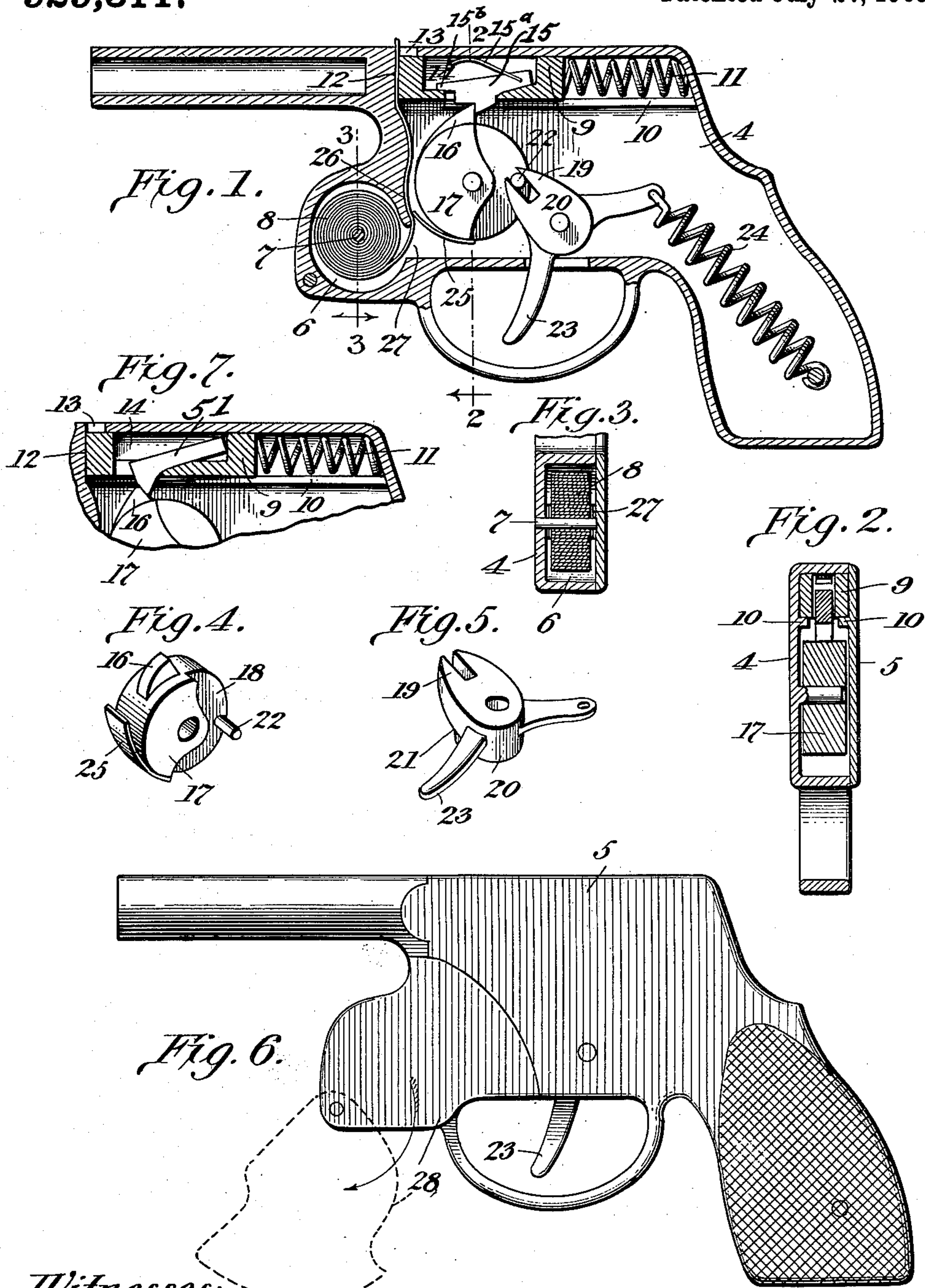


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REPEATING CAP PISTOL.

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929,311.

Patented July 27, 1909.



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UNITED STATES PATENT OFFICE.

JOSEPH D. KILGORE, OF HOMESTEAD, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO CHARLES G. GRUBB, OF PITTSBURG, PENNSYLVANIA.

REPEATING CAP-PISTOL.

No. 929,311.

Specification of Letters Patent.

Patented July 27, 1909.

Application filed February 10, 1908, Serial No. 415,182. Renewed December 29, 1908. Serial No. 469,775.

To all whom it may concern:

Be it known that I, JOSEPH D. KILGORE, 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 Repeating Cap-Pistols, of which the following is a specification.

The present invention relates to toy pistols, and particularly to that type in which what are commonly known as "paper caps" are used.

The pistol which I have invented, and which will be described in detail hereinafter, is designed more especially for handling such paper cap ammunition in strip form, in which form the explosive material is arranged at regular intervals on a long strip of paper which is fed to firing position, so that by practicing my invention, a "repeating" toy pistol is provided.

Stated generally the pistol comprises a suitable strip storing chamber; means for feeding the strip step-by-step to bring the explosive material to proper position for firing; a firing bolt or plunger for exploding the positioned cap; and a suitable trigger and tumbler mechanism for actuating the hammer or firing plunger.

In order that the invention may be understood by those skilled in the art to which it belongs, I have illustrated in the accompanying drawings one embodiment of my invention, and that the best now known to me, although it will be understood that as the showing is merely illustrative, I do not limit myself to the particular embodiment disclosed.

In the drawings: Figure 1 is a central longitudinal sectional view of a pistol embodying my invention. Fig. 2 is a transverse sectional view on line 2—2 of Fig. 1, to show the frame construction and the interior arrangement of the firing bolt and the actuating tumbler. Fig. 3 is a detail sectional view on line 3—3 of Fig. 1, to show the interior construction of the strip chamber and its covering gate. Fig. 4 is a detail view of the tumbler for actuating the firing bolt and feeding the strip. Fig. 5 is a detail perspective view of the trigger. Fig. 6 is a detail sectional view of a slightly different but equivalent form of firing bolt.

Referring to the drawings by numerals, like numbers indicating like parts in the

several views, 4 indicates the frame of the pistol, which may be cast for the most part in one piece as shown, one side of this frame being open and closed by a side plate 5, suitably secured to the main frame 4, as shown in Fig. 2.

The pistol frame is provided with a strip chamber 6, preferably located just forward of the trigger guard as shown in Fig. 1, which chamber 6 is designed to contain the paper cap strip in roll form, a pin 7 extending from the side wall of the chamber to form a support for the roll of strip 8.

In the upper part of the frame 4 is mounted a firing bolt 9, which rides upon inwardly projecting lugs 10 formed on the wall of the pistol frame and the side plate 5, this firing bolt being backed by an actuating spring 11 which is alternately compressed and extended as the bolt is forced back by the trigger and tumbler mechanism, presently to be described, or thrown forward in the operation of the pistol. Opposed to the said sliding bolt 9 is a firing abutment 12, which is arranged substantially above the strip chamber 6, and adjacent said firing abutment 12 is an ejecting opening 13 for the exploding fragments of the paper strip and the portion of the strip which has been fired, this ejecting opening 13 being placed well forward of the handle of the pistol in order that danger of burning from firing fragments of the caps may be minimized.

The construction which I have devised, in which the firing bolt 9 is thrown forwardly away from the user, and against a firing abutment which is located as far forward on the pistol as practical, has several advantages. Among these is the elimination of danger from exploding caps, which is present where a rearwardly sliding bolt or a rearwardly positioned hammer explodes the cap against a firing abutment at the rear of the pistol. Another advantage is that the roll of caps, in my invention, is isolated from the firing point, and danger of burning back to the roll is minimized. Furthermore, by providing an independent isolated roll chamber in the forward part of the pistol, a more compact and simple disposition and construction of the trigger and tumbler mechanism, which will be described hereinafter, is possible.

The firing bolt 9 has an open bottomed cavity in which is mounted a spring pressed bolt actuating dog 15 which rests upon the

inclined bottom of the cavity 14, with its nose depending through the bolt (see Fig. 1). The said dog 15 is loosely placed within the cavity 14 with its spring 15^a which in the form shown, is carried by the dog, although obviously it might be otherwise carried, bearing against the upper wall of the bolt chamber and by this construction I am enabled to dispense with securing or pivoting devices for the dog, thereby reducing the cost of production and the danger of derangement in use. The said dog 15 is preferably provided at its forward end with a projecting nose 15^b, which prevents the spring dog being thrust too far through the bolt.

The normal position of the dog is as shown in Fig. 1, and in this position it depends below the bottom of the firing bolt and in position to be engaged by a projecting toe 16 on a rotary tumbler 17 which is pivoted within the pistol frame, beneath the sliding bolt. This tumbler 17 is substantially round and has a portion 18 cut away to receive the projecting slotted arm 19 of the trigger 20, this trigger arm being also cut away at 21 so that a close assemblage of the parts may be secured and the thickness of the entire pistol thereby materially reduced. The slotted arm 19 of the trigger engages a pin 22 on the tumbler 17 so that as the pivoted trigger is rocked by means of the finger piece 23, the tumbler will be rotated, its projecting toe 16 will strike the dog 15, forcing the spring bolt 9 back and compressing the spring 11. After a predetermined angular movement of the tumbler the toe 16 which travels in an arc, will be disengaged from the dog 15, whereupon the bolt 9 will be released and thrown forward against the firing abutment 12 and explode a cap.

The trigger 20 is provided with a spring 24 which normally holds it in the position shown in Fig. 1, so as to return the parts to this normal position, after they have been actuated.

The tumbler 17 not only serves as a means for actuating the firing bolt, but also as a strip feeding device, this latter function being accomplished by means of a spring foot 25 which bears against a downwardly projecting firing abutment 26 adjacent the feed opening 27 of the strip roll chamber 6, as shown in Fig. 1. It will be seen that as the tumbler 17 is rotated the spring foot 25 will engage the strip, and feed it upwardly so as to bring the caps which are carried by the strip successively into firing position between the firing abutment and the firing bolt.

In order to give convenient access to the roll chamber 6, I provide a swinging gate 28, which is pivoted to the pistol frame so that it may be readily swung downwardly to uncover the chamber, and permit the insertion of a new roll. This arrangement of an inclosed roll chamber having a feed-open-

ing for the strip completely isolates the roll and guards against ignition accidentally of the roll.

Instead of providing a spring pressed bolt actuating dog 15 as heretofore described, I may use a gravity impelled device as shown in Fig. 7, in which the bolt actuating dog 51 rests upon the inclined bottom of the bolt cavity 14 and naturally gravitates toward the bottom of the cavity so that its nose projects through the same. This gravity impelled dog 51 rising idly as the tumbler toe 16 sweeps past it on the return in the same manner in which the dog 15 shown in Fig. 1 rises on the return of the tumbler.

It will be seen that by the construction which I have described, a pistol is produced in which the number of operating parts are reduced to a minimum, and that these parts may be readily made and assembled, and, furthermore, that the construction which I have produced is such that a very compact arrangement is provided and the size of the pistol is much reduced. Furthermore, by arranging the strip-feeding and firing parts as shown, so as to bring the firing point forward and away from the handle, I am able to minimize and in fact eliminate all danger from exploding caps.

While I have shown a particular construction, it will be understood that it may be varied within the skill of a mechanic without departing from my invention, and I do not, therefore, limit myself to any of the details shown and described, except so far as I am limited by the art to which the invention belongs.

Having fully disclosed my invention, I claim:

1. In a device of the class described, and in combination, means for supporting the cap strip, a firing abutment to which the strip is fed, a firing bolt opposed to said abutment, trigger mechanism, and a single trigger-actuated tumbler to feed said strip and retract said firing bolt.

2. In a device of the class described and in combination, a strip containing chamber, a firing abutment to which said strip is fed, a reciprocating firing bolt opposed to said abutment, trigger mechanism, and a rotary trigger-actuated tumbler having a bolt-engaging toe and a strip-feeding foot.

3. In a device of the class described and in combination, a strip-chamber having a strip-feeding mouth, a strip-feeding abutment adjacent said mouth, a firing abutment to which said strip is fed, a firing bolt, trigger-operated strip-feeding and bolt-actuating means cooperating with said feeding abutment and said firing abutment respectively, and trigger mechanism.

4. In a device of the class described and in combination, a strip chamber having a strip feed opening, a side gate for said

chamber, a strip-feeding abutment adjacent the strip feed opening, a firing abutment having an ejectment opening adjacent thereto, a firing bolt, a tumbler, a bolt-actuating toe on said tumbler, a strip feeding foot on said tumbler, and trigger mechanism for actuating said tumbler.

5. In a device of the class described and in combination, a firing bolt, a bolt-actuating tumbler having a cut-away portion, trigger-engaging means on said cut-away portion, and a tumbler-actuating trigger having a cut-away portion lapped on the cut-away portion of said tumbler in operative relation to said trigger-engaging means.

6. In a device of the class described and in combination, a firing abutment, a firing bolt having a dog receiving and inclosing cavity therein provided with an opening in its bottom, a bolt-actuating dog resting upon the bottom of said cavity and having a portion depending through the bottom opening, and bolt-operating mechanism engaging said dog.

7. In a device of the class described and in combination, a firing abutment, a firing bolt having a dog receiving and inclosing cavity therein provided with an opening in its bottom, a loose bolt-actuating dog resting upon the bottom of said cavity and having a portion depending through the bottom opening, and bolt-operating mechanism engaging said dog.

8. In a device of the class described and in combination, a firing abutment, a firing-bolt provided with a cavity having an inclined bottom with an opening therethrough at the lower end of said inclined bottom, a loose bolt-actuating dog resting upon the inclined bottom of said cavity and depending through the bolt-opening, and dog-engaging bolt operating mechanism.

9. In a device of the class described and in combination, a firing abutment, a firing-bolt having a dog-receiving and inclosing

cavity provided with an opening in its bottom, a loose bolt-actuating dog resting upon the bottom of said cavity and having a portion depending through the bottom opening, and means for holding said dog normally against the bottom of the cavity with its depending portion projecting downwardly through said open bottom opening.

10. In a device of the class described and in combination, a firing abutment, a firing-bolt provided with a cavity having an inclined bottom, an opening at the lower end of said inclined bottom, a loose bolt-actuating dog housed in said cavity, and a spring to force said dog downwardly through said open bottom.

11. In a device of the class described and in combination, an inclosing frame, trigger mechanism mounted therein, a trigger-operated bolt-actuating tumbler within said frame, a forwardly-striking firing bolt operable from said tumbler housed within said frame, a firing abutment housed within said frame, an inclosed strip chamber below said abutment, and strip feeding means.

12. In a device of the class described and in combination, an inclosing frame having an ejectment opening in the top wall thereof at a point in advance of the handle portion and a chamber in said handle or stock portion, an inclosed firing bolt adjacent said ejectment opening, a forwardly-striking bolt inclosed in said frame, bolt operating and strip feeding mechanism in said stock chamber, and an independent strip chamber below said ejectment opening having a relatively small feeding passage leading into said stock chamber.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOSEPH D. KILGORE.

Witnesses:

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DANIEL T. McGEARY.