TOY AUTOMATIC SPRING PISTOL
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The mouth of the magazine is arranged at the same side of the barrel as the trigger means. The trigger or a shot releasing detent cooperating with the trigger respectively is provided with a part, largely parallel to the longitudinal direction of the barrel, and is so arranged that, when a projectile is brought backwards against the spring force, said part largely parallel to the barrel is brought to a position between the uppermost of the projectiles in the magazine and the barrel, thereby retaining the projectiles in the magazine. In its shot releasing position the trigger means entirely leaves the barrel, the projectile being released.

Said part being largely parallel to the barrel and retaining the projectiles of the magazine will then form part of the barrel.

The invention will be more closely described in connection with the accompanying drawing in which

Figs. 1 and 3 show two different embodiments of toy guns according to the invention in a longitudinal section and

Fig. 2 an embodiment of the trigger.

Fig. 1 furthermore shows a mechanism making possible the loading of a gun according to the invention without the use of loose parts.

In Fig. 1 showing a sectional view of the essential parts of the gun, 1 designates the body of the gun. This body, preferably made of wood or plastic material, contains a barrel 2 and, within the handle 3 a magazine space for receiving projectiles directly or in a suitable clip. In the embodiment shown in the figure this space is intended to receive the projectiles directly. The mouth of the magazine space communicates with what may be termed the chamber portion of the barrel to which projectiles are delivered.

In a manner known per se a spring, the main or firing spring 5, the upper end of which projects into the barrel, is arranged in a recess in the body and pivoted at the pin 6. This spring is loaded before discharge of a shot, when the projectile is brought backwards, and throws the projectile ahead through the barrel when released at the discharge.

The discharge is brought about by means of the discharge device according to the invention here shown as a lever 7 pivoted at a pin 18 and provided with a part 8 in its resting position hav-
ing its end projecting into the bore in front of the magazine, and being arranged so as to be moved along to cover the mouth of the magazine into the barrel when the gun is discharged, thereby preventing projectiles 13 in the magazine from entering into the barrel.

The lever drawn with continuous lines in the figure shows the position after the discharge, when part 8 covers the aperture of the magazine into the barrel and a projectile 9 is on its way through the barrel. In this position the trigger 10 is drawn back. When the trigger is released, the trigger and the lever 7 are brought to a position shown with dash lines by the trigger springs 11, the projectile being fed into the barrel from the mouth of the magazine by means of a magazine spring 12 and a projectile feeder 13.

This projectile is now ready to be forced backwards against the spring 8 by the part 8 of the lever 7 projecting into the barrel.

Part 3 must consequently be made in such a manner that the lower edge slides along covering the projectiles of the magazine while the upper edge engages the projectile to be discharged for a sufficiently long stroke to load the spring.

The loading of the aperture 14 in the body above the mouth of the magazine. This aperture has the same width and about the same length as the projectiles and is provided with a resilient stop 15. In its resting position the lower part of this stop is located above the barrel and level with the upper surface of the barrel. When inserting the projectiles it is brought aside in order to leave free passage for the projectiles down into the magazine. The ends 17 of the stop, in the embodiment shown consisting of a resilient metal wire, are fastened outside the aperture 14 seen from above, the wire being bent in such a manner that a U-shaped part enters into the aperture with its lower part 16 above the center of the barrel. This part consequently forms part of the barrel for projectiles fed into the barrel from the rearward but is brought aside when the gun is loaded, the ends 17 being then subjected to torsion.

Fig. 2 shows an embodiment where the trigger, the discharging means and the trigger spring constitute one piece consisting of a resilient wire, of which part 19 corresponds to part 8 of Fig. 1, part 21 corresponds to the trigger and part 22 to the trigger spring. This piece is inserted into a suitably shaped recess in the handle such that the part 22 with the adjacent bend of the wire is loaded.

Fig. 3 shows a further embodiment in which the trigger 31 is guided in guides 33 directed obliquely rearwardly and downwardly with respect to the direction of the barrel. The trigger is provided with a projection 32 directed rearwardly the rear end of which in its resting position extends into the barrel in front of and above the aperture of the magazine into the barrel, this projection, when the trigger is brought rearwardly against the action of the spring 35, moving backwardly and downwardly, bringing a projectile inserted into the barrel towards the mainspring 35, here shown as a cylindrical spring, while the part 32 covers the projectiles of the magazine. The mainspring in this figure shows the same as a sliding loose magazine 34, insertable from below into the handle.

The trigger mechanisms shown above for pistol constructions are naturally with the same advantages applicable to other automatically fed toy shooting-weapons.

I claim:

1. An automatic repeating toy gun comprising a body providing a gripping portion and a barrel having a chamber portion, said grip portion providing a magazine space extending laterally from the barrel and having a mouth communicating with said chamber portion, a spring carried by said body for discharging a projectile from said gun, and discharge mechanism for actuating the gun movable from a position of repose to a discharge position, said mechanism including a part located in said barrel ahead of said chamber portion in a position for engagement with a projectile in said chamber portion when said mechanism is in its position of repose, and motion constraining means having a fixed position in said body and engaging said mechanism for impeding movement of said part relative to said barrel rearwardly and to the side thereof occupied by said mouth and over the latter when said mechanism is moved from its position of repose to its discharge position, whereby to initially move said projectile rearwardly of the magazine and thereby to initially move said projectile rearwardly of the magazine and thereafter release the projectile while simultaneously providing a stop covering at least part of said mouth for preventing entry into said chamber of a succeeding projectile from said magazine space.

2. A gun as defined in claim 1 including an aperture in said body opposite the mouth of the magazine space for loading projectiles into said space across the chamber portion of the barrel and a yieldable spring detent carried by said body arranged to yield to permit projectiles to be inserted through said aperture and to prevent projectiles from passing through the aperture in the opposite direction.

3. A gun as defined in claim 1 in which said part of said mechanism comprises an elongated arm disposed substantially parallel with the axis of the barrel, the free end of the arm being positioned to engage a projectile in said chamber portion when said mechanism is in its position of repose and said arm masking said mouth when said mechanism is in its discharge position.

4. A gun as defined in claim 3 in which said motion constraining means comprises a guide surface on said body inclined with respect to the axis of said barrel.

5. An automatic repeating toy gun comprising a body providing a gripping portion and a barrel having a chamber portion, said grip portion providing a magazine space extending laterally from the barrel and having a mouth communicating with said chamber portion, a spring carried by said body for discharging a projectile from said gun, and discharge mechanism for actuating the gun movable from a position of repose to a discharge position, said mechanism including a part located in said barrel ahead of said chamber portion in a position for engagement with a projectile in said chamber portion when said mechanism is in its position of repose, and motion constraining means having a fixed position in said body and engaging said mechanism for impeding movement of said part relative to said barrel rearwardly and to the side thereof occupied by said mouth and over the latter when said mechanism is moved from its position of repose to its discharge position, whereby to initially move said projectile rearwardly of the magazine and thereafter release the projectile while simultaneously providing a stop covering at least part of said mouth for preventing entry into said chamber of a succeeding projectile from said magazine space.
wardly of the barrel against the force of the firing spring and thereafter release the projectile, said part of said mechanism comprising an elongated arm disposed substantially parallel with the axis of the barrel, the free end of said arm being positioned to engage a projectile in said chamber portion when said mechanism is in its position of repose and said arm masking said mouth when said mechanism is in its discharge position, said arm constituting one end portion of a lever member forming a part of said mechanism, said member being pivotally mounted on said motion constraining means.

6. A gun as defined in claim 5 in which said lever is pivoted intermediate its ends and includes a portion engaging said body for urging said arm away from its discharge position.

7. A gun as defined in claim 6 in which a portion of said lever is exposed to provide a trigger portion located to be moved by the user to actuate said mechanism and fire the gun.

STURE E. J. HJELM.

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