July 28, 1942. R. J. RICKENBACHER 2,290,995

CARRIER CONSTRUCTION IN TOY PISTOLS

Filed Sept. 16, 1940

FIG. 1

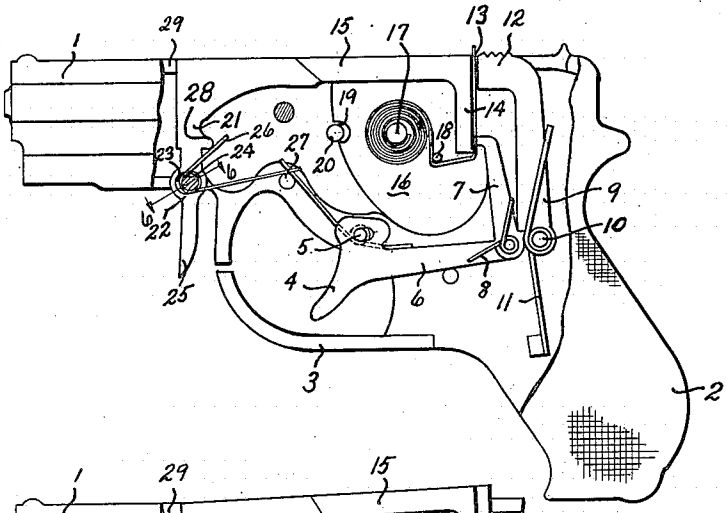


FIG. 2

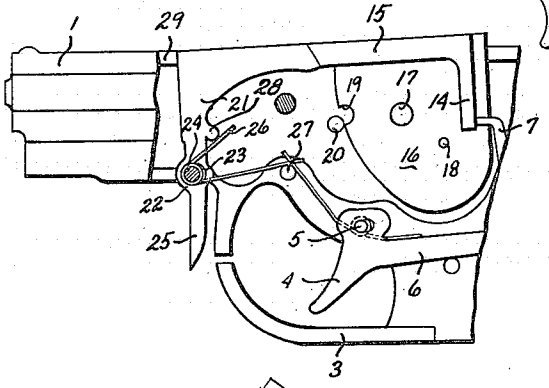


FIG. 5

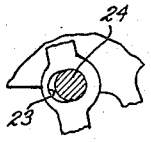


FIG. 3

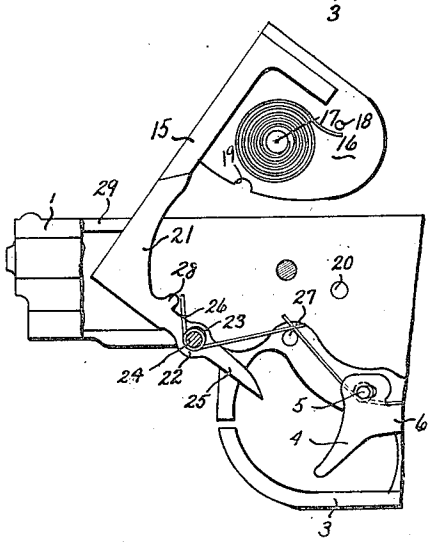


FIG. 6

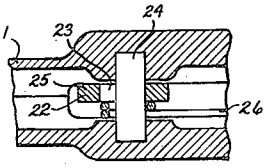
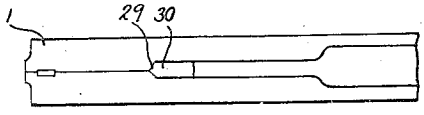


FIG. 4



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CARRIER CONSTRUCTION IN TOY PISTOLS

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6 Claims. (Cl. 42—57)

The object of this invention is to provide for a movable carrier in a toy pistol for strips of ammunition, particularly in that type of toy pistol in which the pistol is of the rigid or non-breakable type.

It is another object of this invention to provide a toy pistol of the type which does not permit being broken in order to insert ammunition and in which there is a movable carrier of one piece construction that can be actuated from the closed firing position to the ammunition loading position by the movement of a trigger.

It is a particular object of this invention to provide a single piece carrier with which the trigger is integrally formed so as to reduce the number of pieces and provide a very simple but rugged construction that can accurately support, feed and position the ammunition strip.

It is a further object to provide on such carrier the anvil for receiving the hammer of the firing mechanism actuated by the firing trigger of the pistol.

It is an additional object to provide locking mechanism for this carrier which will retain the ammunition in feeding position and the hammer in locked position without danger of detachment and which will likewise easily permit the unlocking of the carrier and the elevating of the carrier by pressure upon the trigger of the carrier.

Heretofore it has been necessary to use a pistol of the type that was "broken" in order to load the ammunition strip coil or other device into the pistol. By this construction it is possible to not only provide a pistol that is of the unbroken type but also to provide with a single finger piece or trigger a one piece carrier that will remain in locked position so that it will be entirely safe to operate while at the same time it can be readily opened for loading position.

Referring to the drawing:

Figure 1 is a side elevation of the pjistol with one side of the wall broken away to show the carrier in its firing position locked in position for the purpose of the ammunition being fired.

Figure 2 is a similar view showing the carrier just unlocked and about to move to fully opened position.

Figure 3 is a similar view showing the carrier in fully opened position.

Figure 4 is a fragmentary top view of the pistol to show the restraining barrier which limits the upward movement of the carrier.

Figure 5 is an enlarged fragmentary view of the loose pivot construction of the finger piece forming a part of the carrier which permits of its locking and unlocking operation by a single movement of the finger piece of the carrier.

Figure 6 is a section on the line 6—6, looking in the direction of the arrow, illustrating further the arrangement of the spring and the loose pivot construction of the carrier.

Referring to the drawing in detail, 1 designates the barrel of the weapon, 2 the butt of the weapon and 3 the trigger guard. As usually employed in pistols of this type, the pistol is formed of two identical main castings forming the respective sides of the pistol which are bolted together by suitable bolts or rivets. Between these two sides is located the operating mechanism and the carrier mechanism. The operating mechanism actuates the firing mechanism through the usual finger piece of trigger. There is nothing that is claimed in connection with the firing mechanism. A diagrammatic type of firing mechanism is illustrated and it will be understood that this is merely for the purpose of illustrating a typical firing mechanism. The invention is primarily devoted to the carrier, its method of installation, operation, support and locking.

The firing mechanism is actuated by a finger piece 4 which is pivoted at 5. It is connected by an arm 6 to a spring pressed feeding finger 7 actuated by a spring 8. This finger also serves to actuate a hammer finger 9 pivoted at 10 and actuated by a spring 11. 12 designates a hammer which engages with an ammunition strip 13 as it passes over an anvil 14 which is mounted on a carrier frame 15. When the hammer is retracted prior to firing the feeding finger 7 feeds the strip to a new firing position in the usual manner.

The carrier frame 15 is provided with a side plate 16 on which is an ammunition carrier pin 17 that feeds the ammunition and supports it. The ammunition strip passes over a guide pin 18 and then over the anvil 14. The forward edge of this plate 16 is provided with a locking notch 19 for engaging with a locking pin 20 carried on the side walls of the pistol. The frame 15 of the carrier is provided with a depending finger portion 21 the intermediate portion of which as at 22 is provided with enlarged pivot opening 23 larger than a pivot pin 24 passing therethrough. The pivot pin is carried between and on the side walls of the pistol. Below this pivot pin this depending finger extends to a finger piece or carrier trigger 25. This finger piece is located directly in front of the trigger guard 3. It is therefore so located that it is readily ac-

cessible to the trigger finger of the operator when it is removed from the main firing trigger **4**.

This finger piece and its associated carrier are spring actuated to an elevated position by a spring **26** which is wound about the pin **24** and has one end resting upon an abutment **27** on the pistol and upon an abutment **28** on the depending finger portion **24** of the carrier frame **15**. When the carrier is in elevated position it is in engagement with an abutment as at **29** at the top of the pistol. This abutment is at a forward end of the slot **30** through which the carrier reciprocates from its elevated to its closed position. It will be obvious that upon pressure being applied to the finger piece **25**, when the carrier is in its closed position, that the carrier will be first shifted backwardly which enables the slot **19** to disengage with the locking pin **20** so that the plate **16** of the carrier can then move upwardly under the impetus of the spring **26**. The enlarged slot **23** is horizontally disposed so that its major dimension is in a horizontal plane, thus permitting this horizontal shifting to the rear of the carrier frame for unlocking purposes prior to the elevation of the carrier in order that a new strip may be loaded upon the carrier pin **17**.

We have thus seen that there is provided in this construction a firing mechanism actuated by one trigger, which has associated with it a feeding mechanism, a hammer and feeding finger engaging an ammunition strip moving over an anvil independently supported and carried upon the carrier. The carrier, itself, is independently actuated by its own finger piece or trigger.

It will be understood that I desire to comprehend within my invention such modifications as come within the scope of the claims and the invention.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. In a toy pistol, the combination of a rigid frame pistol, firing and feeding mechanism therein, a one piece ammunition carrier for carrying an ammunition strip comprising an anvil, means to lock said carrier in said pistol, an actuating integral finger piece on said carrier, and yielding means adapted to maintain said carrier in locked position when it is closed in operating position and tending to move it to its open position when it is unlocked.

2. In a toy pistol, the combination of a rigid frame pistol, firing and feeding mechanism therein, a one piece ammunition carrier for carrying an ammunition strip comprising an anvil, means to lock said carrier in said pistol, an actuating integral finger piece on said carrier, and yielding means adapted to maintain said carrier in locked position when it is closed in operating position and tending to move it to its open position when it is unlocked, said carrier having a pivot means comprising a stationary pivot pin on said pistol and a loose pivotal connection formed between said pin and said carrier whereby upon the actuation of said finger piece said carrier is moved backwardly to unlock it from its locking means whereupon said yielding means moves the carrier to its open position.

3. In a toy pistol, comprising a frame, a carrier loosely pivoted on said frame comprising a main frame, an anvil, a depending member for supporting an ammunition strip having a locking notch therein, means on said pistol for engaging with said locking notch, a depending finger from said carrier having in a large pivot opening a smaller pivot pin passing therethrough mounted in said pistol, yielding means surrounding said pin and engaging in an abutment on said carrier and on said pistol whereby when said carrier, if moved to its operative position said yielding means causes the carrier to move forwardly on its loose pivot connection to engage with the locking pin to remain in locked position and when said carrier is moved backwardly by its finger piece, said yielding means will move said carrier to its inoperative position when it is unlocked from said locking pin.

4. In a toy pistol, the combination of a pistol frame having a hollow interior, feeding and firing mechanism therein, a trigger for actuating said mechanism, a carrier pivotally mounted within said frame and depending therein comprising a carrier frame, an anvil, means for supporting an ammunition strip in front of said anvil, means for locking said carrier in its operative position in said pistol, and means comprising a loosely mounted finger piece integral with said carrier for actuating it to unlocked position and yielding means adapted to move said carrier from its unlatched position to an inoperative position.

5. In a toy pistol, the combination of a pistol frame having a hollow interior, feeding and firing mechanism therein, a trigger for actuating said mechanism, a carrier pivotally mounted within said frame and depending therein comprising a carrier frame, an anvil, means for supporting an ammunition strip in front of said anvil, means for locking said carrier in its operative position in said pistol, and means comprising a loosely mounted finger piece integral with said carrier for actuating it to unlocked position and yielding means adapted to move said carrier from its unlatched position to an inoperative position and means on said pistol comprising an abutment to limit the upward movement of said carrier into its inoperative position whereby the carrier will be in position to be reloaded.

6. In combination a toy pistol having spaced halves joined to one another with a slot at the top thereof between said halves, firing and feeding mechanism within said pistol, a trigger mechanism for actuating said firing and trigger mechanism, a pivoted carrier loosely pivoted within said pistol and adapted to move through said slot into inoperative loading position, an anvil on said carrier, depending means for supporting an ammunition strip having a locking notch therein, a locking pin in said pistol for engaging said notch, and a depending finger from said carrier loosely mounted upon said pistol, and yielding means engaging with said depending finger and pistol adapted to move said carrier to its inoperative position when it is moved to unlocking position and adapted when the carrier is in operative position to yieldingly hold it in locked position.

ROBERT J. RICKENBACHER.