Nov. 16, 1943. C. S. JOHNSON 2,334,332

REPEATING TOY GUN

Filed April 14, 1941

Fig. 1.

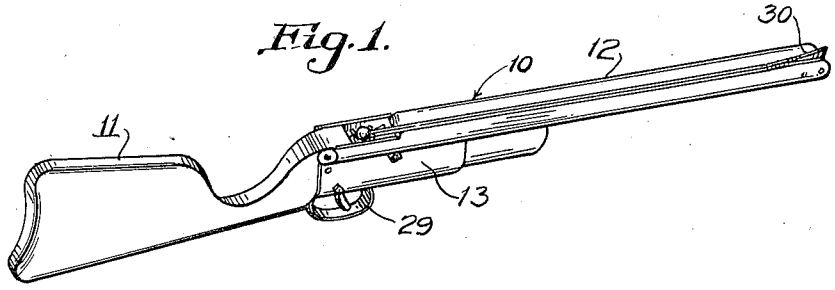


Fig. 2.

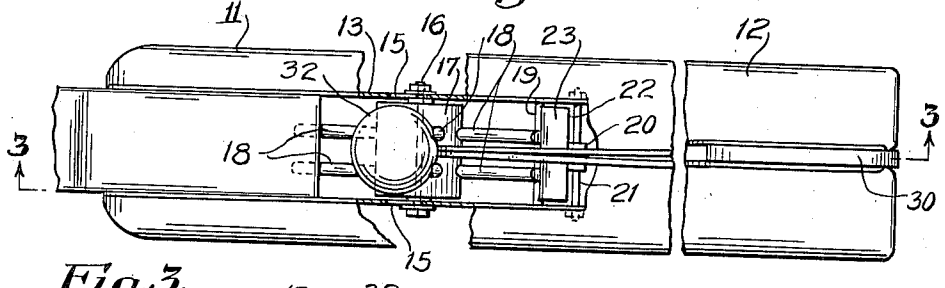


Fig. 3.

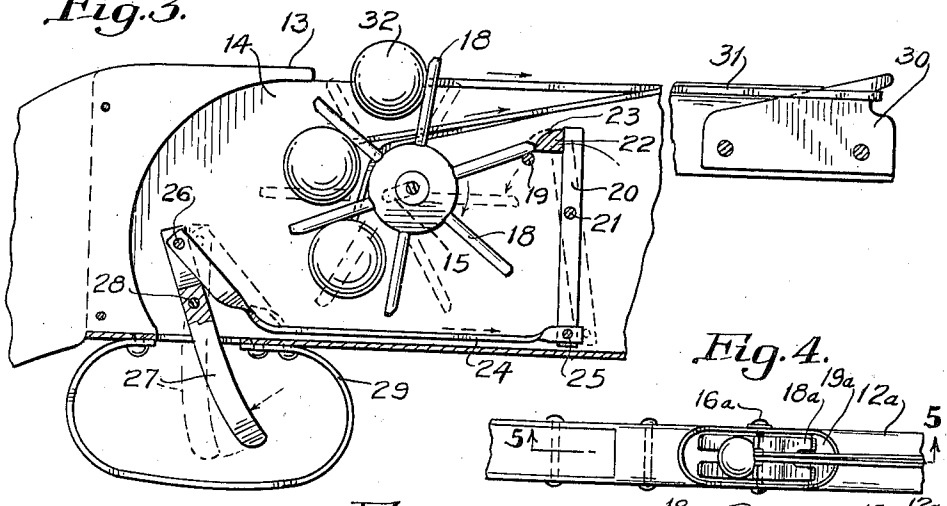


Fig. 4.

Fig. 5.

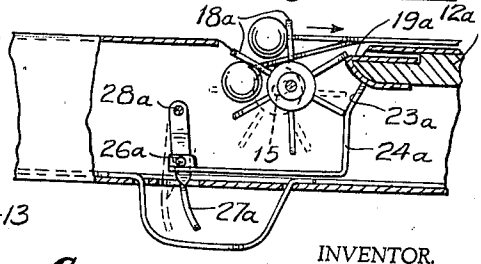


Fig. 7.

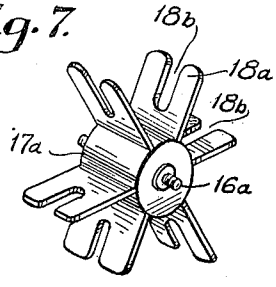
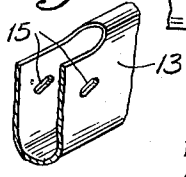


Fig. 6.



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2,334,332

REPEATING TOY GUN

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Application April 14, 1941, Serial No. 388,400

4 Claims. (Cl. 124—17)

This invention relates to toys and more especially to a repeating toy gun for shooting rubber balls by the force of a stretched elastic band.

An object of the invention is to provide a simple, practical and inexpensive article of the character described.

Another object of the invention is to provide a toy gun of the character described having repeating, or multiple, firing characteristics.

A further object of the invention is to provide in a toy of the character described novel means for loading and firing a plurality of pellets or shots.

Other objects and advantages will appear and be brought out more fully in the following specification, reference being had to the accompanying drawing, wherein:

Fig. 1 is a perspective view of the embodiment of my invention;

Fig. 2 is a plan view of the same illustrating the firing mechanism;

Fig. 3 is a side elevation view of the same partly in section;

Fig. 4 is a view similar to Fig. 2 of a modified form of the invention;

Fig. 5 is a sectional view taken along line 5—5 of Fig. 4;

Fig. 6 is a fragmentary perspective view showing the slotted bearings for the rotating element; and

Fig. 7 is a perspective view of the rotating element of Figs. 4 and 5.

Referring more particularly to the drawing, and especially Figs. 1 to 3, I show a toy gun 10, having a stock 11, and two barrels 12 preferably of wood but optionally of any equivalent material, a breech housing 13 forms a chamber 14 for the trigger mechanism and is provided with a pair of slots 15, which form bearings for a rotary shaft 16 on which shaft is a hub 17, from which extend radially a plurality of pairs of pin arms 18. An abutment pin 19 extends across the side wall of housing 13 and forms an abutment of the ends of pin arms 18, a lever 20 is pivotally mounted on a bearing pin 21 supported by housing 13, and is provided with a lateral extension 22, having a cam surface 23, a link 24 is pivoted at 25 to lever 20 and pivotally connected at 26 to a trigger 27 pivotally mounted at 28 in housing 13. A trigger guard 29 is provided as shown.

A hook element 30 is positioned at the forward end of barrels 12 and is adapted to receive the forward looped end of an elastic band 31, secured to a projectile 32, which preferably comprises a soft rubber ball, or the like.

The gun is loaded by hooking elastic band 31 around hook 30 and holding ball 32 in the hand, stretching the band, and placing the ball in the V-shaped space between pairs of arms 18 with the elastic band 31 between the two arms of the upperly extending pair. The forward pull of the elastic band 31 causes shaft 16 to be drawn forward in slots 15 and the next adjacent pair of pin arms 18 will rest on abutment pin 19. As the pin arms 18 come to rest on pin 19, the ends of the arms move over cam surface 23 of lever extension 22 and rock the lever to the full line position as shown in Fig. 3, which movement with link 24 rotates trigger 27 to the forward position. When trigger 27 is pulled backwardly, lever 20 is rocked and extension 22 pushes against the end of pin arms 18, causing shaft 16 to be pushed backwardly in slots 15 and the rotating element is free to turn, releasing ball 32 which is projected over barrels 12 as should be obvious.

The gun may be loaded with a plurality of balls 32, by placing them in the manner described one at a time and turning the rotator to the left, and a maximum of six balls can thus be loaded. As each ball is fired the tension of the remaining elastic bands 31 resets the rotating element for the following ball and any number up to the capacity of the gun can be fired in a quick succeeding manner.

In Figs. 4, 5, and 7 I show a modified form of the firing mechanism which has a similar resulting action. In these figures which show a similar barrel 12*a*, and abutment element 19*a* comprising a V-shaped plate secured to barrel 12*a*, the rotating element is provided with slots 15 as above, for mounting shaft 16*a* on which is a hub 17*a* which secures a plurality of arms 18*a*, each having a slot 18*b*, and permit the elastic band 31 to pass therethrough when loading the gun. A trigger 27*a* is pivoted at 28*a* and a link 24*a* is pivoted at 26*a* to trigger 27*a*. Link 24 is provided with a cam and abutment surface 23*a*, which engages the ends of arms 18*a* after each firing and which push against the ends of said arms successively release the precedingly positioned arm from abutment 19*a*, as should be clear.

Having described my invention, what I claim is:

1. A repeating toy gun as described having a barrel provided with a hook at the extreme end thereof, a breech portion having a cavity and bearing means, a rotator in said cavity having a shaft in said bearings, a plurality of radially disposed slotted abutment arms on said rotator,

a fixed abutment adapted for successive engagement with the ends of said arms, and trigger means adapted to successively engage said arms when in engagement with said abutment to disengage the arm having abutment engagement, and permit rotation of said rotator to a similar successive arm and abutment engagement position, said trigger means adapted to be actuated by said arms to a position to permit a successive disengaging action.

2. A repeating toy gun as described having a barrel provided with a hook at the outer end thereof for a resilient element, a breech portion having a cavity and slotted bearings, a rotator having a shaft in said bearings, and a plurality of radially disposed slotted abutment arms, a fixed abutment adapted for engagement with the ends of said arms, trigger means adapted to engage the ends of said arms for disengaging the arm having abutment engagement, and having a cam surface adapted to be engaged by the ends of said arms to position said trigger means opposite the ends of said arms for a successive arm and abutment disengagement.

3. A repeating toy gun as described having a barrel provided with a hook at the outer end thereof, a breech portion having slotted bearings, a rotator having a shaft mounted in said bearings, a plurality of radially disposed slotted abutment arms, a fixed abutment adapted for successive engagement with the ends of said arms, one of said arms adapted to be engaged by said abutment when a projectile having an elongated resilient portion is positioned against an adjacent abutment arm with the resilient portion extending through the slot of said arm and secured to said hook, and trigger means adapted to release the arm having abutment engagement to permit rotation of said rotator for a successive arm and abutment engagement.

4. A repeating toy gun as described having a barrel provided with means at the extreme end thereof to releasably secure one end of a plurality of resilient elements, a breech portion having a cavity, a rotatable element having a shiftable bearing mounting in said cavity and a plurality of radially disposed slotted abutment arms forming receiving recesses for a plurality of projectiles each secured to an end of one of said resilient elements, adapted to be passed into the slots of said arms, a fixed abutment for engagement with the ends of said arms, pivoted trigger means adapted when pivoted to engage the end portion of one of said arms to disengage one of said arms from engagement with said abutment to permit partial rotation of said rotatable member, said trigger means adapted when in pivoted position to engage the end portion of one of said arms and be pivoted by said arm and be disengaged therefrom and permit additional rotation of said rotatable element and engagement of one of said arms with said abutment.

CLARENCE S. JOHNSON.