Nov. 2, 1937. J. D. KILGORE 2,098,006

CAP PISTOL

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Fig. 1.

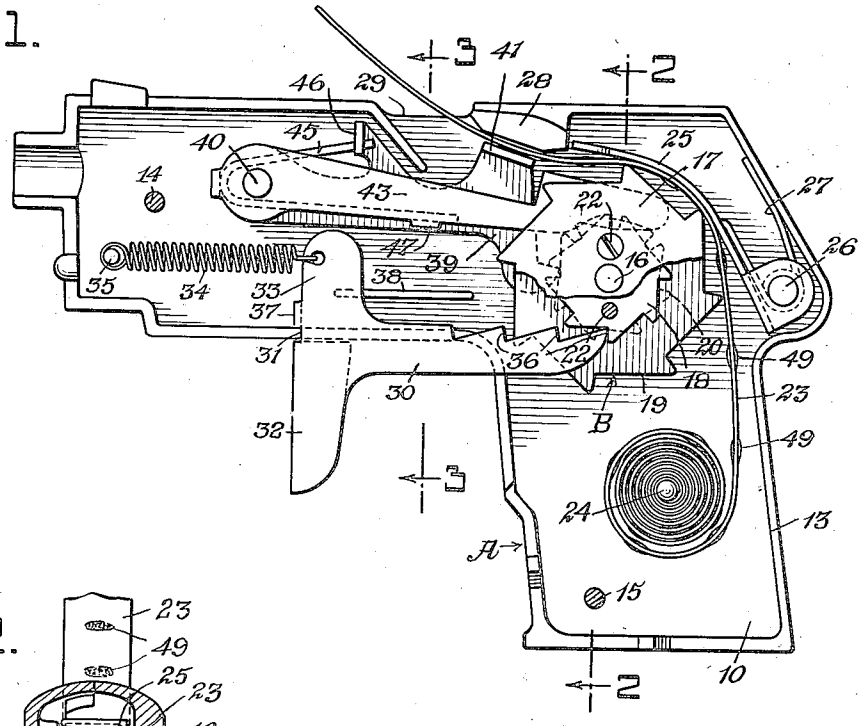


Fig. 2.

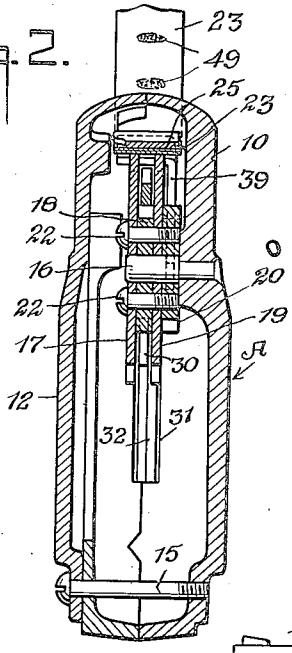


Fig. 3.

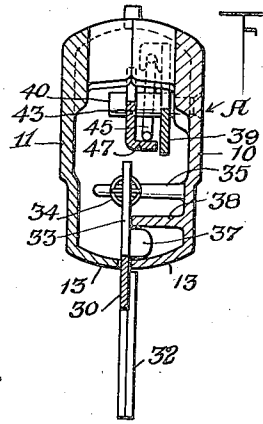
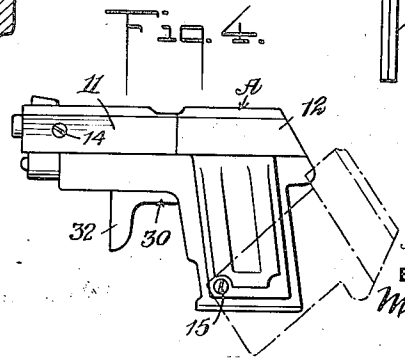


Fig. 4.



WITNESSES

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Fig. 5.

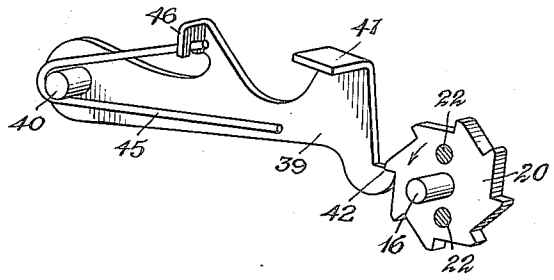
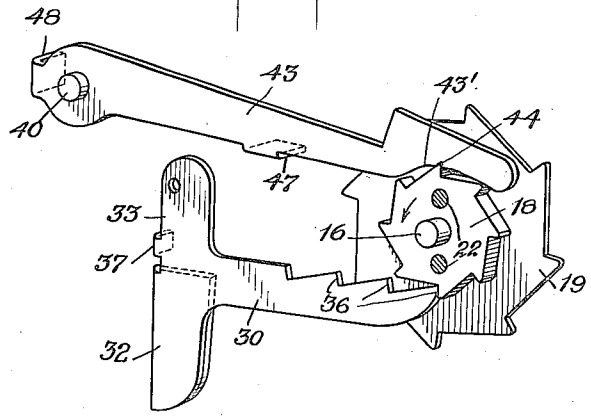


Fig. 6.



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UNITED STATES PATENT OFFICE

2,098,006

CAP PISTOL

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Application May 22, 1937, Serial No. 144,166

11 Claims. (Cl. 42—57)

This invention relates to cap pistols, an object of the invention being to provide a pistol of this character which upon a single operation of the trigger will selectively cause the firing or detonation of one, two, or three caps, the detonations, of course, closely following one another.

The invention embodies many novel features of construction and combinations and arrangements of parts, all of which will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings—

Fig. 1 is a view in sectional elevation, partly broken away, and showing one-half of the casing containing the operating mechanism with the other half of the casing removed;

Fig. 2 is a view in transverse section on the line 2—2 of Fig. 1, with all sections of the casing in position;

Fig. 3 is a similar view in transverse section on the line 3—3 of Fig. 1;

Fig. 4 is a view on a somewhat reduced scale in side elevation of the pistol;

Fig. 5 is a detail perspective view showing the position of the hammer with relation to its operating wheel; and

Fig. 6 is a detail perspective view showing the relative positions of the trigger, drag arm and operating wheel.

My improved cap pistol includes a casing indicated generally by the reference character A, which consists of three castings. One of these castings, 10, comprises one-half of the casing, the other half of the casing consisting of two castings 11 and 12. All of the castings are provided at their edges with inwardly projecting flanges 13, so that when they are secured together by means of screws or rivets, as shown at 14 and 15, they comprise a hollow casing in which the mechanism of the pistol is housed. If a screw 14 is employed it is projected through the forward end of the casting 11 and screwed into casting 10, and the screw 15 is projected through the lower portion of the casting 12 and screwed into the casting 10. This last-mentioned screw constitutes a hinge pin which permits the casting 12 to be swung to the dot-and-dash line position shown in Fig. 4 to expose the mechanism and to permit the insertion of a new cap strip. It is, of course, to be understood that the casing is shaped to represent a pistol and the particular shape illustrated is made to represent in appearance a pistol of the automatic type, although the casing may be shaped to represent any firearm.

The reference character B is employed to indicate generally a rotary assemblage which has rotary mounting on a stud 16 fixed in casting 10 adjacent the rear thereof. This rotary assemblage comprises four toothed wheels 17, 18, 19 and 20, which are of the ratchet form of wheel. All these wheels are fixed to turn together, and as a securing means I may employ screws or rivets. If screws 22 are employed they are projected through openings in the wheels 17, 18 and 19 and screwed into threaded openings in the wheel 20. The toothed wheels 17 and 19 are of the same diameter and are appreciably larger than the toothed wheels 18 and 20, the toothed wheel 18 lying between the toothed wheels 17 and 19 and the toothed wheel 20 located at one extreme of the rotary assemblage.

The toothed wheels 17 and 19 operatively engage a cap strip 23 which is coiled about a fixed pin 24 in the casing, and a curved arm 25 is pivotally connected to the casing by a pin 26, and a spring 27 exerts pressure on this arm 25 to yieldingly hold the cap strip in contact with the teeth of the wheels 17 and 19. These wheels when caused to turn in the right direction move the cap strip past an anvil 28 constituting a part of casting 10, and thence through an opening 29 in the top of the casing.

30 represents my improved trigger which is mounted to move in a slot 31 formed between the flanges 13 of castings 10 and 11. This trigger 30 has a finger-receiving portion 32 at its forward end and a perforated upstanding lug 33 which is connected by a coil spring 34 with a fixed pin 35 on casting 10. This spring serves to hold the trigger in its forward position and return the trigger to this position when permitted. The main portion of the trigger constitutes a horizontal arm having a series of teeth 36, preferably three in number, although, of course, it is to be understood that the exact number of these teeth may be varied. The toothed end of the trigger 30 engages the ratchet wheel 18 so that when the trigger is moved rearwardly one-third of its travel, it will cause the wheel 18 to turn a distance of one tooth, and correspondingly if the trigger 30 is moved rearwardly two thirds of its movement it will cause the wheel to turn a distance of two teeth, and if the full stroke on the rearward movement of the trigger is had, it will cause the wheel 18 to turn a distance of three teeth.

The trigger 30 is also guided in its movement by means of a laterally projecting lug 37 on the forward portion of the trigger, which rides in a

space between the flange 13 and a longitudinal web 38 on casting 10.

39 represents the hammer of the pistol. This hammer comprises an arm or lever pivotally mounted at its forward end on a stud 40, and at its rear end and at the upper portion thereof is provided with a laterally projecting lug 41 which directly impacts the caps of the strip 23 when the latter are properly positioned relative to the anvil 28 and the hammer, thus causing the caps to explode. This hammer 39 at its rear end and at its lower portion is provided with a finger 42 which is engaged by the teeth of wheel 20.

43 represents a drag arm which at its forward end is also pivotally mounted on the stud or pin 40, and at its rear free end rests upon and engages the upper portion of toothed wheel 18. The function of this drag arm 43 is to frictionally engage the wheel 18 to prevent an over movement of the wheel in one direction and to positively prevent a retrograde movement of the wheel and the entire rotary assemblage. For this reason the arm is provided with a somewhat curved face 43' which engages the wheel 19, and in this curved face a notch 44 is provided which permits the arm to function as a pawl and prevent retrograde movement of the wheel.

45 represents a spring which comprises a length of spring wire bent intermediate its ends, the intermediate portion of the spring located around the pin 40. The upper run of this spring engages in a notched lug 46 on hammer 39 and the lower run of this spring engages an inwardly projecting lug 47 on the arm 43. Thus the spring serves the double function of exerting a downward pressure on the arm 43 and an upward pressure on the hammer 39, and to hold the spring in its proper relationship an inwardly projecting lug 48 is formed on the forward end of the arm 43 which extends across the bend of the spring 45.

The drag arm 43 not only functions as above described but it permits what is known as "half cocking" the pistol. This is accomplished when the trigger 30 is given a half pull. The hammer 39 descends approximately $\frac{1}{16}$ of an inch from the anvil, thus providing an open space between the hammer and the anvil which allows for the free and easy placing of cap strip in position for perfect feeding and firing, and also prevents buckling or jamming of cap strip 23, and affording unobstructed opening for ejecting debris due to firing.

The cap strip 23 above referred to is of the ordinary type comprising a strip of paper having caps 49 therein properly spaced apart.

The operation of the cap pistol is as follows: The hammer 39 is normally spaced from the anvil 28 and is held away from the anvil by the teeth of wheel 20, and the hammer is only permitted to move upwardly and cause the cap to explode against the anvil when the finger 42 of the hammer 39 rides off the end of a tooth of the wheel 20. This is only through a fraction of a second as the finger 42 of the hammer 39 is instantly engaged by the next tooth of the toothed wheel 20 to move it away from the anvil. Thus there is no interference with the proper feeding of the cap strip. When the trigger is moved rearwardly it will, as above explained, cause the rotary assemblage to turn a distance of one, two, or three teeth in accordance with the distance the trigger is moved. When this rearward movement of the rigger takes place, the rotary assemblage B is, of course, caused to turn and this turning movement of the rotary assemblage causes the cap strip 23 to be fed past the anvil 28. It also permits the hammer 39 to be freed from its wheel 18 and forced upwardly by the spring 45 to explode the cap or caps against the anvil, and this proper movement of the rotary assemblage is safeguarded by the action of the drag arm 43 which, as above explained, frictionally prevents an over movement of the rotary assemblage and positively prevents any retrograde movement thereof. While I refer to three teeth 36 on the trigger 30, it is, of course, well within the scope of the invention to vary the number of teeth as desired.

While I have illustrated and described what I believe to be a preferred embodiment of my invention, it is obvious that various changes may be made with regard to the form and arrangement of parts without departing from my invention, and hence I do not limit myself to the precise details set forth but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the claims.

I claim:

1. A cap pistol adapted to explode caps on a strip of paper, including a casing having an anvil and an opening adjacent thereto for the escape of the cap strip, a rotary assemblage in the casing adapted when turned to move the cap strip a predetermined distance past the anvil, a spring pressed hammer adapted to engage the caps and explode them against the anvil, a toothed wheel constituting a part of the rotary assemblage adapted to retract the hammer, a second toothed wheel constituting a part of the rotary assemblage, and a longitudinally movable trigger having a plurality of teeth thereon engaging the last-mentioned toothed wheel whereby the movement of the rotary assemblage and number of operations of the hammer to explode caps is governed by the distance the trigger is moved.

2. A cap pistol adapted to explode caps on a strip of paper, including a casing having an anvil and an opening adjacent thereto for the escape of the cap strip, a rotary assemblage in the casing adapted when turned to move the cap strip a predetermined distance past the anvil, a spring pressed hammer adapted to engage the caps and explode them against the anvil, a toothed wheel constituting a part of the rotary assemblage adapted to retract the hammer, a second toothed wheel constituting a part of the rotary assemblage, and a longitudinally movable trigger having a plurality of teeth thereon engaging the last-mentioned toothed wheel whereby the movement of the rotary assemblage and number of operations of the hammer to explode caps is governed by the distance the trigger is moved, said rotary assemblage also including a pair of spaced toothed wheels engaging the cap strip.

3. A cap pistol adapted to explode caps on a strip of paper, including a casing having an anvil and an opening adjacent thereto for the escape of the cap strip, a rotary assemblage in the casing adapted when turned to move the cap strip a predetermined distance past the anvil, a spring pressed hammer adapted to engage the caps and explode them against the anvil, a toothed wheel constituting a part of the rotary assemblage adapted to retract the hammer, a second toothed wheel constituting a part of the rotary assemblage, a longitudinally movable trigger having a plurality of teeth thereon engaging the last-mentioned toothed wheel whereby the movement

of the rotary assemblage and number of operations of the hammer to explode caps is governed by the distance the trigger is moved, a curved pivoted arm engaging the cap strip and holding the cap strip against the rotary assemblage, and a spring exerting pressure on said arm.

4. A cap pistol adapted to explode caps on a strip of paper, including a casing having an anvil and an opening adjacent thereto for the escape of the cap strip, a rotary assemblage in the casing adapted when turned to move the cap strip a predetermined distance past the anvil, a spring pressed hammer adapted to engage the caps and explode them against the anvil, a toothed wheel constituting a part of the rotary assemblage adapted to retract the hammer, a second toothed wheel constituting a part of the rotary assemblage, a longitudinally movable trigger having a plurality of teeth thereon engaging the last-mentioned toothed wheel whereby the movement of the rotary assemblage and number of operations of the hammer to explode caps is governed by the distance the trigger is moved, and a pivoted drag arm engaging a toothed wheel and having a notch therein to receive a tooth of said wheel and prevent retrograde movement of the wheeled assemblage.

5. A cap pistol adapted to explode caps on a strip of paper, including a casing having an anvil and an opening adjacent thereto for the escape of the cap strip, a rotary assemblage in the casing adapted when turned to move the cap strip a predetermined distance past the anvil, a spring pressed hammer adapted to engage the caps and explode them against the anvil, a toothed wheel constituting a part of the rotary assemblage adapted to retract the hammer, a second toothed wheel constituting a part of the rotary assemblage, a longitudinally movable trigger having a plurality of teeth thereon engaging the last-mentioned toothed wheel whereby the movement of the rotary assemblage and number of operations of the hammer to explode caps is governed by the distance the trigger is moved, said rotary assemblage also including a pair of spaced toothed wheels engaging the cap strip, and a pivoted drag arm engaging a toothed wheel and having a notch therein to receive a tooth of said wheel and prevent retrograde movement of the wheeled assemblage.

6. A cap pistol adapted to explode caps on a strip of paper, including a casing having an anvil and an opening adjacent thereto for the escape of the cap strip, a rotary assemblage in the casing adapted when turned to move the cap strip a predetermined distance past the anvil, a spring pressed hammer adapted to engage the caps and explode them against the anvil, a toothed wheel constituting a part of the rotary assemblage adapted to retract the hammer, a second toothed wheel constituting a part of the rotary assemblage, a longitudinally movable trigger having a plurality of teeth thereon engaging the last-mentioned toothed wheel whereby the movement of the rotary assemblage and number of operations of the hammer to explode caps is governed by the distance the trigger is moved, a curved pivoted arm engaging the cap strip and holding the cap strip against the rotary assemblage, a spring exerting pressure on said arm, and a pivoted drag arm engaging a toothed wheel and having a notch therein to receive a tooth of said wheel and prevent retrograde movement of the wheeled assemblage.

7. A cap pistol adapted to explode caps on a strip of paper, including a casing having an anvil and an opening adjacent thereto for the escape of the cap strip, a rotary assemblage in the casing adapted when turned to move the cap strip a predetermined distance past the anvil, a spring pressed hammer adapted to engage the caps and explode them against the anvil, a toothed wheel constituting a part of the rotary assemblage adapted to retract the hammer, a second toothed wheel constituting a part of the rotary assemblage, a longitudinally movable trigger having a plurality of teeth thereon engaging the last-mentioned toothed wheel whereby the movement of the rotary assemblage and number of operations of the hammer to explode caps is governed by the distance the trigger is moved, a pivoted drag arm engaging a toothed wheel and having a notch therein to receive a tooth of said wheel and prevent retrograde movement of the wheeled assemblage, said hammer and drag arm having a common pivot, and a single spring engaging both of said members and exerting spring pressure on both of them.

8. A cap pistol adapted to explode caps on a strip of paper, including a casing having an anvil and an opening adjacent thereto for the escape of the cap strip, a rotary assemblage in the casing adapted when turned to move the cap strip a predetermined distance past the anvil, a spring pressed hammer adapted to engage the caps and explode them against the anvil, a toothed wheel constituting a part of the rotary assemblage adapted to retract the hammer, a second toothed wheel constituting a part of the rotary assemblage, a longitudinally movable trigger having a plurality of teeth thereon engaging the last-mentioned toothed wheel whereby the movement of the rotary assemblage and number of operations of the hammer to explode caps is governed by the distance the trigger is moved, said rotary assemblage also including a pair of spaced toothed wheels engaging the cap strip, a pivoted drag arm engaging a toothed wheel and having a notch therein to receive a tooth of said wheel and prevent retrograde movement of the wheeled assemblage, said hammer and drag arm having a common pivot, and a single spring engaging both of said members and exerting spring pressure on both of them.

9. A cap pistol adapted to explode caps on a strip of paper, including a casing having an anvil and an opening adjacent thereto for the escape of the cap strip, a rotary assemblage in the casing adapted when turned to move the cap strip a predetermined distance past the anvil, a spring pressed hammer adapted to engage the caps and explode them against the anvil, a toothed wheel constituting a part of the rotary assemblage adapted to restract the hammer, a second toothed wheel constituting a part of the rotary assemblage, a longitudinally movable trigger having a plurality of teeth thereon engaging the last-mentioned toothed wheel whereby the movement of the rotary assemblage and number of operations of the hammer to explode caps is governed by the distance the trigger is moved, a curved pivoted arm engaging the cap strip and holding the cap strip against the rotary assemblage, a spring exerting pressure on said arm, a pivoted drag arm engaging a toothed wheel and having a notch therein to receive a tooth of said wheel and prevent retrograde movement of the wheeled assemblage, said hammer and drag arm having a common pivot, and a single spring engaging both of said members

and exerting spring pressure on both of them.

10. A cap pistol adapted to explode caps on a strip of paper, including a casing having an anvil and an opening adjacent thereto for the escape of the cap strip, a rotary assemblage in the casing adapted when turned to move the cap strip a predetermined distance past the anvil, a spring pressed hammer adapted to engage the caps and explode them against the anvil, a toothed wheel constituting a part of the rotary assemblage adapted to retract the hammer, a second toothed wheel constituting a part of the rotary assemblage, a longitudinally movable trigger having a plurality of teeth thereon engaging the last-mentioned toothed wheel whereby the movement of the rotary assemblage and number of operations of the hammer to explode caps is governed by the distance the trigger is moved, and a retractile spring connecting the trigger with a fixed part at the forward portion of the casing.

11. A cap pistol adapted to explode caps on a strip of paper, including a casing having an anvil and an opening adjacent thereto for the escape of the cap strip, a rotary assemblage in the casing adapted when turned to move the cap strip a predetermined distance past the anvil, a spring pressed hammer adapted to engage the caps and explode them against the anvil, a toothed wheel constituting a part of the rotary assemblage adapted to retract the hammer, a second toothed wheel constituting a part of the rotary assemblage, and a longitudinally movable trigger having a plurality of teeth thereon engaging the last-mentioned toothed wheel whereby the movement of the rotary assemblage and number of operations of the hammer to explode caps is governed by the distance the trigger is moved, one section of said casing pivotally connected with the main portion of the casing and adapted to be moved to expose the interior of the casing.

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