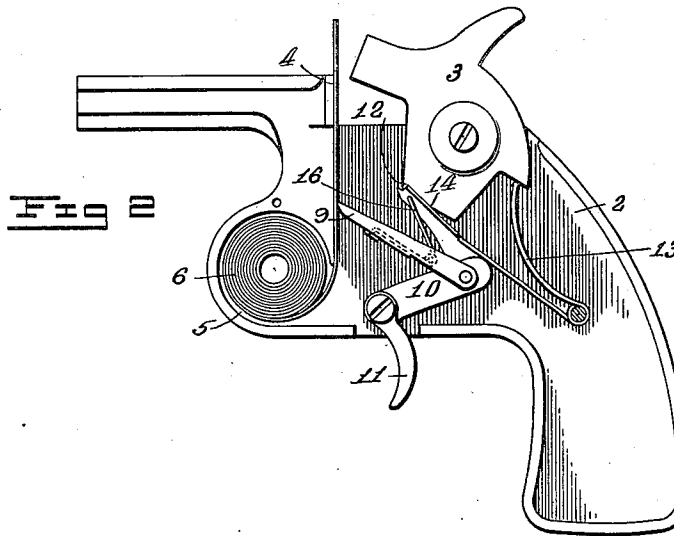
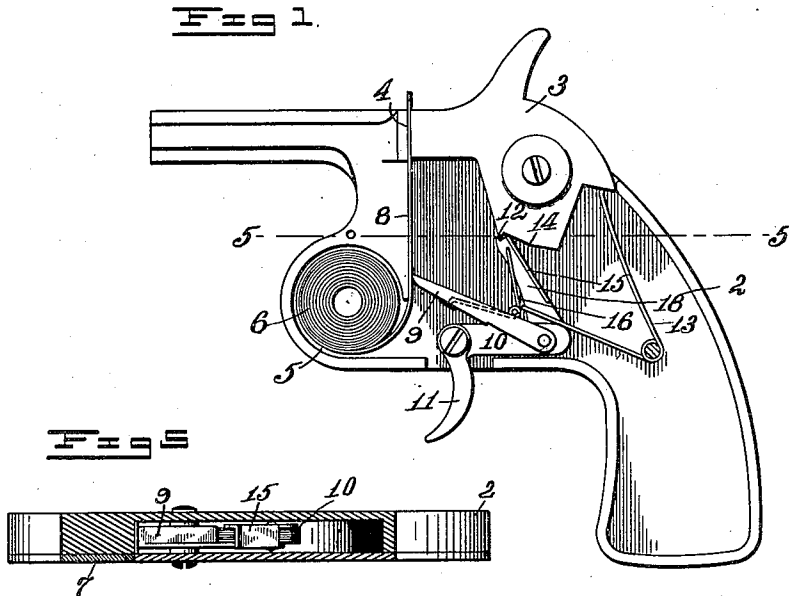


W. R. ATKINSON.
TOY PISTOL.
APPLICATION FILED DEC. 12, 1908.

1,061,257.

Patented May 13, 1913.

2 SHEETS-SHEET 1.



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2 SHEETS-SHEET 2.

Fig 3

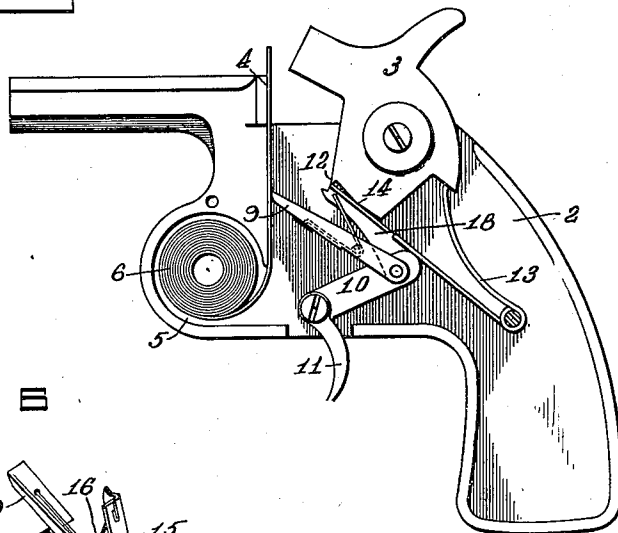


Fig 6

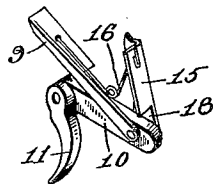
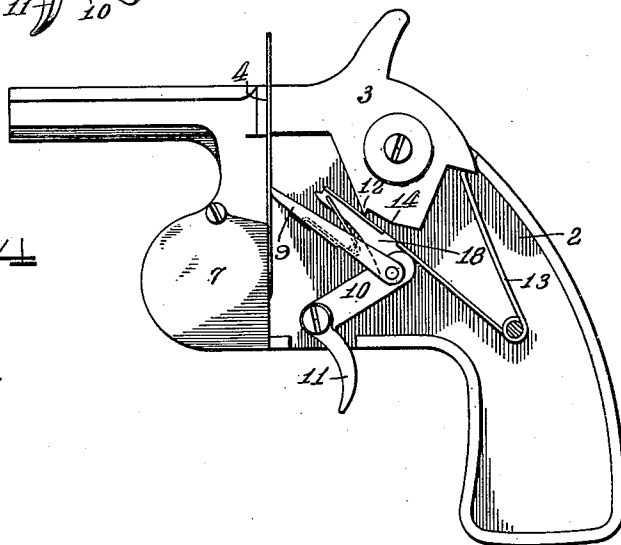


Fig 4



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UNITED STATES PATENT OFFICE.

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TO JOHN C. KNODE, OF MUNHALL, PENNSYLVANIA.

TOY PISTOL.

1,061,257.

Specification of Letters Patent.

Patented May 13, 1913.

Application filed December 12, 1908. Serial No. 467,172.

To all whom it may concern:

Be it known that I, WILLIAM R. ATKINSON, a citizen of the United States, residing at Homestead, in the county of Allegheny and State of Pennsylvania, have invented new and useful Improvements in Toy Pistols, of which the following is a specification.

The present invention relates to toy pistols of the general type used for exploding paper caps, and is designed as a repeating cap pistol in which paper caps in strip form may be fired continuously, proper firing and feeding instrumentalities being provided, so that as long as the trigger mechanism is operated a succession of shots may be fired.

In order that the invention may be clear to those skilled in the art to which it belongs, I have illustrated one embodiment thereof in the drawings herewith, and in said drawings:

Figure 1 is a side view of a pistol with the frame plate removed to show the interior construction of a pistol made in accordance with my invention. Fig. 2 is a view similar to Fig. 1 showing the hammer in the position occupied at the beginning of its retracting movement. Fig. 3 is a view showing the hammer in the position it occupies just prior to its release for firing. Fig. 4 is a view showing the position of the hammer and the trigger mechanism after release of the retracted hammer. Fig. 5 is a sectional view substantially on line 5, 5 of Fig. 1, showing the trigger mechanism in plan. Fig. 6 is a detail perspective view of the trigger mechanism.

Referring to the drawings by numbers, like numbers indicating like parts in the several views, 2 denotes a pistol frame of suitable construction and any approved design, in the upper part of which is pivoted a hammer 3 opposed to a firing abutment 4 located approximately midway of the pistol frame. The said frame 2 is provided with a cap magazine 5 in which is coiled a strip of paper caps, the said magazine being provided with a swinging gate 7, as shown in Fig. 4, so that the ammunition may be readily inserted. From the magazine the strip of caps is led upwardly past a feeding wall 8 to the firing abutment 4, as shown,

and to automatically feed caps upwardly I provide a feed dog 9, which is pivoted to a trigger-arm 10 pivoted in the frame and having a finger hold 11 projecting downwardly in the usual position adjacent the grip.

It will be seen that as the trigger is operated the feed dog 9 will impinge upon the cap strip and force it upwardly along the feed wall 8 in a step-by-step manner so as to bring the explosive spots in the strip in position to be struck against the firing abutment 4 by the hammer 3.

The hammer is operated by means of the sear 18 which engages a lifting toe 12 on the hammer 3 and retracts the hammer as the trigger is thrown from the position shown in Fig. 1 to that shown in Fig. 3, at which point the sear 18 slips from the hammer toe 12, whereupon the spring 13 throws the hammer forward with a firing impulse against the cap strip.

In order that the sear 18 may give a quick release to the hammer, I preferably shape the lower face of the hammer against which the sear 18 rides, in the manner shown, namely, with two inclines reversely placed with respect to each other so that as the sear 18 moves from the position shown in Fig. 1 to that shown in Fig. 3, it will rock past the central point 14 of the sear face on the hammer and quickly disengage from the hammer toe 12. The sear 18 is provided with a flat plate or bearing-portion 15 which rides on the hammer face, as best shown in Fig. 6, and this construction gives a steady bearing as between the sear and the hammer, so that they will ride easily in operation. The trigger 10 is engaged by the spring 13 which operates the hammer, so that, after a firing operation (see Fig. 1), the hammer and trigger are reengaged and returned to their normal engaging position shown in Fig. 1, and it will be seen that the operation of firing will be automatic and continuous as long as the trigger is pulled. The feed-dog 9 and firing-sear 18 are spring-separated by means of the spring 16, as shown, so that they are automatically returned to their respective positions, after their functions of feeding the strip and re-

tracting the hammer have been performed. The feeding dog or foot 9 for the trigger-mechanism and the hammer-elevating sear 18 are compactly assembled by being cut away, as shown best in Fig. 6, so that their actuating portions 9^a and 15 overlie the trigger 10 and overlap each other in the manner shown, and spring 16 is arranged between these overlapping parts so that a very compact and close arrangement is secured, and the dimensions of the inclosing frame may be kept down to reasonable limits. As will be seen, the spring 16 is connected to the feed dog or foot 9 and the sear, and is formed to provide an outward pressure to both of these parts; also that the point of pivotal connection of the sear and dog with the trigger-arm is located in rear of the point of contact of sear and hammer, thereby retaining the sear in a position where the face 15 thereof is inclined forwardly from the point of pivotal connection, and also providing an angularity of considerable extent between the direction of length of the feed dog and the plane of the feeding abutment. By this construction it will be readily understood that the movement of the trigger-arm during the feeding movement, causes the free end of the dog to move upwardly over the feeding abutment, thereby changing its angularity with respect to the arm 10 and the plane of the feeding abutment, this change in angularity compressing the spring 16 to increase the tension thereof, and thereby place increasing pressure on both the feeding strip and the hammer; this increased pressure insuring a positive feed of the strip as well as preventing liability of the sear becoming disengaged from the hammer prior to the forced disengagement of the hammer and sear. Owing to the particular location of the pivot point of the dog and sear, the feed movement of these parts produces a relative action somewhat similar to that of the closing movement of a pair of shears, said parts moving toward each other, and therefore in opposite directions, which movements gradually increase the pressure of the spring 16 until the point 14 of the hammer begins to release the sear from its engagement with the hammer; this movement of the point 14 of the hammer provides a much more rapid increase of pressure, and as this takes place approximately at the time the hammer is disengaged, it will be understood that when such disengagement takes place the dog is subjected to the maximum pressure of the spring 16, and absolutely feeds the strip to its proper position. As soon as the hammer is released, the firing movement thereof takes place, and, inasmuch as the movement of the hammer permits the sear to yield outwardly, it will be understood that, such

movement of the hammer provides a decrease in the pressure on the dog, this pressure gradually decreasing as the trigger-arm resumes its normal position after the firing takes place. It will therefore be clear that the particular structure herein disclosed provides for a mutual operation of the dog and sear to provide variable pressures on these parts, one on the other, these pressures varying to provide maximum and minimum pressures at particularly desired points in the movements of these elements.

By combining the parts as shown and described, a very compact and simple construction with a minimum number of parts is secured, and yet a firing mechanism which will give a continuous action is provided.

It will be understood, of course, that as illustrated in Fig. 5, the hammer and trigger mechanism described, will be completely inclosed by an appropriate side plate secured to the main frame in any suitable manner.

Such changes as are within the range of mechanical skill may, of course, be made and yet be within the purview of my invention, and I do not therefore, restrict myself to the details of this disclosure except in so far as I am limited by the art to which the invention belongs.

I claim:—

1. In a toy pistol designed to use cap strip ammunition, the combination of a hammer, a firing abutment, and a feed wall continuous with the face of said abutment, a trigger having an arm extending rearwardly to a point below the hammer pivot, a single spring for operating the hammer and the trigger, a cap strip feeding dog pivoted on one side of the free end of the trigger arm, a sear pivoted on the opposite side of the free end of said arm, actuating portions extending laterally from said dog and said sear overlying the trigger arm and overlapping each other, and a single spring between and attached to said actuating portions tending to hold said dog and sear apart and to their work.

2. In a toy pistol designed to use cap strip ammunition, the combination of a hammer, a firing abutment, and a feed wall continuous with the face of said abutment, a trigger having an arm extending rearwardly to a point below the hammer pivot, a single spring for operating the hammer and the trigger, a cap strip feeding dog pivoted on one side of the free end of the trigger arm, a laterally extending portion on said feeding dog overlying said trigger arm adapted to engage with and feed the cap strip, a sear pivoted on the opposite side of the free end of said arm, a laterally extending portion on said sear arranged to engage with and actuate the

hammer, said portion also overlying the trigger arm and overlapping the similar portion on the feeding dog, and a single spring attached to said actuating portions
5 tending to hold said dog and sear apart and to their work.

In testimony whereof I have hereunto

set my hand in presence of two subscribing witnesses.

WILLIAM R. ATKINSON.

Witnesses:

JOSEPH D. KILGORE,

JOHN BLADEN MCADOO.