 held within an opening in the mounting 9 preferably of transparent material.

The upper portion of the bearing 8 is raised above the remainder thereof to enable the user to sight along the sights 4 and 5. The half sections 1 are secured together at the barrel and hand grip end by attaching screws 10, and said barrel portion is provided from its outer end with the inwardly extended projectile discharge opening 11 with the rear of which communicates a projectile receiving opening 12 formed between the upper meeting edges of the half sections 1 at the rear end of the barrel portion 2 above the opening 11. The half sections are formed with a bore 13 into which is mounted the longitudinally movable plunger 14 about which is coiled the controlling spring 15, bearing against an abutment 16 at the forward end of the plunger, and at its rear end seating against the abutment sleeve 17 at the rear end of the bore 13 and within which the plunger 14 reciprocates. The extreme rear end of the plunger operates in a guide depression 18 and the rear portion of said plunger carries the upwardly extended impeller plate 19, the upper end 20 of which when the plunger is in its normal forward position projects into the lower end of the receiving opening 12 and assists in supporting the deposited coin or token 21 within the upper end of said opening 12. The upper edge of the plate 20 curves downwardly and rearwardly as at 22, and terminates at its lower end in a vertical wall forming a shoulder 23. At a point above the shoulder 23 is fulcrumed on the pin 24 a trigger 25, the lower end of which projects through a slot 26 at the forward end of the hand grip portion 3. The upper end of the trigger in

advance of the pin 24 is formed with a lip 27, which is adapted to co-act with the abutment 28 carried by one of the halves 1, and said trigger portion adjacent the lip 27 is formed with a vertically disposed arcuate slot 29 within which the fulcrum pin 24 operates. Below said slot 29 the trigger carries an impeller actuating pin 30 mounting an anti-friction roller 30′ which co-operates with the curved wall 22 of the plate 20, and at the side opposite said pin the trigger is provided with a trigger re-set spring lug 31 into which is adapted to seat the forward end of a trigger re-set spring 32 anchored at its rear end by a screw 33.

In operation, the user deposits a coin or token 21 in the opening 12, grasps the grip portion 3 with one finger on the trigger 25, the pistol is then aimed and a gradual rearward movement of the trigger 25 causes the pin 30 in engaging the shoulder 23 to draw plunger 14 and impeller 19 rearwardly, which motion first permits the coin or token 21 to drop from full to dotted line position, as in Figure 2 of the drawings, to register with the rear end of the opening 11. The continued rearward movement of the trigger 25 causes the lip 27 to strike the abutment 28, and this contact changes the fulcrum point of the trigger as the continued movement causes a sliding of the slot 29 on the pin 24, and a gradual upward movement of the pin 30 and roller 30′ on the shoulder 23 until such time as the trigger is moved approximately into dotted line position, Figure 2, when the roller 30′ will ride free of the shoulder 23 and permit the spring 15 to actuate the impeller 19 to discharge the coin or token 21 from the opening 11. The sudden release of the collar 30′ from the shoulder, and the consequent sudden release of pressure of spring 15 from the trigger causes the strain of the finger on the trigger by the user to pull the trigger its full distance indicated by dotted lines, Figure 2. This insures the complete release of the impeller. On the release of pressure on the trigger 25, re-set spring 32 causes a forward movement of the trigger 25 first causing the engagement of lip 27 with abutment 28 and the releasing the lip from the said abutment, and during this operation the slot 29 is moved relative to the fulcrum pin 24. It will be apparent that the pin 24 provides the normal fulcrum for the trigger 25, and that on contact of the lip 27 and abutment 28, the fulcrum point of the trigger 25 is shifted from the pin 24 due to the arcuate slot 29, and which shift of fulcrum releases the roller 30′ from the shoulder 23. It will be observed that as soon as the pressure is released on the trigger 25, the same immediately returns to its normal position permitting a succeeding rearward movement of the impeller 19 when the trigger 25 is again moved rearwardly.

The providing of the roller 30′ serves as an antifriction roller and riding on the surface 22 overcomes the necessity of hardening or tempering the member 19, and this construction materially lengthens the effective period of successful operation of the device without repair.

I claim:—

1. A pistol including a body formed with a barrel and a hand grip portion, said body provided with a projectile discharge opening disposed longitudinally of the barrel and a receiving opening communicating with the rear of the discharge opening, a spring actuated projectile impeller within the body, a trigger mounted at its upper end to pivot on a variable fulcrum, a curved shoulder on said projectile impeller, a pin on said trigger for engaging said shoulder on the manual rearward movement of the trigger to first move the impeller rearwardly and then release the same to shoot the projectile from the barrel, and a spring for moving the trigger forwardly on the release of manual pressure therefrom for a succeeding engagement of the pin with the shoulder.

2. A pistol including a body formed with a barrel portion and a hand grip portion, said body provided with a projectile discharge opening disposed longitudinally of the barrel and a receiving opening communicating with the rear of the discharge opening, a longitudinally movable plunger mounted within the barrel, an operating spring associated therewith, an impeller extended laterally from said plunger and normally coacting with the rear end of said projectile discharge opening, a trigger within said body disposed with its lower end extended in advance of said grip portion, said trigger provided at its upper end with a forwardly extending lip and formed adjacent said lip with a longitudinally disposed slot, a fulcrum pin for the trigger received in said slot, an abutment with which said lip engages during the manual rearward movement of said trigger, said impeller provided on its upper surface with a curved shoulder, a pin on the trigger below said slot for engaging with said shoulder, and a spring for normally returning the trigger to operative position.

In testimony whereof I have signed my name to this specification.

EDMUND C. FEY.