Aug. 13, 1929. J. B. FISHER 1,724,271

TOY GUN

Filed Nov. 29, 1927

Fig. 1

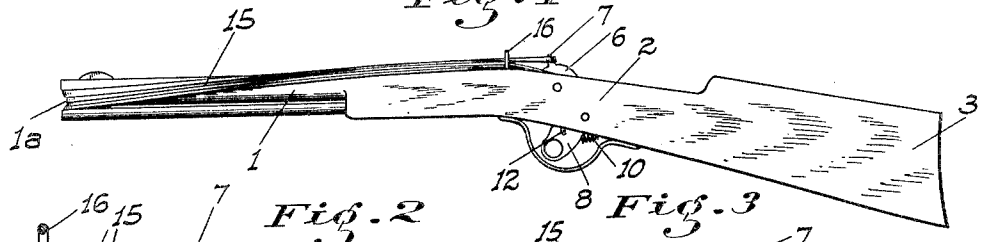


Fig. 2

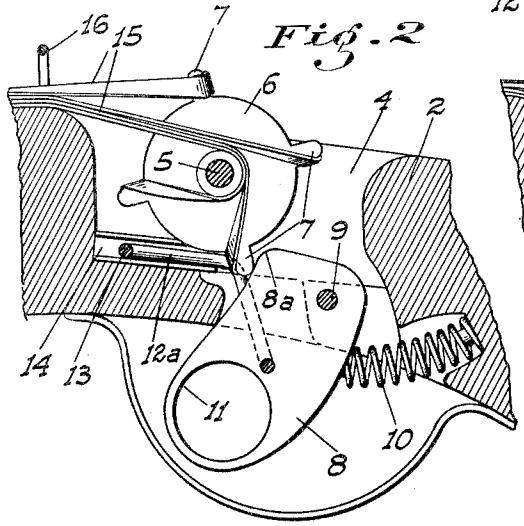


Fig. 3

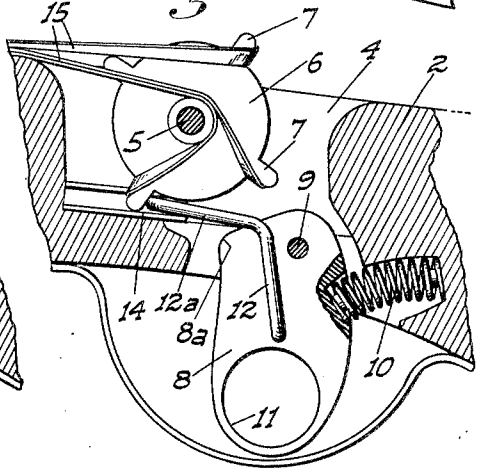


Fig. 4

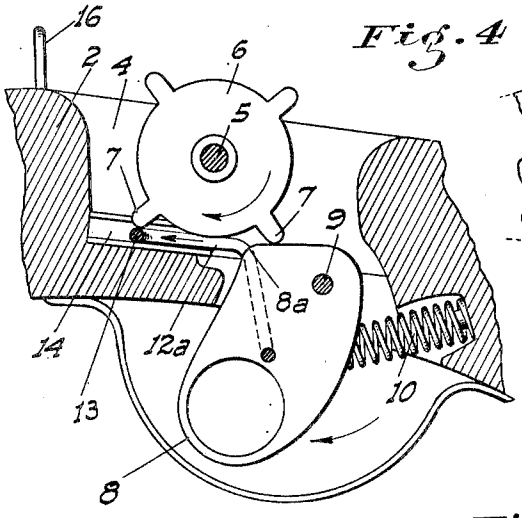


Fig. 5

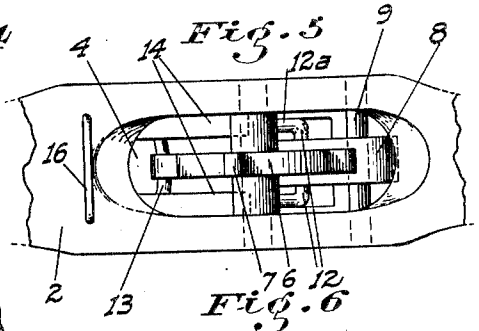


Fig. 6

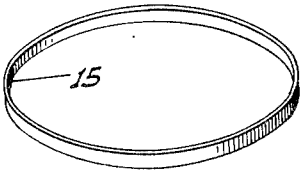
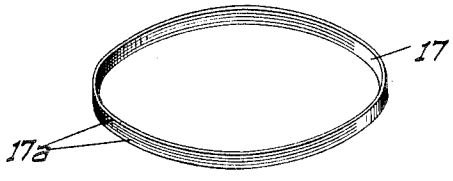


Fig. 7



INVENTOR

J. B. Fisher

BY

ATTORNEY

Patented Aug. 13, 1929. 1,724,271

UNITED STATES PATENT OFFICE

JOSEPH B. FISHER, OF STRATHMORE, CALIFORNIA.

TOY GUN.

Application filed November 29, 1927. Serial No. 236,463.

This invention relates to toy or imitation rifles, my principal object being to provide a device of this character arranged to employ rubber bands as missiles, especially bands of a size which may be readily cut from old inner tubes.

Another object of the invention is to arrange the gun so that it may be loaded with a plurality of such bands at one time while providing for the discharge of the different bands in single and consecutively controlled order.

I also arrange for the successive bands to automatically move to a shooting or discharge position as each band is charged. I have therefore devised an imitation repeating and self-loading firearm which will prove a source of harmless amusement, particularly to children.

A further object of the invention is to produce a simple and inexpensive device and yet one which will be exceedingly effective for the purpose for which it is designed.

These objects I accomplish by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawings similar characters of reference indicate corresponding parts in the several views:

Fig. 1 is a side elevation of my improved toy gun.

Fig. 2 is an enlarged sectional elevation of the actuating mechanism of the gun, showing the trigger in its normal or cocked position.

Fig. 3 is a similar view showing the position of the trigger after it has been pulled to discharge a missile.

Fig. 4 is a similar view showing the trigger as partly retracted to its normal position after having been pulled.

Fig. 5 is a top plan view of the actuating mechanism.

Fig. 6 is a perspective view of a missile band.

Fig. 7 is a similar view of a modified form of band.

Referring to the numerals of reference on the drawings, the gun comprises a main member which may be made out of a single piece of wood for lightness and cheapness of construction, which member is shaped to form a barrel 1, a stock 2, and a shoulder pad member 3, in imitation of the general shape and proportions of an actual rifle. The stock 2 is formed with a vertical opening 4 therethrough in which the operating mechanism of the device is mounted.

Disposed in the opening 4 and mounted on a transverse turnable shaft 5 is a disk 6, which is narrower than the opening and has a plurality of radial lugs 7 projecting outwardly therefrom, four of such lugs being preferably employed. The disk is disposed so that its upper periphery is substantially in line with the upper edge of the barrel and stock, any lug which is then uppermost projecting above the barrel as will be evident.

Extending into the opening 4 rearwardly of and below the disk and depending below the stock is a trigger 8 which is pivoted on a transverse pin 9. A spring 10 acts on the trigger to normally swing the same forwardly or to a cocked position. If it is desired, the trigger may be formed with a transverse circular or oval opening 11 therethrough, so as to receive a finger therethrough and allow for the finger movement to aid in or actually perform the recocking operation.

At its upper forward end the trigger is formed with a transverse shoulder or stop 8^a which is arranged when the trigger is in its forward position to project into the path of movement of the disk lugs, so as to be engaged by the lowermost lug and then prevent rotation of the lug and disk in a rearward direction. Pivoted onto the trigger below the pin 9 and projecting upwardly therefrom are transversely opposed arms 12 which at their upper ends are bent to form substantially horizontal and forwardly projecting extensions 12^a, which are connected at their forward ends so as to form a rigid unit therewith by a cross bar 13. The forward portions of the extensions 12^a travel in guide 14 which project inwardly from the sides of the opening 4, so that the arm 13 may move back and forth only in a definite plane. The trigger is prevented from forward movement beyond a predetermined limit with the pressure of a lug 7 thereagainst by suitable means, such as by coming in contact with the bottom of the stock at the forward end of the opening 4, as clearly shown in Fig. 2. The cross bar 13 is disposed so that when the trigger is in said foremost position, the bar is ahead of the path of movement of the disk lugs.

The missile bands 15 are of flexible rub-

ber having a normal diameter considerably less than the distance from the outer end of the barrel to the disk. Fixed on top of the stock just ahead of the opening 4 is a transverse staple 16, which forms an imitation rear sight. To load the gun with the bands each band is individually placed through the staple and engaged with the adjacent and uppermost lug 7. The band is then stretched so that its opposite end straddles the front end of the barrel which at such end is formed with a concave depression 1ª so as to prevent slipping of the band from place. The disk is then rotated rearwardly by hand until another lug projects upwardly, when the opposed lug will then be engaged by the trigger shoulder to prevent forward rotation of the disk as induced by the pull of the band thereon. The next band is then positioned and stretched, the disk is again rotated to place the lug uppermost and so on, until all the bands are in position. The bands first placed are then partly wrapped around the shaft 5 to the sides of the disk as will be seen in Figs. 2 and 3. Then when the trigger is pulled from the position shown in Fig. 2, to that shown in Fig. 3, the lug engaged by the trigger shoulder will first be moved forward slightly to place the top band under even greater tension, and will then be suddenly released by the downward movement of the shoulder out of the path of the lug. The disk is then free to rotate, and the upper band will act to pull the upper lug forward. As soon as the lug passes its highest point and starts down, the band will slip from engagement therewith and will be propelled forward with a force depending upon the strength of the rubber and the extent to which the band has been stretched.

As the trigger is pulled rearwardly, the cross bar 13 moves rearwardly also, so that by the time the trigger reaches its rearmost position, said cross bar is rearwardly of and is engaged by the next lug as shown in Fig. 3. This, as will be evident, prevents further rotation of the disk, so that only one band will be discharged; since by reason of this arrangement the disk can only rotate at any one time an extent equal to the distance between adjacent lugs. When the finger or spring pressure moves the trigger to its original cocked position, the cross bar first pushes the lug with which it is engaged ahead somewhat, and remains in engagement therewith until the shoulder 8ª of the trigger has raised and is in the path of movement of said bar engaged lug rearwardly of the same. Then when the bar disengages said lug, the disc turns back somewhat, due to the pull of the band on the upper lug, until the lower lug is stopped by the member 8ª. When the trigger is in its foremost position the cross bar has become disengaged from said lug and is a sufficient distance ahead of the same so as not to interfere with a further rotative movement when the trigger is again pulled. In other words the parts are then restored to the positions shown in Fig. 2.

The type of missile shown in Fig. 7 comprises a band 17 cut for the larger portion of its circumference to form a number of strips 17ª joined together only by a short length of band at one end. With this type of missile the strips are disposed at the forward end of the barrel when the gun is loaded, and when such bands are discharged the strips spread out with an effect similar to that had with the discharge from an actual shot gun.

From the foregoing description it will be readily seen that I have produced such a device as substantially fulfills the objects of the invention, as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claims.

Having thus described my invention what I claim as new and useful and desire to secure by Letters Patent is:

1. A toy gun for shooting elastic bands including a body having a barrel and a stock, releasable members for independent and detachable engagement with the bands at their rear ends, their other ends being adapted to engage the outer end of the barrel, and a movable trigger mechanism separate from said members for normally holding said members against release, and for enabling such release to take place to disengage the bands in consecutive order; and means operating in conjunction with the trigger mechanism for positively preventing the release of more than one band with each movement of the trigger.

2. A toy gun for shooting elastic bands including a body having a barrel and a stock, a rotary member turnably mounted in the stock on a transverse axis, a plurality of lugs projecting radially from the member for detachable engagement with the rear ends of the bands, the other ends of the bands being adapted to engage the outer end of the barrel, one lug being normally upstanding from the member, and then projecting above the stock, a trigger pivoted in the stock below the member and having a shoulder normally engaging the rear face of a lug other than the uppermost one and depressable from said lug when the trigger is pulled, and means operating in conjunction with the trigger for positively preventing a movement of the lug member to an extent greater than the arcuate distance be-

tween adjacent lugs with every pull of the trigger.

3. A toy gun for shooting elastic bands including a body having a barrel and a stock, a rotary member turnably mounted in the stock on a transverse axis, a plurality of lugs projecting radially from the member for detachable engagement with the rear ends of the bands, the other ends of the bands being adapted to engage the outer end of the barrel, one lug being normally upstanding from the member and then projecting above the stock, and a trigger pivoted in the stock below the member and having a shoulder normally engaging the rear face of a lug other than the uppermost one and depressable from said lug when the trigger is pulled, a cross bar, and means connecting said cross bar to the trigger in a manner to cause said bar to be moved, with the pull of the trigger, into the path of movement of a lug other than that released from the trigger with the pull thereof, whereby to limit the rotative movement of the member.

4. A toy gun for shooting elastic bands including a body having a barrel and a stock, a rotary member turnably mounted in the stock on a transverse axis, a plurality of lugs projecting radially from the member for detachable engagement with the rear ends of the bands, the other ends of the bands being adapted to engage the outer end of the barrel, one lug being normally upstanding from the member, and then projecting above the stock, a trigger, means between the trigger and member for normally preventing rotative movement of the latter, and means whereby with every pull of the trigger the member is free to rotate to an arcuate extent only equal to the spacing between adjacent lugs.

5. A toy gun including a body having a barrel and a stock, a transverse shaft mounted in the stock, a rotary member turnably mounted on the shaft, and having a plurality of radially extending and circumferentially spaced lugs, one at a time of said lugs projecting above the stock to enable one end of an elastic band stretched from the outer end of the barrel to be engaged therewith, trigger means then engaging one of the other lugs to prevent rotation thereof with the pull of the band and arranged to be depressed to release the lug, and means mounted in connection with the trigger for stopping engagement with one of the lugs after the trigger has been depressed and the lug member has rotated a predetermined arcuate extent.

6. A toy gun including a body having a barrel and a stock, a transverse shaft mounted in the stock, a rotary member turnably mounted on the shaft, and having a plurality of radially extending and circumferentially spaced lugs, one at a time of said lugs projecting above the stock to enable one end of an elastic band stretched from the outer end of the barrel to be engaged therewith, trigger means then engaging one of the other lugs to prevent rotation thereof with the pull of the band and arranged to be depressed to release the lug, and a member mounted with the trigger and moving into the path of rotation of one of the lugs after the trigger has been depressed to then limit the rotative movement of the lug member.

In testimony whereof I affix my signature.

JOSEPH B. FISHER.