June 9, 1931. J. R. McFARLAND 1,809,208

REPEATING GUN FOR SHOOTING ELASTIC BANDS

Filed March 17, 1930 2 Sheets-Sheet 1

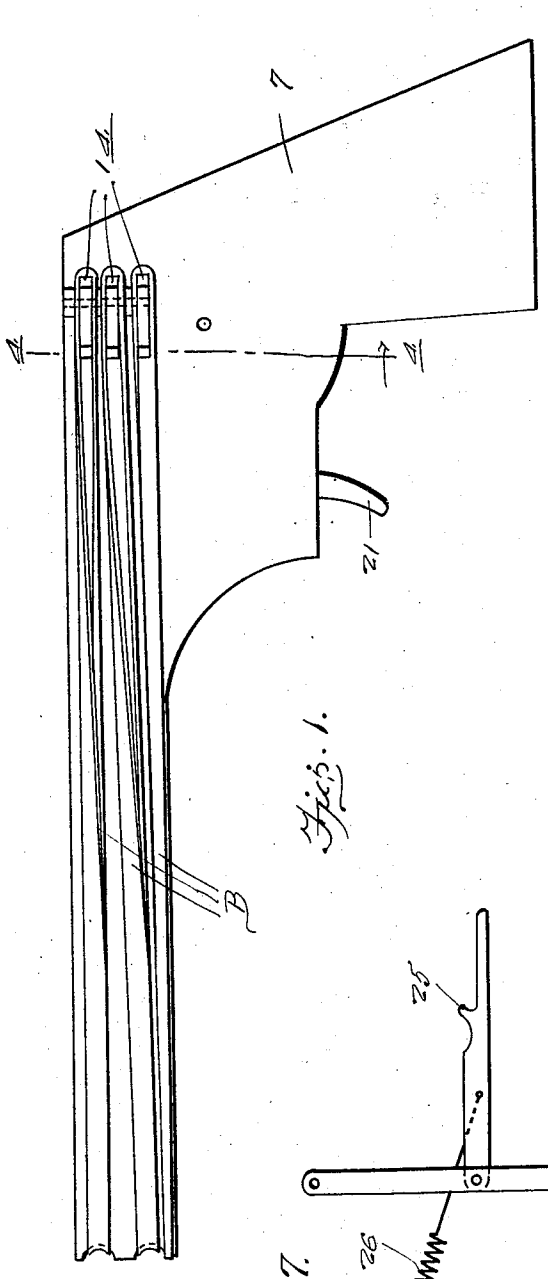

Fig. 1.

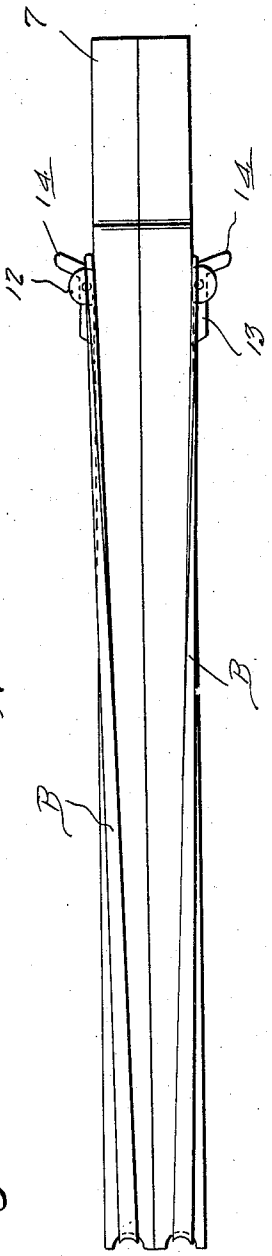

Fig. 2.

Fig. 7.

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REPEATING GUN FOR SHOOTING ELASTIC BANDS

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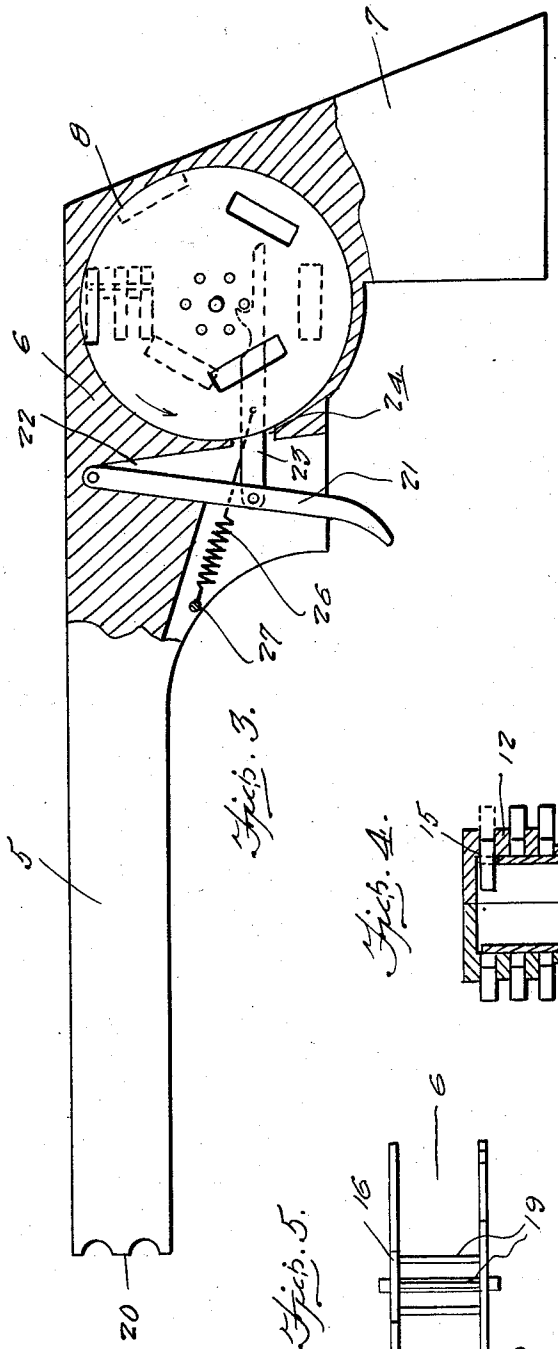

Fig. 3.

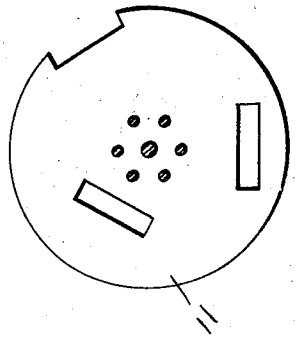

Fig. 6.

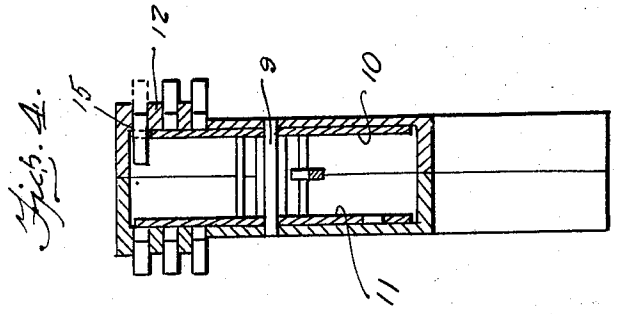

Fig. 4.

Fig. 5.

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UNITED STATES PATENT OFFICE

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REPEATING GUN FOR SHOOTING ELASTIC BANDS

Application filed March 17, 1930. Serial No. 436,589.

This invention relates to a repeating gun for shooting elastic bands.

A primary object of this invention is to provide a toy gun from which a plurality of rubber bands may be shot in succession.

A further object of this invention is to provide a toy gun that may be loaded with a plurality of elastic bands for discharging the bands in single and consecutively controlled order.

A still further object is to provide a toy gun of the character above mentioned which is simple in construction, practical in operation, inexpensive, and otherwise well adapted for the purpose designed.

Other objects of the invention will become apparent from the following description, taken in connection with the accompanying drawings wherein:

Figure 1 is a side elevation of the toy gun or pistol,

Figure 2 is a top plan view thereof,

Figure 3 is a view partly in section and partly in elevation for more clearly illustrating the actuating mechanism of the gun or pistol,

Figure 4 is a vertical sectional view taken substantially on line 4—4 of Figure 1,

Figure 5 is a plan view of the control disk,

Figure 6 is a detail view taken substantially on the line 6—6 of Figure 5,

Figure 7 is a side elevational view of the spring controlled trigger and actuator rod.

With reference more in detail to the drawings, it will be seen that the gun comprises a barrel 5, a stock 6 and a grip 7. The stock, barrel and grip are preferably formed integral, and the gun in its entirety may be formed of a pair of sections as suggested in Figures 2 and 4.

The stock 6 is provided with a vertical annular chamber 8. Rotatably mounted within the chamber 8 is a shaft 9 extending horizontally, and disposed transversely of the chamber. Keyed to the shaft 9 at the opposite end of the shaft are the control disks 10 and 11.

The stock 6 on opposite sides of the chamber 8 is provided with a plurality of lateral lugs 12. Pivoted between the lugs on the respective sides of the stock or independently operable bell crank releasing levers, each of said releasing levers comprising a relatively long arm 13 and a relatively shorter arm 14.

Opposite each arm 13 the stock is provided with horizontal elongated slots 15. The slots 15 communicate with the chamber 8 as clearly suggested in Figures 3 and 4. Each of the control disks 10 and 11 are provided on their periphery with a notch 16 adapted to register with the uppermost slot 15 on the adjacent side of the stock 6.

Each of said disks are further provided with an elongated slot or opening 17 adapted to register with the intermediate slot 15 in the adjacent wall or side of the stock 6; said disks being further provided with a third slot or opening 18 suitably arranged relative to the notch 16 and slots 17 for registry with the lowermost slots 15 on the adjacent side of the stock 6.

Extending between the disks 10 and 11 and connecting said disk is an annular series of connecting pins or rods 19 arranged circumjacent the shaft 9.

In the present example, I have shown six of such releasing bell crank levers, there being three of such bell cranks on each side of the stock 6. Consequently, each disk is provided with one notch 16, slot 17 and slots 18 and the notches and slots of the respective disks are so arranged in alternate relation with respect to one another that upon one-sixth of a turn imparted to the shaft 9 one of the bell crank levers will be actuated under the influence of the rubber band with which it is associated for releasing the band in a manner presently to become apparent.

At its forward end, the barrel 5 is provided with an annular series of rubber band engaging lugs 20, the number of lugs 20 corresponding in number to the releasing bell crank levers.

In their initial position, the disks 10 and 11 completely close the openings 15, and the arms 13 of the bell crank levers bear against the portions of the respective disks closing the openings 15, the arms 13 being urged inwardly against the disk under the influence of the rubber band engaging the arms 14 and

their respective lugs 20 as clearly suggested in Figure 1.

The rubber bands are designated generally by the reference character B. A trigger 21 is pivoted at its upper end in the upper end of a suitable recess 22 provided therefor in the stock 6 forwardly of the chamber 8. An actuating or push rod 23 is pivoted to the trigger 22 intermediate the ends of the trigger and extends into the chamber 8 through a suitable opening 24 as clearly suggested in Figure 3. Inwardly from its free end, the push or actuating rod 23 is provided with a pin engaging hook 25 for releasably and consecutively engaging the pins 19 for rotating the disk one-sixth part of a complete revolution.

Normally urging the hook 25 out of engagement with the pins 19 is a suitable spring 26 one end of which is anchored to the actuator rod 23 between the hook 25 and trigger 21, and the other end of said spring 26 is suitably anchored rearwardly of the barrel 5 as at 27.

One wall of the recess 22 is engageable by the trigger 21 under the action of the spring 26 thus constituting the stop for the trigger while the opposite wall of the recess 22 acts as a stop for the trigger 21 when the latter is moved against the tension of the spring 26 for actuating the actuator rod 23 whereby the disks 10 and 11 are rotated for consecutively freeing one of the bell crank releasing levers whereby the rubber band B engaging the lug 20 and the arm 14 of the respective bell crank releasing levers are singly and consecutively released.

This operation may be continued as long as a band remains upon the gun, the pins 19 being alternately engaged and released by the hook 25 under the influence of the trigger 21 and spring 26 controlled by the finger of the operator in a manner clearly apparent.

From the foregoing then it will be seen that I have provided a simple and inexpensive repeating gun for discharging rubber bands, and that the same is an amusing yet harmless toy gun.

Even though I have herein shown and described the preferred embodiment of my invention, it is to be understood that the same is susceptible to changes fully comprehended by the spirit of the invention and the scope of the appended claims.

Having thus described my invention, what I claim as new is:

1. In a repeating gun for shooting elastic bands, a gun comprising a barrel and a stock, said stock having an annular chamber formed therein, slots on opposite sides of the stock communicating with said chamber, a plurality of bell crank levers pivoted to said sides of the stock adjacent said slots, there being one bell crank lever for each of said slots, each of said bell crank levers including an arm into and out of said chamber through the slots, lugs on the barrel corresponding in number to the number of bell crank levers, means operable within said chamber and movable across the slots for engaging the first mentioned arms of the bell crank for normally urging said arms outwardly through the respective slots, elastic band engaging the lugs on the barrel and the bell crank, a trigger mechanism, operating in conjunction with the last referred to means for positively preventing the movement of the arm of more than one bell crank lever inwardly of the chamber through its respective slots with each movement of the trigger.

2. In a repeating gun for shooting elastic bands, a gun comprising a barrel and a stock, a plurality of bell crank levers pivoted intermediate their ends through the stock on opposite sides of the stock, each of the bell crank levers including an arm for releasable engagement with the inner end of a rubber band, the other end of the band being adapted to engage the forward end of the barrel, a movable trigger mechanism cooperating with said bell crank lever for normally maintaining said arm against release, and a rotatable member engaging said bell crank lever and operating in conjunction with said trigger mechanism for positively preventing the release of more than one band with each movement of the trigger.

3. In a repeating gun for shooting elastic bands, a gun including a barrel and a stock, a transverse shaft rotatable in the stock, a series of slots formed on opposite sides of the stock, a series of releasing levers pivotally mounted on the stock on opposite sides of the stock adjacent said slots, an annular series of lugs formed on the barrel for engagement with the forward end of the band, the other end of the band adapted to engage one end of said releasing lever for normally urging the opposite end of said levers inwardly of the stock through said slots, members on said shaft and rotatable therewith within the slots for engagement with the other end of said releasing lever for normally urging said other end outwardly of the stock between said slots, a trigger mechanism, and means operating in conjunction with the trigger mechanism for rotating said shaft a predetermined extent in a manner for positively preventing the disengagement of more than one of said members from its respective lever.

4. In a repeating gun for shooting elastic bands, a gun including a barrel and a stock, a transverse shaft rotatable in the stock, a series of slots formed on opposite sides of the stock, a series of releasing levers pivotally mounted on the stock on opposite sides of the stock adjacent said slots, an annular series of lugs formed on the barrel for engagement with the forward end of the band, the other end of the band adapted to engage one end of said

releasing lever for normally urging the opposite end of said levers inwardly of the stock through said slots, members on said shaft and rotatable therewith within the slots for engagement with the other end of said releasing lever for normally urging said other end outwardly of the stock between said slots, a trigger mechanism, and means operating in conjunction with the trigger mechanism for rotating said shaft a predetermined extent in a manner for positively preventing the disengagement of more than one of said members from its respective lever, said last mentioned means including a reciprocating actuating bar, and an annular series of pins connecting said members and adapted to be consecutively engaged by said reciprocating bar.

5. In a repeating gun for shooting elastic bands, a gun including a barrel and a stock, a transverse shaft rotatable in the stock, a series of slots formed on opposite sides of the stock, a series of releasing levers pivotally mounted on the stock on opposite sides of the stock adjacent said slots, an annular series of lugs formed on the barrel for engagement with the forward end of the band, the other end of the band adapted to engage one end of said releasing lever for normally urging the opposite end of said levers inwardly of the stock through said slots, members on said shaft and rotatable therewith within the slots for engagement with the other end of said releasing lever for normally urging said other end outwardly of the stock between said slots, a trigger mechanism, and means operating in conjunction with the trigger mechanism for rotating said shaft a predetermined extent in a manner for positively preventing the disengagement of more than one of said members from its respective lever, said last mentioned means including a reciprocating actuating bar, and an annular series of pins connecting said members and adapted to be consecutively engaged by said reciprocating bar, and means cooperating in conjunction with the trigger mechanism for positively preventing the engagement of more than one of said pins by said bar with each movement of the trigger.

In testimony whereof I affix my signature.

JESSE R. McFARLAND.