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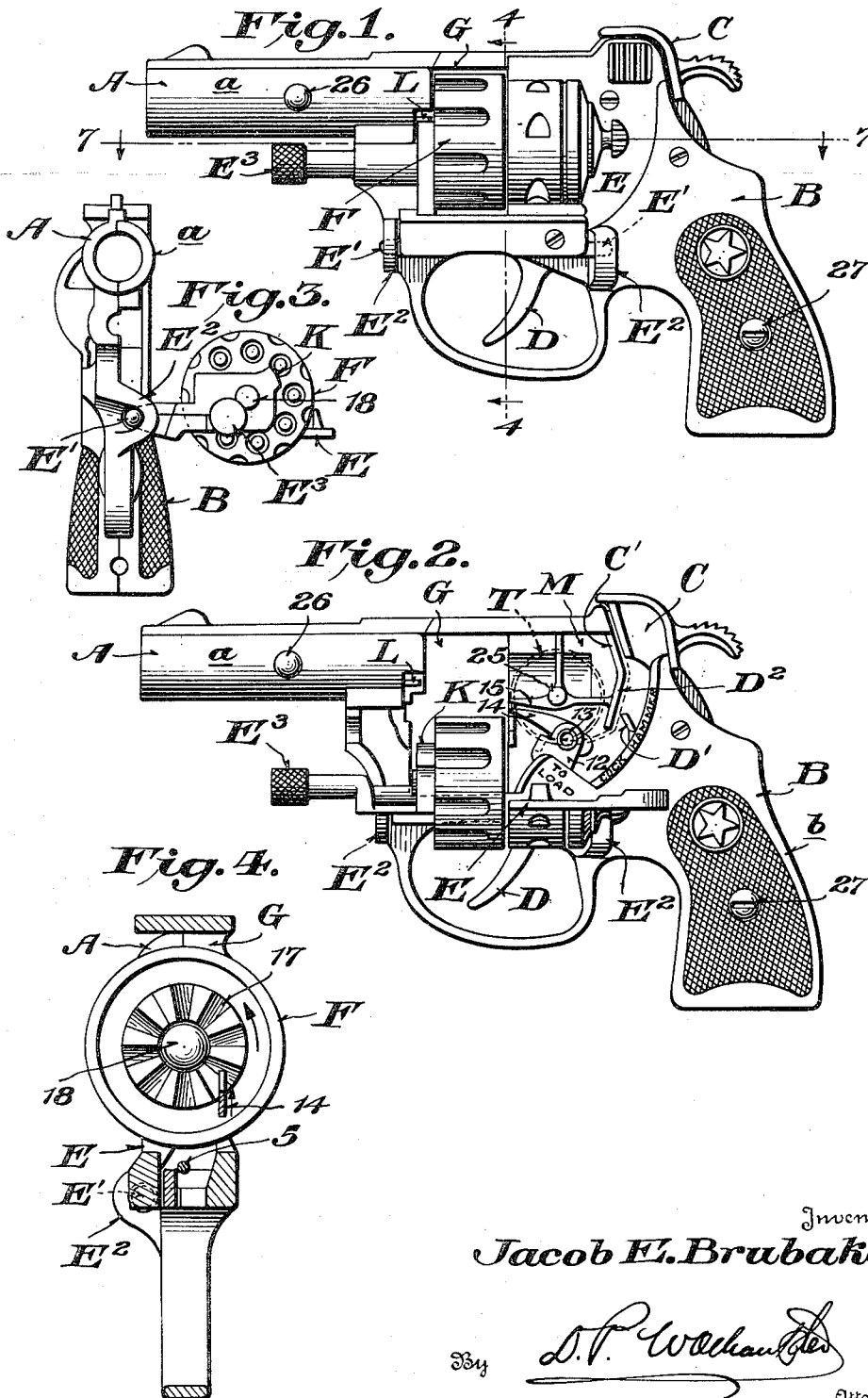
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TOY PISTOL

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## TOY PISTOL

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This invention relates to toy pistols and more particularly to pistols of the automatic or repeating type.

One of the general objects of the invention is to provide a toy pistol having a movable side wall carrying a cartridge cylinder simulating element which may be moved laterally into position when the side wall is fitted in place. More specifically, however, the invention contemplates a toy pistol of the magazine type having a relatively movable magazine cover carrying a cartridge cylinder simulating element adapted to be actuated simultaneously with the detonation of the caps to provide the effect of moving new cartridges into firing position upon each actuation of the trigger. In one aspect, the present invention represents a carrying forward of the principal feature of my former Patent No. 1,993,916, dated March 12, 1935, wherein there is shown a toy repeating pistol with a cylinder movable step by step simultaneously with the detonation of successive caps or explosive charges. In that connection, however, the present invention is more particularly concerned with a pistol wherein the barrel and stock portions are relatively fixed as distinguished from a pistol of the former type wherein the barrel is pivoted relative to the stock.

Another object of the invention is to provide novel means for cocking the hammer to facilitate loading of the magazine. That is to say, the present improvements include a construction whereby the hammer may be moved manually away from the anvil and then automatically held in that position while the end of the cap tape is threaded over the anvil, thereby facilitating loading of the magazine and preventing accidental movement of the hammer toward the anvil while the loading operation proceeds.

A further object of the invention is to provide a magazine cover or plate which is movable laterally with reference to the body of the pistol to cover and uncover the magazine and which carries the cartridge simulating cylinder previously referred to in such a way that the mere act of assembling the cover over the magazine opening automatically positions the cylinder with reference to trigger operated actuating means to insure proper synchronous movement of the hammer and the cylinder in firing the pistol.

Still further objects of the invention are to provide a construction wherein the movable cover plate may be firmly held in latched or locked position to insure accurate operation of the entire mechanism; which is easy and safe to oper-

ate; and, also, to provide a construction which is simple, practical, easy to assemble and sturdy or rugged enough to withstand usage to which toys of this type are ordinarily subjected.

With the above and other objects in view which will more readily appear as the nature of the invention is better understood, the same consists in the novel features of construction, combination and arrangement of parts hereinafter more fully described, illustrated in the accompanying drawings and defined in the appended claims.

A preferred and practical embodiment of the invention is shown in the accompanying drawings, in which:—

Figure 1 is a side elevation of the improved pistol with the magazine cover closed.

Figure 2 is a view similar to Figure 1 showing the magazine cover open.

Figure 3 is a front elevation of the construction shown in Figure 2.

Figure 4 is a vertical sectional view taken on the line 4—4 of Figure 1.

Figure 5 is a vertical sectional view taken on the line 4—4 of Figure 1 but looking in the opposite direction from that indicated by the arrows on Figure 1.

Figure 6 is a vertical longitudinal sectional view illustrating the relative position of parts when the magazine cover is open and the hammer is cocked to permit of easily positioning the cap tape.

Figure 7 is a horizontal sectional view taken on the line 7—7 of Figure 1.

Figure 8 is a detail view of the trigger piece and associated tape feeding means.

Figure 9 is a detail view of the hammer.

Figure 10 is a detail side view of the magazine cover disassociated from the pistol body.

Similar reference characters designate corresponding parts throughout the several figures of the drawings.

In the drawings, the invention is shown as comprising a pistol body including a barrel designated generally as A; a handle or stock B; a detonator or hammer C; and trigger means D together with a movable side wall or magazine cover plate E carrying a rotatable cartridge simulating cylinder F.

The cover E is intended to open and close a cap tape receiving magazine M (Figure 2). And, to enable the cartridge simulating cylinder F to be properly positioned or centered with reference to the barrel A when the cover is closed, the body of the pistol is provided with an opening

G. In its preferred embodiment, the magazine cover plate E is preferably hinged or pivoted to the body through the medium of the pintle elements E' which are fitted in the perforated ears E<sup>2</sup> on the body. Thus, the plate or magazine cover E is pivoted or hinged to the body of the pistol, parallel with the axis of the barrel A. Consequently, said plate or magazine cover E has a lateral movement with respect to the body of the pistol, and in the hinged type of mounting shown, the said cover has a lateral arcuate movement with reference to the body.

For the purpose of holding the cover E in closed position, suitable keeper means K are provided on the cover for cooperating with a spring latch L on the body. To facilitate the movement of the magazine cover with reference to the body, the said cover is provided with a cylinder pin simulating member E<sup>3</sup> which serves as a handle for manipulating the cover.

Referring more in detail to the structural features involved, it may be observed that the detonating mechanism including the hammer and trigger C and D, respectively, also include a tape feeding element D' (Figures 2 and 6) whereby the hammer C cooperates with an anvil C' and the tape feeding means D' cooperates with a wall D<sup>2</sup> leading to the anvil C' from the magazine chamber M.

The trigger means D includes a trigger piece 1 pivotally mounted on a stud 2 carried by one of the sections of the body, and one of the arms 3 of the trigger piece has the tape feeding element D' pivoted thereto as indicated at 4. The trigger piece 1 and tape feeding means D' are tensioned by a spring 5 in such a way that the trigger piece is normally forced in a clockwise direction as viewed in the drawings. In that connection, it may be noted that the arm 5<sup>a</sup> of the spring passes through an eye 5<sup>b</sup> in the tape feeding member D', and since the latter is pivoted to the trigger piece at 4, the said spring 5 serves to energize both the trigger piece and the tape feeding means as previously indicated. Normally, the tape feeding means D is held in such a position by the spring arm 5<sup>a</sup> that the shoulder 5<sup>c</sup> (Figure 8) on the tape feeding means is held in contact with the upper edge of the trigger piece 1. The arm 3 of the trigger piece 1 is provided with a retaining shoulder 6 which is intended to cooperate with a laterally projecting lug 7 on the hammer C to hold the hammer in partially cocked position, as shown in Figure 6, to facilitate the placing of the cap tape in position. The hammer C is pivotally supported on a stud 8 in the stock portion of the pistol body and is tensioned by the spring 9. The hammer is also provided with a shoulder 10 for cooperating with a shoulder 11 shown in dotted lines on Figure 8 for the purpose of effecting its actuation. In that connection, the operation of this part is substantially the same as that shown in my former patent referred to. The new feature of the present construction is the provision of the elements 6 and 7 on the trigger piece and hammer for permitting cocking of the hammer to facilitate loading.

Referring further to the trigger means D, it may be pointed out that the trigger piece 1 also has an arm 12 which has pivotally connected thereto as at 13 a pawl 14. This pawl is intended to operate the cartridge cylinder simulating element F when the cover E is closed as, for example, when the parts are in the relative position shown in Figures 1, 6 and 7. The pawl

14 is guided in its forward movement by the upper abutment 15 and the lower abutment 16 so that it accurately engages the series of ratchet teeth 17 provided within the cylinder F.

It will therefore, be understood that the cartridge simulating cylinder F which is carried by the cover plate E may be of partially hollow formation with the annular series of ratchet teeth 17 formed coaxially with a pivot pin 18. This pin connects the cylinder F with the angular or offset bracket arm 19 of the cover. The pivot 18 is preferably surrounded by a coil spring 20, housed in a central socket formed in the cylinder. The said spring causes the cylinder to frictionally engage the bracket arm 19 and prevent spinning of the cylinder while at the same time permitting definite step by step movement thereof under the influence of the actuating pawl 14 when the finger grip of the trigger 6 is actuated. In that connection it may be pointed out that if desired, suitable washer elements may be used between the bottom wall of the cylinder F and the bracket 19 to properly tension the cylinder in such a way that it will move accurately step by step under the influence of the actuating pawl without causing the cylinder to over-run normal movement.

The angular or offset wall 19 of the cover E which supports the cylinder F is provided with the keeper nose or shoulder K previously referred to and which cooperates with the spring latch L to releasably hold the cover in locked position. The spring L is preferably a flat spring held between suitable opposed abutments 21 and 22 in one of the sections of the barrel A as will be apparent from Figure 6. The end of the spring near the muzzle of the barrel may be bent downwardly as indicated at 23 to engage between spaced shoulders 24 to prevent longitudinal movement of the spring in either direction in the barrel. Therefore, the cover may be readily held in releasable locked position through the medium of the keeper means K and the free end of the spring L which is exposed in the body at the location of the opening G therein.

The magazine M is provided with a tape reel support 25 located above the trigger actuating means and its associated parts, and, as will be apparent from Figure 5, the tape reel T may be positioned in such a way as to be entirely free and clear of the operating parts of the detonating mechanism.

While the body of the pistol may be made in various ways, nevertheless in the example shown, one half of the body is made in a longitudinal casting or section and the complementary portion of the barrel a (Figure 1) may be held in assembled relation by means of a fastening 26. The perforated ear E<sup>2</sup> is formed on the body of the pistol and the other perforated ear E<sup>2</sup>, that is the right-hand ear as viewed in Figures 1 and 2 may be formed on the portion of the stock or handle indicated as b. After the detonating mechanism etc. has been assembled in the main half or section as shown in Figure 6 for example, the left-hand pintle E' of the cover E may be fitted in the left-hand perforated ear E<sup>2</sup> and then the stock section b may be moved into position so that the right-hand pintle E' will pass over the right hand ear E<sup>2</sup>. The stock section B may then be secured to the body of the pistol by the fastening 27. Therefore, the fastenings 26 and 27 are the only fastenings required to complete the assembly of the pistol after the detonating mechanism has been placed in one of the sections.

When it is desired to load the pistol in the condition shown in Figure 1, it is only necessary for the user to grasp the handle E<sup>3</sup> of the cover and pull it towards him. This will swing the cover open and render the magazine accessible. The hammer C may then be moved to the cocked position shown in Figure 6 and the reel of tape fitted over the post 25. The free end of the tape may then be laid or pushed over the wall D<sup>2</sup> to the anvil without interference from the hammer or tape feeding element D'. The cover plate E may then be swung to closed position and the pistol is ready for use. Successive pulls on the trigger will then automatically feed the tape and bring the caps to detonating position.

Without further description it is thought that the features and advantages of the invention will be readily apparent to those skilled in the art, and it will of course be understood, that changes in the form, proportion and minor details of construction may be resorted to, without departing from the spirit of the invention and scope of the appended claims.

I claim:—

1. A toy cap pistol of the repeating type including a body having a magazine chamber and a cylinder receiving opening, a magazine cover pivoted to the body parallel to the axis of the barrel, and a rotatable cylinder carried by the cover and adapted to fit into said opening when the cover closes the magazine chamber.

2. A toy cap pistol of the repeating type including a body having a tape magazine chamber and a cylinder receiving opening, a magazine cover hinged to one side of the body on an axis parallel to the axis of the pistol barrel, a rotatable cylinder carried by the cover and adapted to fit into said opening when the cover closes the tape magazine chamber, a spring latch on the body, and keeper means on the cover for engaging said latch.

3. A toy cap pistol including a body comprising barrel and stock portions rigidly connected and having an anvil therebetween and a cap tape magazine formed at the barrel side of the anvil, a cover plate for the magazine hinged to the body on an axis parallel to the pistol barrel for pivotal movement toward and from the magazine, and cartridge cylinder simulating means carried by the cover plate.

4. A toy cap pistol including a body comprising barrel and stock portions having an anvil therebetween and a cap tape magazine formed at the barrel side of the anvil, tape feeding means, a hammer for the anvil, a cylinder actuator, trigger means for operating the tape feeding means, anvil and cylinder actuator, a cover plate for the magazine hinged to the body for lateral arcuate movement toward and from the barrel, and a rotatable cylinder carried by the cover plate and adapted to be operatively positioned with respect to said cylinder actuator when the cover plate closes the magazine.

5. A toy pistol including a body having a barrel, an anvil, a hammer for the anvil, tape feeding means, trigger means for operating the hammer and tape feeding means, a pivoted pawl also operated by said trigger means, a member pivoted parallel to the longitudinal axis of the barrel and adapted to be moved into and out of registry with one side wall of the body, and a rotatable cylinder carried by said movable member and having a ratchet adapted to be held in operative relation to said pawl when said member is in registry with the body.

6. A toy pistol including a body comprising barrel and stock portions having an anvil therebetween and a cap tape magazine formed at the barrel side of the anvil, a hammer for the anvil, tape feeding means, trigger means for actuating the hammer and tape feeding means, a cylinder actuator also operated by said last named means, cooperating means on said trigger means and hammer for holding the hammer in a partially cocked position away from the anvil, a cover plate for the magazine hinged to the body for lateral arcuate movement toward and from the magazine, and a rotatable cylinder carried by the cover plate and adapted to be operatively positioned with respect to said cylinder actuator when the cover plate closes the magazine.

7. A toy cap pistol of the repeating type having a barrel and a magazine chamber provided with a tape reel support, an anvil at one side of the magazine chamber, a hammer for the anvil, a cover for the magazine chamber pivoted on an axis parallel to the said barrel, a trigger for actuating the hammer, and cooperating means on the trigger and hammer for cocking the hammer to hold it away from the anvil to permit threading of the tape between the anvil and the hammer while the cover is swung away from the magazine chamber.

8. A toy pistol including a body having a magazine chamber, an anvil having a tape feeding wall leading thereto, a hammer for the anvil, a pivoted, spring controlled trigger piece, tape feeding means pivoted to said trigger piece and adapted to cooperate with said tape feeding wall leading to the anvil, cooperating means on the trigger and hammer piece for actuating the hammer and including means for holding the hammer in cocked relation to said anvil, a movable cover on the body for said magazine, a rotatable cylinder carried by said cover, and a cylinder actuator on said trigger piece adapted to operatively engage said cylinder when the cover closes the magazine.

9. A toy cap pistol of the repeating type including a body having a tape reel magazine opening at one side of the body, an anvil and a tape feeding wall leading thereto in the body at one side of the magazine, a tape reel support in the magazine, cap detonating means, tape feeding means cooperating with said wall leading to the anvil, a trigger for actuating said detonating means and tape feeding means, a removable cover on the body for the magazine, a rotatable cylinder carried by said cover and including an interior ratchet, and a pawl associated with said trigger for engaging said ratchet when the cover is positioned over the magazine and the cylinder has a portion thereof lined up with the pistol barrel.

10. A toy cap pistol of the repeating type including a body having a stationary magazine accessible from one side of the pistol body, an anvil on the body having a tape feeding wall connected therewith and communicating with the said magazine, a tape reel support in the magazine, cap detonating means cooperating with the anvil, tape feeding means cooperating with said tape feeding wall leading to the anvil, trigger means for actuating the tape feeding means and detonating means, a cover for the magazine adapted to be moved laterally toward and from the body to close and open said magazine, an angular support on the cover, a cartridge cylinder simulating element, spring tensioned pivot means for mounting said cylinder simulating element on said angular support, a series of ratchet teeth

within the cylinder simulating element, and a pawl associated with said trigger means and normally lying out of the path of movement of the cylinder element on the cover when the cover is fitted to the body and adapted to be projected into the cylinder to engage with said ratchet means when the trigger is actuated to move said cylinder element simultaneously with the operation of the said detonating means.

11. A toy pistol of the repeater type including a body having a tape magazine, a cover for the magazine movable laterally with respect to the normal operative position of the body to cover and uncover the magazine, a cylinder carried by the cover, cap detonating means, and cylinder actuating means within the body and adapted to operate in a path at right angles to the plane of movement of the cylinder when the cover moves to a position to close the magazine.

12. In a toy cap pistol of the repeating type, a body including a barrel and stock rigidly connected and having a tape reel magazine opening at one side of the body substantially at the junction of the barrel and stock, a cover for said magazine, and a rotatable member simulating a cartridge cylinder carried by the cover.

13. A toy cap pistol of the repeating type including a body comprising rigidly connected barrel and stock portions, a magazine in the body for receiving a reel of cap tape, said magazine opening laterally to one side of the barrel and stock portions, cap detonating means on the body,

a cover for covering and uncovering the magazine, a rotatable member simulating a cartridge cylinder carried by the cover, and means for simultaneously operating the detonating means and rotatable member carried by the cover when the latter is in closing relation to the magazine.

14. A toy cap pistol of the repeating type including a body comprising barrel and stock portions, a cap magazine opening at one side of the body, cap detonating means on the body, a member for covering and uncovering the magazine, a rotatable member simulating a cartridge cylinder carried by the cover and means for simultaneously operating the detonating means and the rotatable member covered by the cover when the latter is in closing relation to the magazine.

15. A toy pistol including a body having barrel and stock portions, provided with a transverse opening therebetween, cap detonating means, a member adapted to be engaged and disengaged with the body by movement at right angles to the axis of the barrel, said member being cut away to provide a portion for registering with said opening, a cartridge cylinder simulating element carried by said member and exposed from the side of said member at said cut-away portion, said cylinder simulating element being adapted to fit into said opening in the body when said member is fitted thereto, and means for simultaneously operating said detonating means and cylinder.

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