Feb. 14, 1950 A. MILLER 2,497,555

TOY RUBBER BAND GUN

Filed April 3, 1947 2 Sheets-Sheet 1

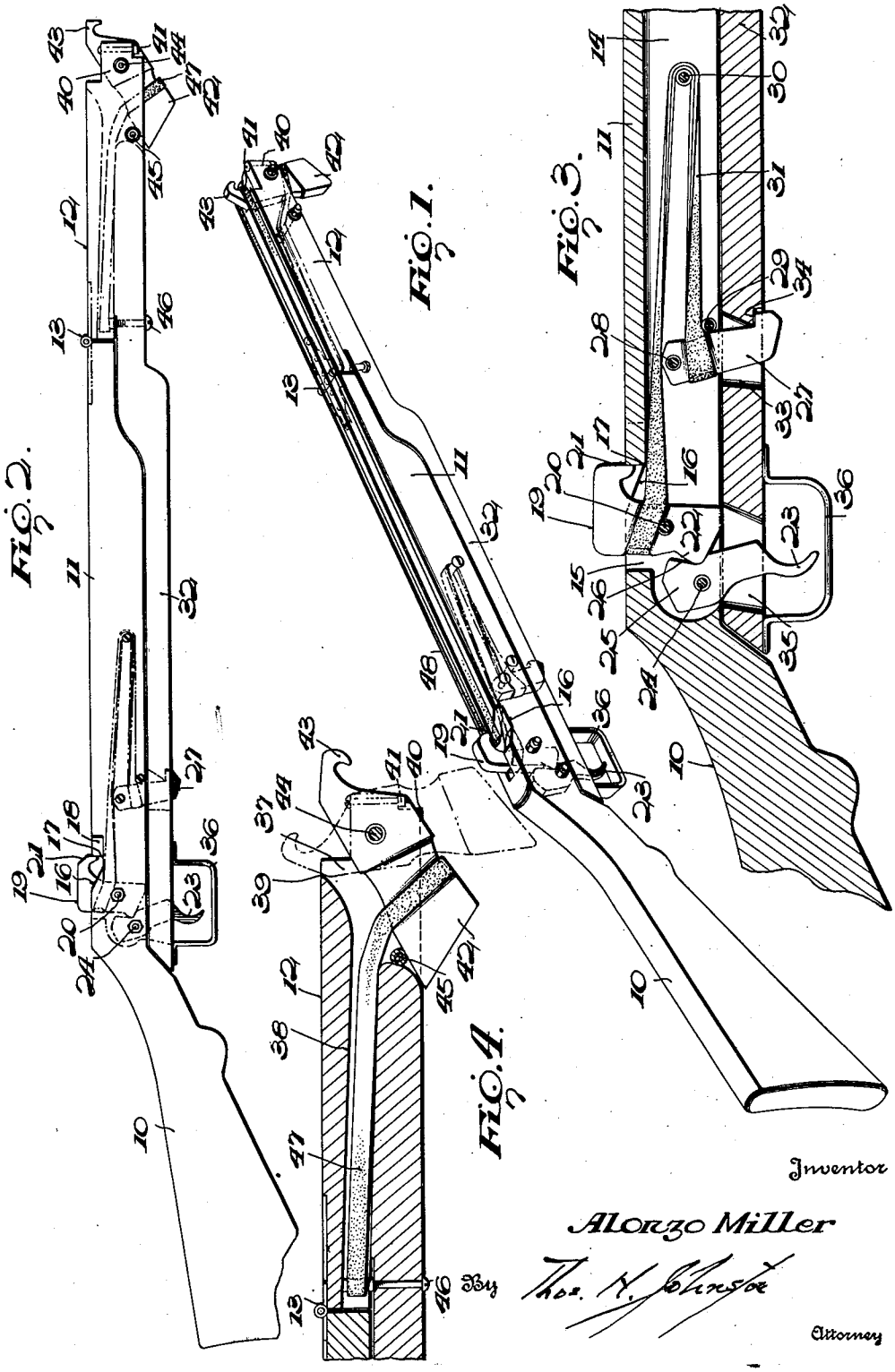


Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

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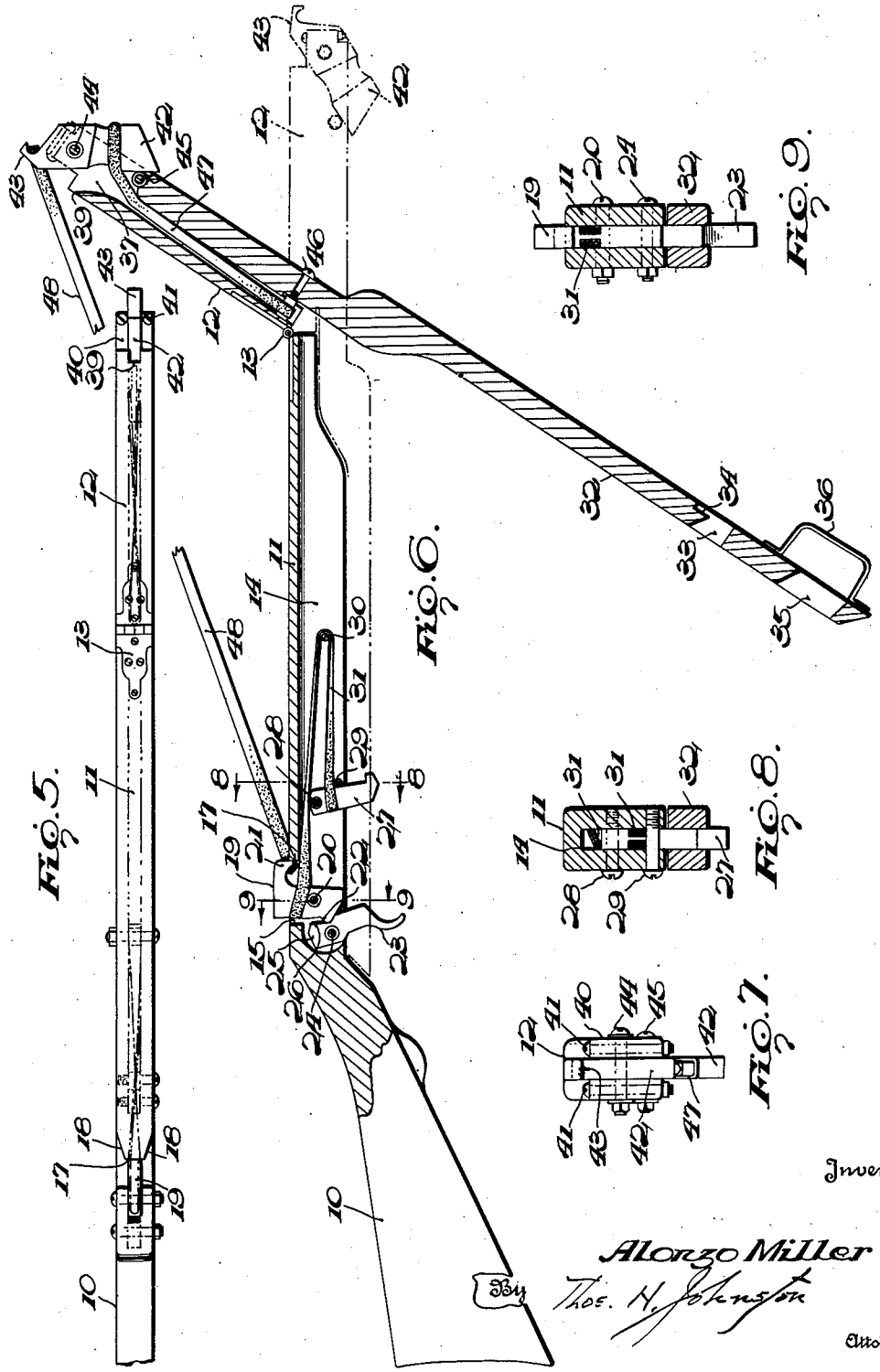


Fig. 5.

Fig. 6.

Fig. 9.

Fig. 8.

Fig. 7.

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TOY RUBBER BAND GUN

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Application April 3, 1947, Serial No. 739,123

3 Claims. (Cl. 124—18)

1

This invention relates to an improved toy gun.

The invention comprehends a toy gun employing an elastic band as a missile, and one of the objects of the invention is to provide a device wherein the band, when released, will travel in a more or less straight path, so that the operator may derive pleasure and amusement in aiming the gun and hitting the object at which he has aimed.

Another object of the invention is to provide a toy gun wherein, when the gun is set ready to release the elastic band, said band will be stretched between a shoulder at the breech of the simulated barrel and a catch at the muzzle of the barrel, and wherein, upon the release of the band, the muzzle catch will be instantly swung down out of the path of trajectory of the band so that said band may travel in a substantially straight line.

A further object of the invention is to provide a toy gun wherein the barrel will be formed of hingedly connected breech and muzzle sections, the latter of which may be swung up so that the elastic band may be initially arranged with ease to extend between the breech shoulder of the barrel and the muzzle catch, and wherein the muzzle section will be provided with a lever which may be manipulated to swing the muzzle section into alignment with the breech section and thereby stretch the band and set the gun ready for operation.

Another object of the invention is to provide a toy gun wherein the lever of the muzzle section of the barrel will normally be latched in closed position to thus secure the muzzle section in alignment with the breech section of said barrel, so that accidental upward folding of the muzzle section under the tension of the elastic band will be prevented, and wherein the lever will, when in closed position, mate with the breech section of the barrel to provide a simulated forestock.

And a still further object of the invention is to provide a toy gun wherein the elastic band will, when the gun is set ready for operation, be held in engagement with the breech shoulder of the barrel by a simulated hammer, wherein a trigger for said hammer will be provided, and wherein, upon the actuation of the trigger, the hammer will be raised to release said band.

Other and incidental objects of the invention will appear during the course of the following description, and in the drawings:

Figure 1 is a perspective view of my improved gun.

Figure 2 is a side elevation of the device.

2

Figure 3 is a fragmentary vertical section through the rear end portion of the barrel.

Figure 4 is a fragmentary vertical section through the forward end portion of the barrel.

Figure 5 is a fragmentary plan view of the gun.

Figure 6 is a longitudinal section showing the muzzle section of the barrel swung up.

Figure 7 is a front end elevation of the barrel.

Figure 8 is a section on the line 8—8 of Figure 6.

Figure 9 is a section on the line 9—9 of Figure 6.

In carrying the invention into effect, I employ a simulated unitary stock and barrel which may be of wood or other approved material. The stock is indicated at 10. The barrel comprises a breech section 11, and a complemental muzzle section 12 connected with the breech section by a suitable hinge 13.

Formed in the breech section 11 of the barrel from the lower edge thereof is a longitudinal channel 14 entering the rear end portion of which is a slot 15 opening through the upper edge of said section. Formed in the side walls of the slot 15 are notches 16 defining a vertical shoulder 17 at the forward end of said slot and, as best seen in Figure 5, said section of the barrel is cut away to provide divergent side faces 18 flanking said shoulder. The shoulder is thus narrow.

Mounted to rock in the channel 14 of the section 11 of the barrel is a hammer 19 which projects freely through the slot 15 and is carried by a transverse pivot pin 20. Formed on the head of the hammer at its upper forward terminal is a depending tip 21 which, when the hammer is lowered, abuts the upper end edge of the breech shoulder 17 and, as will be observed, the inner face of said tip is preferably convex. At its rear edge, the lower end portion of the hammer is notched to provide an inclined shoulder 22.

Pivoted within the channel 14 of the section 11 of the barrel behind the hammer 19 is a trigger 23 mounted to rock upon a pivot pin 24. The trigger is provided with a head 25, and said head is notched to seat the lower rear corner of the hammer as well as to provide an inclined shoulder 26 confronting the shoulder 22 of the hammer. Thus, as the lower end of the trigger is pulled rearwardly, the shoulder 26 will coact with the shoulder 22 for raising the hammer.

Depending from the muzzle section 11 of the barrel at a point forwardly of the hammer 19 is a pivoted latch 27, the upper end portion of which is received within the channel 14 and is engaged

by a pivot pin 28. Disposed forwardly of the latch is a stop pin 29 therefor, and extending medially of said channel a suitable distance forwardly of said stop pin is a like transverse pin 30. Extending within the channel over the stop pin 29 is an elastic band 31 which is trained about the pin 30 and one end of which is looped around the hammer 19 while the other end of said band is looped around the latch 27. The band 31 may be of rubber and will normally rock the hammer forwardly and yieldably hold said hammer lowered to abut the breech shoulder 17 as well as yieldably hold the latch 27 in engagement with the stop pin 29.

The muzzle section 12 of the barrel normally aligns with the breech section 11 thereof, and extending from the lower rear portion of said muzzle section is a lever 32 which, when in closed position, mates with the breech section and closes the channel 14 of said breech section at its lower side. The lever thus also provides a simulated forestock for the gun, and formed through said lever is a slot 33 which accommodates the latch 27 and provides a shoulder 34 normally engaged by the latch for securing the lever closed. The lever 32 is further formed with a slot 35 to accommodate the trigger 23, and secured to the lever is a trigger-guard 36 straddling said slot.

Formed in the muzzle section 12 at its free end, as best seen in Figure 4, is a vertical slot 37 elongated toward the lower edge of said section, and leading rearwardly from said slot through the section is a bore 38. A stop shoulder 39 is thus defined at the upper end of the slot, and forwardly of said shoulder the muzzle section is cut away at its upper edge to provide terminals 40 flanking the slot and of less width than said section. Extending vertically through the free end portions of said terminals are reinforcing elements 41 intended to prevent splitting of said terminals.

Mounted to rock within the slot 37 of the muzzle section 11 of the barrel is a catch 42 provided at its upper end with a hook 43. This catch is carried by a pivot pin 44 which extends through the terminals 40 of said section, and disposed behind the catch at the lower rear portion of said slot is a stop pin 45 for said catch. Extending upwardly through the muzzle section near the rear end of the bore 38 is a pin 46, and looped at one end about said pin is an elastic band 47 which extends freely through said bore into the slot 37 and is looped at its opposite end about the lower end portion of the catch. The band 47 may be of rubber and will normally swing the catch forwardly and yieldably hold said catch to abut at its lower end with the stop pin 45.

In conjunction with the gun, I provide an elastic band 48 which may be of rubber and serves as a missile.

To set the gun, the latch 27 is first manually swung rearwardly to release the lever 32, when said lever is swung downwardly, as shown in Figure 6, to rock the muzzle section 12 of the barrel upwardly relative to the section 11 of said barrel. The trigger 23 is then actuated to raise the hammer 19, when one end of the band 48 is looped about the breech shoulder 17 and the hammer lowered. The tip 21 of the hammer will thus coact with the band to maintain said band engaged with said shoulder.

Having secured the band 48 at its rear end, the forward end thereof is then looped about the hook 43 of the catch 42, when the lever 32 is returned to closed position secured by the latch 27.

Thus, as the muzzle section 12 of the barrel is returned to normal position aligning with the section 11, the catch 42 will be swung up to abut the stop shoulder 39 while the band 48 will be stretched to extend taut close along the upper edge of the barrel between the breech shoulder 17 and said catch. The gun is, as seen in Figure 1, thus set ready for operation and, as will be appreciated, the latch 27 will prevent accidental upward movement of the barrel section 12 under the tension of said band.

To shoot the band 48, the gun is aimed and the trigger 23 actuated to raise the hammer 19, when the band will slip free of the breech shoulder 17 as well as free of the convex face of the tip 21 of the hammer and travel forwardly under its own impetus. Coincidentally, the elastic band 47 will, as the tension of the band 48 on the catch 42 is relieved, swing the catch forwardly and downwardly to augment the impetus of the band 48 and project the band forwardly as well as swing the hook 43 downwardly out of the path of the band 48. The band 48 may thus travel forwardly in substantially a straight path toward the object at which the gun is aimed.

Having thus described my invention, I claim:

1. A toy gun including a simulated stock and barrel the latter of which is formed of pivotally connected breech and muzzle sections, front and rear means carried by the barrel near the ends thereof releasably engageable by an elastic band stretched to extend between said means, the muzzle section being swingingly movable into angular relation to the breech section to initially receive said band to extend between said means and being returnable to normal position in alignment with the breech section for stretching said band, a pivoted simulated hammer carried by the rear end portion of the barrel and provided with a portion to coact with said rear means for retaining the band in stretched position, a trigger mounted upon the stock to operatively coact with the hammer and movable to actuate the hammer and release said band, a lever carried by the muzzle section for swinging the same and movable to lie along the breech section mating therewith in closed position when the muzzle section is aligned with the breech section, a pivoted latch carried by the breech section to engage said lever and normally securing the lever in closed position, and a single yieldable means acting on the hammer as well as said latch and urging the hammer to a position retaining the band stretched as well as urging the latch to normally engage said lever.

2. A toy gun including a stock and barrel, said barrel comprising a breech section fixed to the stock and a muzzle section pivoted upon the breech section and normally aligning therewith to form the forward end portion of the barrel, forward and rear means carried by the barrel near the ends thereof and releasably engageable by an elastic band to extend stretched between said means, the breech section of the barrel being provided with a longitudinal channel opening through the lower edge thereof, a hammer pivoted in said channel near the rear end of the barrel and having a portion to coact with said rear means for retaining the band engaged therewith, a trigger pivoted in said channel to coact with the hammer and operable to actuate the hammer and release said band, the muzzle section of the barrel being movable into angular relation to the breech section to initially receive the band to extend between said means and being

returnable to normal position for stretching said band, and a lever carried by the muzzle section of the barrel for rocking the same and normally lying against the breech section therebeneath closing said channel.

3. A toy gun including a stock and barrel, said barrel comprising a breech section fixed to the stock and a muzzle section pivoted upon the breech section and normally aligning therewith to form the forward end portion of the barrel, forward and rear means carried by the barrel near the ends thereof and releasably engageable by an elastic band to extend stretched between said means, the breech section of the barrel being provided with a longitudinal channel opening through the lower edge thereof, a hammer pivoted in said channel near the rear end of the barrel and having a portion to coact with said rear means for retaining the band engaged therewith, a trigger pivoted in said channel to coact with the hammer and operable to actuate the hammer and release said band, the muzzle section of the barrel being movable into angular relation to the breech section to initially receive the band to extend between said means and being returnable to normal position for stretching said band, a lever carried by the muzzle section of the barrel for rocking the same and normally lying against the breech section therebeneath closing said channel, a latch pivoted in said channel and normally engaging said lever for securing the lever in normal position, and an elastic band extending between the hammer and said latch within said channel urging the hammer forwardly as well as urging the latch into engagement with said lever.

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