A. C. JONASSEN.

TOY PISTOL.

APPLICATION FILED FEB. 9, 1922.

1,430,813. Patented Oct. 3, 1922.

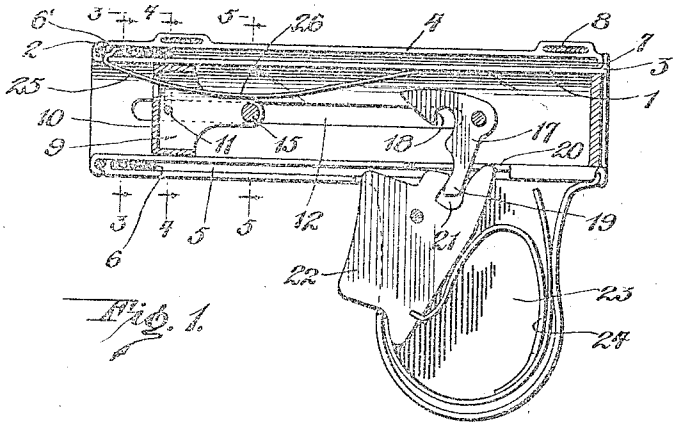


Fig. 1.

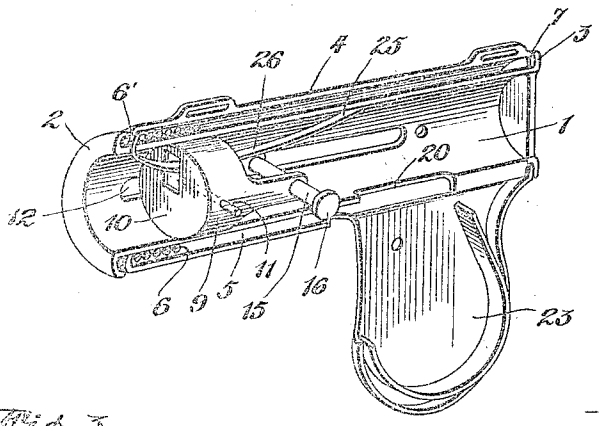


Fig. 2.

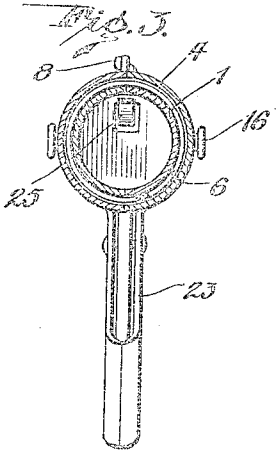


Fig. 3.

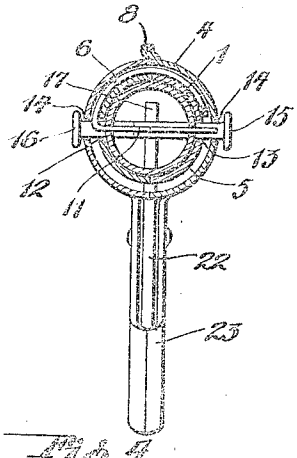


Fig. 4.

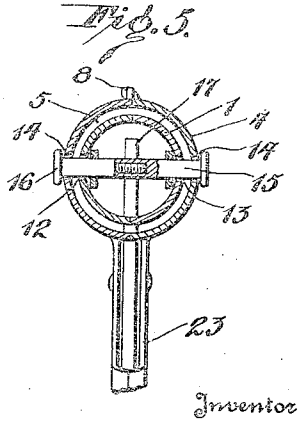


Fig. 5.

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UNITED STATES PATENT OFFICE.

ALFRED CHRISTIAN JONASSEN, OF DAYS BAY, WELLINGTON, NEW ZEALAND.

TOY PISTOL.

Application filed February 9, 1922. Serial No. 535,374.

To all whom it may concern:

Be it known that ALFRED CHRISTIAN JONASSEN, a subject of the King of England, residing at Bay View House, Days Bay, Wellington, New Zealand, has invented certain new and useful Improvements in Toy Pistols, of which the following is a specification.

This invention relates to an improvement in toy pistols, of that type wherein a plunger is operated by a spring to eject a projectile.

The present improvement is directed to providing a particular housing for the operating spring, with means for conveniently securing the fixed end of the spring in the housing. The spring housing is utilized in part as the barrel of the pistol, and the plunger operative in such barrel is connected with one end of said spring. The plunger is manually operative to tension the spring through a member extending through slots in the spring housing and barrel. The operating member extends transversely of and through the plunger, and serves as a pin to engage a locking lever, controlled by a trigger, so that the plunger may be held in cocked position or released at will.

The piston is particularly adapted for using round objects as projectiles, such as balls or marbles, and is to be provided with a projectile-retaining spring, shaped to permit temporary holding of projectiles of varying sizes in loaded position in the barrel.

The invention in the preferred form is illustrated in the accompanying drawings, in which:

Fig. 1 is a longitudinal vertical sectional view of the pistol.

Fig. 2 is a perspective view, one half the spring housing being omitted.

Fig. 3 is a section on line 3—3 of Fig. 1.

Fig. 4 is a section on line 4—4 of Fig. 1.

Fig. 5 is a section on line 5—5 of Fig. 1.

The improved pistol comprises a barrel 1, which includes a cylindrical sheet metal body of appropriate diameter for the purpose. This body is for convenience of assemblage made in halves, as shown, and these halves are preferably assembled with the division lines vertically of the barrel as in use. The ends of the barrel are turned outwardly, forming forward flange 2, and rear flange 3. The barrel forms a part of the housing for the operating spring, there being associated with the barrel an addition cylindrical body 4, also preferably made in halves and adapted for connection. This body 4 is of somewhat larger diameter than the body or barrel proper 1, so that in the concentric arrangement of the cylindrical bodies there is provided a space 5 between them, in which is arranged the operating spring 6. This spring, which is loosely coiled about the barrel 1 is secured at the forward end of the barrel through the medium of an inwardly extending flange 6′ on the outer body 4, said flange 6 seating in rear of the forward coil of the spring and confining such forward coil between the flange 2 on the barrel and the flange 6 on the outer body. The rear end of the body 4 has an inwardly extending flange 7, fitting within the flange 3 on the barrel. Securing means of any appropriate type, indicated at 8, secures the bodies 1 and 4 in proper relation, thereby completing the barrel and spring housing of the pistol.

A plunger 9 is arranged for sliding movement in the barrel 1, this plunger presenting a flat end 10 to engage the projectile. The operating spring 6 is secured to said plunger, by extending the final end of such spring as a rod like extension 11, and passing the same through a slot 12 in the barrel body 1, the spring extension 11 then passing through and being secured in the plunger. The plunger is thus responsive to spring control, as the spring can move in the housing provided for it, and the connection of the spring and plunger is permitted through the slot in the barrel.

The slot 12 of the barrel is duplicated by a diametrically opposed slot 13, and registering slots 14 are formed in the outer body 4. A plunger operating member 15, in the form of a rod, passes through the rear end of the plunger and through the registering slots, to the outer side of the body 4. The rod 15 is terminally provided with enlargements 16 provided convenient finger grips, whereby the plunger may be forced rearwardly in the barrel, and the spring 6 tensioned.

A locking lever 17 is pivotally supported within the barrel, and formed in its forward portion with a recess or notch 18, adapted, when the plunger has been moved rearwardly thereto, to engage with the rod 15, and so hold the plunger in cocked position, with the spring 6 under tension. The locking lever has a depending finger 19, passing through

registering openings 20 in the bodies 1 and 4, and seating in a recess 21 of a trigger 22, pivotally supported in a butt or handle grip portion 23 of the pistol. This handle grip portion is also preferably of sheet metal appropriately shaped and made, if desired, in halves for convenience of assemblage. The trigger 22 projects through an opening in the forward wall of the handle grip portion 23, and is held in forward or normal position by a spring 24, arranged as shown. Through the connection of the trigger and lever 17, the spring 24 acts to always maintain the lever in position to engage the plunger, so that to load the pistol for firing all that is necessary is to retract the plunger by means of the rod 15 until the lever 17 engages and locks the plunger in the new position. The spring 6 is thus extended and tensioned, so that on release of the lever 17, by operating the trigger, the plunger is moved lengthwise the barrel under the force of the spring, to eject the projectile.

To provide for projectiles of varying sizes, there is provided a retaining spring 25, comprising a flat leaf spring arranged interiorly of the barrel and bowed to present a variable holding effect. The forward or connected end of this spring is passed upwardly through the barrel body 1, beneath the forward or secured coil of the spring 6, and rearwardly beneath flange 6′ of body 4 and over the next several coils of the spring. Thus the retaining member is secured at its forward end, and within the barrel, this member extends in bowed form through an opening in the plunger, as at 26, and rests at its rear end against the interior of the barrel. The spring yields under the introduction of projectiles, and will thus temporarily secure projectiles of the full size of the barrel, or of a minimum size corresponding to the bowed limit of the retaining member. Thus projectiles of varying sizes may be used, and increasing the value of the pistol, as a toy.

By use of the means employed in connection with the spring, the use of pins and the like can be dispensed with, the path of movement of the spring being uninterrupted, one coil of the spring engaging against the other when the spring is in movement.

Claims:

1. A toy pistol having a barrel, a plunger operative in the barrel, a spring for operating the plunger, and a body arranged concentric with and connected to the barrel, said body and barrel providing a housing for the spring.

2. A toy pistol having a spring housing constructed of concentric spaced cylindrical bodies, one of which serves as a barrel for the pistol, a spring arranged in said housing and capable of being extended longitudinally for tensioning, a plunger slidable within the barrel, said barrel being formed with a slot and one end of the spring being extended through said slot and connected to the plunger.

3. A toy pistol having a spring housing constructed of spaced cylindrical bodies, one of which serves as a barrel for the pistol, a plunger operative in the barrel, a spring coiled about the barrel and operative in the housing, the outermost cylindrical body having an inwardly extended flange to engage in rear of a forward coil of the spring to secure the forward end of the spring in the housing.

4. A toy pistol having a spring housing constructed of spaced cylindrical bodies, one of which serves as a barrel for the pistol, a plunger operative in the barrel, a spring operative in the housing and secured at the forward end therein, said cylindrical bodies being formed with diametrically opposed slots, a pin passing through said slots and connected to the plunger, the outer end of the pin being formed to permit manual movement of said pin longitudinally of the slots to move the plunger, one terminal of the spring being extended through one of said slots and engaged with the plunger.

5. A toy pistol having a spring housing constructed of spaced cylindrical bodies, one of which serves as a barrel for the pistol, a spring arranged in the housing, a plunger slidable in the barrel, a connection between the spring and plunger, a pin connected to the plunger and extending beyond the housing to permit manual operation of the plunger, a butt connected to the spring housing, a locking lever mounted in the housing and adapted to engage said pin to hold the plunger in a retracted position, and a trigger mounted in the butt and operatively connected to the locking lever.

6. A toy pistol having a spring housing constructed of spaced cylindrical bodies, one of which serves as a barrel for the pistol, a plunger operative in the barrel, a spring mounted in the housing and connected to the plunger, the outermost body of the housing having an inwardly directed flange to engage in rear of the forward front of the spring to fix the latter in position, and a projectile retaining member arranged in the barrel, the forward end of said member passing through the barrel and beneath the forward coil of the spring and inwardly directed flange, whereby to secure said retaining member in place.

7. A toy pistol having a barrel, a coil spring encircling the same, a body arranged concentric with and spaced from the barrel, said body having an inwardly directed flange to engage in rear of a coil of the spring to fix one end of the spring against movement, and a projectile retaining member having a bowed portion within the body

portion, the forward end of said member being secured by said spring and inwardly directed flange.

8. A toy pistol having a barrel, a plunger slidable therein, a spring for operating the plunger, means for locking the plunger in a position to tension the spring, a trigger for releasing the plunger lock to permit the spring to operate the plunger, and a projectile retaining spring arranged within the barrel and passing through the plunger, that portion of the spring within the barrel being bowed to provide for temporarily holding projectiles of varying sizes.

9. A toy pistol having a barrel formed with a slot, a housing located over the slot and spaced from the barrel, a spring arranged in the housing and capable of being extended longitudinally for tensioning, a plunger slidable within the barrel, the spring having one end extended through the slot and connected to the plunger, and a projectile retaining spring arranged within the barrel and passing through the plunger, that portion of the spring within the barrel being bowed to provide for temporarily holding projectiles of varying sizes.

10. A toy pistol having a barrel formed at opposite ends with flanges, a plunger operative within the barrel, a body arranged concentric with the barrel and provided at opposite ends with flanges interfitting with the flanges on the barrel, a spring arranged between the housing and barrel and having one end secured by the interfitting flanges of the barrel and housing, the opposite end of the spring being extended into the barrel and connected to the plunger.

11. A toy pistol having a barrel formed with diametrically arranged slots, a plunger operative within the barrel, a spring arranged around the barrel with one end secured thereto, the opposite end of the spring being attached to the plunger, and a pin passing through said slots and connected to the plunger, the free ends of the pin being extended beyond the barrel to permit manual movement of said pin longitudinally of the slots to move the plunger in the barrel.

12. A toy pistol including spaced concentric members, a plunger slidably operative within the innermost member, a plunger operating spring arranged and operative in the space between the members, and means connected to the plunger and extending through and beyond both members, said members being formed with slots for the passage of the means and to permit movement thereof longitudinally of said members.

In testimony whereof I affix my signature.

ALFRED CHRISTIAN JONASSEN.