No. 661,450. Patented Nov. 6, 1900.

H. C. HALL.

TOY REVOLVING PISTOL.

(Application filed Feb. 12, 1900.)

(No Model.)

Fig. 1

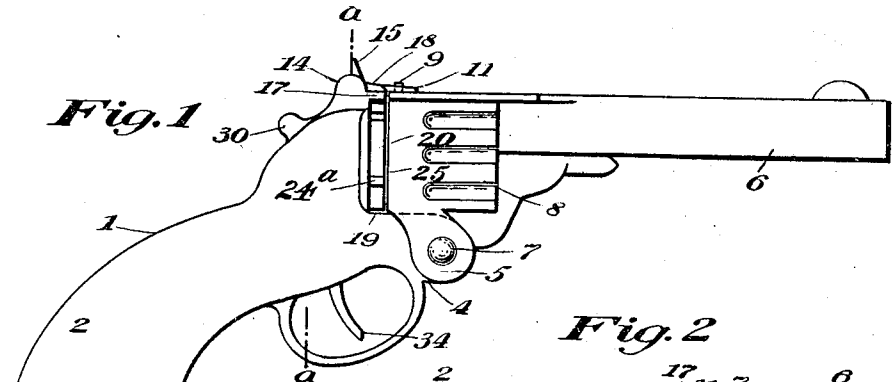


Fig. 2

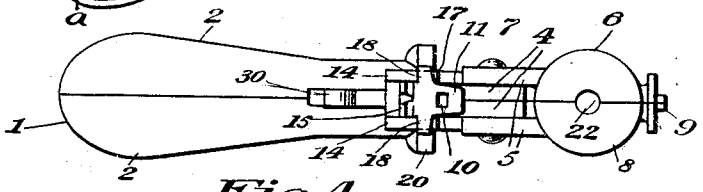


Fig. 4

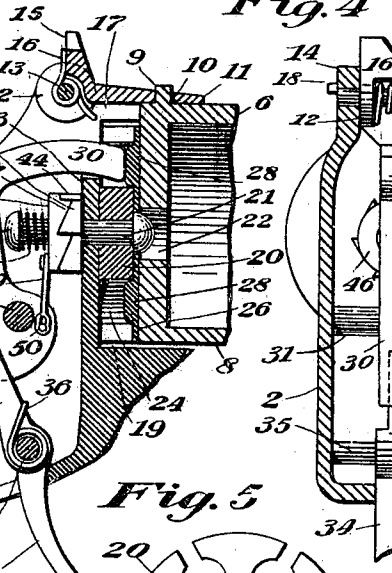


Fig. 3

Fig. 6

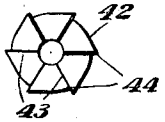


Fig. 7

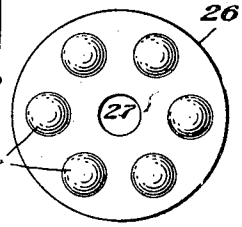
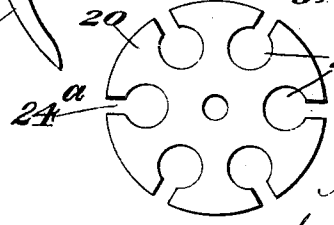


Fig. 5



Witnesses
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Henry Clay Hall,
by John Elias Jones,
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UNITED STATES PATENT OFFICE.

HENRY CLAY HALL, OF COVINGTON, KENTUCKY, ASSIGNOR OF ONE-HALF TO LOUIS FRITZ, OF SAME PLACE.

TOY REVOLVING PISTOL.

SPECIFICATION forming part of Letters Patent No. 661,450, dated November 6, 1900.

Application filed February 12, 1900. Serial No. 4,883. (No model.)

To all whom it may concern:

Be it known that I, HENRY CLAY HALL, a citizen of the United States of America, and a resident of Covington, in the county of Kenton and State of Kentucky, have invented certain new and useful Improvements in Toy Revolving Pistols, of which the following is a specification.

This invention relates to certain improvements in toy pistols, and has for its object to provide a device of this character of a simple, strong, and inexpensive nature and of a construction closely resembling in appearance an ordinary revolver and being adapted for firing a number of times without reloading.

The invention consists in a toy pistol comprising a grip portion, a barrel portion pivoted thereon, firing mechanism comprising a hammer or its equivalent, a rotatable breech-piece arranged between the grip portion and barrel portion and provided with openings for the passage of the hammer of the firing mechanism, said breech-piece being adapted to hold the charge between itself and the barrel portion of the pistol in position to be exploded by the hammer when projected through the openings in the breech-piece, and means for rotating the breech-piece.

The invention also contemplates certain novel features of the construction, combination, and arrangement of the several parts of the improved toy pistol, whereby certain important advantages are attained and the device is made simpler, cheaper, and otherwise better adapted for use, all as will be hereinafter fully set forth. The novel features of the invention will be carefully defined in the claims.

In the accompanying drawings, which serve to illustrate my invention, Figure 1 is a side elevation showing a toy pistol embodying my improvements; and Fig. 2 is a top view of the same, showing the breech as it appears when broken down for reloading. Fig. 3 is an enlarged partial section taken through the lock, the hammer and other operative parts being shown in elevation. Fig. 4 is an enlarged section taken through the lock in a plane at right angles to Fig. 3, being substantially as indicated by the line *a a* in Fig. 1. Fig. 5 is an enlarged detail view of the rotating breech-piece detached. Fig. 6 is an enlarged detail view of one of the clutch members for rotating said breech-piece. Fig. 7 is an enlarged detail view showing a form of cap or charge especially adapted for use in the pistol.

In the drawings, 1 indicates the grip of the pistol, preferably made in two corresponding castings 2 2, held together at the butt-end by means of a screw or rivet 3 and having at their forward ends similar perforated lugs 4 4, registering and adapted to fit between lugs 5 5 on the barrel portion 6 of the pistol, the lugs 5 being also perforated for the passage of a bolt or rivet 7, which also passes through the lugs 4 for holding the barrel pivotally on the grip 1. The rear end of the barrel portion 6 is enlarged and forms an anvil in front of the breech and upon which the caps are exploded, and said rear end 8 has an upward extension or pin 9, adapted when the breech is closed to be received by an opening 10 in one arm of a dog 11, having at its rear end perforated ears 12, held on a pivot-pin 13 between lugs 14 on the forward end of the grip 1, and having an upwardly-extended thumb-piece 15, made to represent a sight. A spring 16 is provided, having engagement at one end with the thumb-piece 15 and at its other end with the frame for holding the dog 11 normally in the position shown in the drawings; but when the thumb-piece is pressed backward it is evident that the dog will be lifted, so as to disengage the pin 9 from the opening 10 and permit the breech to be opened, the part 6 swinging down pivotally to the position shown in Fig. 2.

The lugs 14 have forward extensions 17, on which rest arms or wings 18 on dog 11 to limit the downward movement of the dog, and the forward ends of said extensions 17 are adapted to be engaged by the rear portion 8 of the pivoted part 6, so as to hold the parts 1 and 6 spaced away from each other at the breech, as shown at 19 in Figs. 1 and 3, the rotating breech-piece 20 being held to turn in said space. The breech-piece 20 is in the form shown in Fig. 5, being a metal disk held on the forward end of a shaft 21, headed outside the disk and adapted to enter a central opening 22 in the anvil 8. The shaft 21 has a bearing and turns in a partition or wall 23 of

the part 1, just back of the opening 19, and has a number of openings or chambers 24 in annular series and extending through it for the passage of the hammer in exploding the caps.

The thickness of the piece 20 is not sufficient to entirely fill the space or opening 19, a space 25 being provided between said piece 20 and the anvil 8 to receive a circular or disk-like sheet 26 of paper or cardboard having an annular series of fulminating-caps 28, as shown in Figs. 3 and 7, so arranged as to correspond and fit in the chambers 24 of the breech-piece and also provided with a central opening 27 for the passage of the head of the shaft 21. The chambers 24 of the breech-piece are formed with lateral outlet-passages 24^a, leading through the edge of the breech-piece, for the escape of the smoke and gases when the charge is fired in the chamber.

The upper part of the partition or wall 23 has an opening 29, through which plays the hammer 30, pivoted at 31 and actuated by a spring 32, which has engagement under the rear hooked end 33 of the hammer.

34 indicates the trigger, movable in a guard, as herein shown, being pivoted at 35 and provided with a spring 36, coiled on the pivot-pin 35, with one end secured to the frame, and the other end engages with a sear 37, adapted for engagement with a notch 38 in one side of the hammer. The rear wall of the notch 38 is beveled, as shown at 39, while the front wall is made flat, so that when the trigger is pressed by the finger the engagement of the front face of the sear with the flat front wall of the notch 38 will first act to lift the hammer 30, so as to withdraw it from the opening 24 in the breech-piece 20, and afterward the engagement of the beveled rear part 39 of the notch 38 with the rear face of the sear 37, which face may, if desired, be also beveled, will act to push the sear sidewise and out of the notch 38, so as to free the hammer from the sear and allow the spring 32 to act to throw said hammer forcibly into the chamber 24 of the breech-piece 20, so as to explode the cap 28 held therein. The lateral motion of the sear and trigger 34 is permitted by the spring 36 and the opening 40 in the frame, said spring 36 acting, after the disengagement of the parts and the throwing of the hammer by its spring 32, to throw the sear 37 rearwardly and also to press it over toward the hammer to again engage it with the notch 38.

To communicate the movement of the hammer 30 to the rotating breech-piece 20, I employ mechanism comprising two clutch members held on the shaft 21 to the rear of the wall or partition 23. One of these clutch members 42 is fixed on the shaft 21 and prevents endwise movement thereof, being provided with a number of ratchet-teeth or serrations 43, corresponding to the number of chambers or openings 24 in the breech-piece, and being also provided with a similar number of peripheral ratchet-teeth 44, engaged by a spring dog or pawl 45 in the casing to hold the shaft and breech-piece against back rotation. The ratchet-teeth 43 of member 42 are adapted for engagement with similar teeth 47 on a clutch member 46, loose on the shaft 21, the rear end of which shaft is extended in the hollow of the casing and is provided with a head 41, between which and the member 46 is coiled on the shaft a spring 48, serving to hold the member 46 with its teeth normally engaged with the teeth 43 of member 42. A link 49 is pivoted to the member 46 and extends down and is loosely connected to the hammer, as shown at 50, so that when the hammer is raised a partial rotation is imparted to the clutch member 46 and is communicated therefrom to the member 42 and piece 20, which are fixed on shaft 21, so as to present a new chamber beneath the hammer 30 when the same is thrown by its spring 32. Upon the throwing of the hammer a reverse movement is imparted to the member 46, so as to cause the teeth of the same to ride over the teeth of member 42, which is held against back rotation by the dog 45.

In the operation of the device when it is desired to load the pistol the dog 11 is detached from pin 9 and the barrel portion 6 is thrown down to the position shown in Fig. 2, so as to open the breech to receive a cap or charge held on the head of the shaft 21, after which the breech is closed by a reverse movement of the portion 6 and is locked by said dog 11. The trigger being pressed by the finger causes the hammer to be lifted, rotating the piece 20 until the sear is thrown out of engagement with the hammer, and the spring 32 acts to throw the hammer and explode the cap in chamber 24, at the same time setting the clutch member 46 in position to turn the breech-piece 20 forward again at the next raising movement of the hammer.

From the above description it will be seen that the construction of the improved revolving toy pistol while very simple and inexpensive is at the same time extremely strong and not liable to become broken or get out of order, so that the device is well adapted for use as a toy and subjected to rough and careless handling, and it will also be obvious from the above description that the device is capable of some modification without material departure from the principles and spirit of the invention, and for this reason I do not desire to be understood as limiting myself to the precise form and arrangement of the several parts herein set forth.

Having thus described my invention, I claim—

1. In a toy pistol, the combination of a grip portion, a barrel portion pivoted thereon and provided with an enlarged rear end, means to lock the barrel portion against pivotal movement, firing mechanism comprising a hammer or its equivalent, a breech-piece rotatable between the grip portion and the enlarged rear

end of the barrel portion and provided with openings for the passage of the hammer or its equivalent said breech-piece being connected to the grip portion and being adapted to hold the charge between itself and the enlarged rear end of the barrel portion in position to be exploded by the hammer when projected through the said openings in the breech-piece and means to rotate the breech-piece, substantially as set forth.

2. In a toy pistol, the combination of a grip portion, a barrel portion pivoted thereon and provided with an enlarged rear end having a central opening, means to lock the barrel portion against pivotal movement, firing mechanism comprising a hammer or its equivalent, a breech-piece arranged between the grip portion and the enlarged rear end of the barrel portion and provided with openings for the passage of the hammer or its equivalent, a shaft on which the breech-piece is held, said shaft having its end arranged to project beyond the breech-piece for engagement with the central opening in the rear end of the barrel portion, and means to rotate the breech-piece, substantially as set forth.

3. In a toy pistol, the combination of a frame, firing mechanism comprising a hammer, a shaft mounted to turn in the frame, a breech-piece carried by the shaft, a clutch member fixed to the shaft, a clutch member loose on the shaft and provided with a spring for holding it engaged with the first-named clutch member and means to communicate the movement of the hammer to said loose clutch member, substantially as set forth.

4. In a toy pistol, the combination of a grip portion, a barrel portion pivoted thereto, means to lock the barrel portion against pivotal movement, firing mechanism, a shaft held to turn at the forward end of the grip portion and driven from the firing mechanism, and a breech-piece held on the forward end of said shaft between the grip portion and the barrel portion and provided with openings for the passage of the hammer of the firing mechanism, substantially as set forth.

5. In a toy pistol, the combination of a grip portion, a barrel portion pivoted thereon, means to lock the barrel portion against pivotal movement, firing mechanism comprising a hammer, a shaft held to turn at the forward end of the grip portion, a breech-piece held to turn with said shaft between the grip portion and the barrel portion, a head or enlargement on the rear end of said shaft, a clutch member fixed on the shaft, a clutch member loose on the shaft and adapted for engagement with the fixed clutch member when moved in one direction, to compel rotation of the shaft, a spring coiled on the shaft between the head or enlargement thereof and the loose clutch member, and a connection between the hammer and said loose clutch member, substantially as set forth.

Signed by me at Cincinnati, Ohio, this 10th day of February, 1900.

HENRY CLAY HALL.

Witnesses:
JOHN ELIAS JONES,
J. D. THORNE.