May 3, 1949. G. M. STOPPER 2,469,016

GRAVITY FED DISK MAGAZINE

Filed Dec. 12, 1946 2 Sheets-Sheet 1

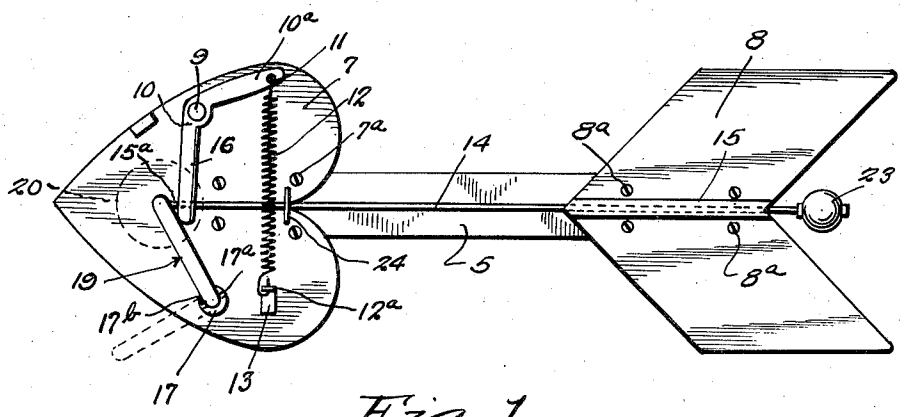


Fig. 1

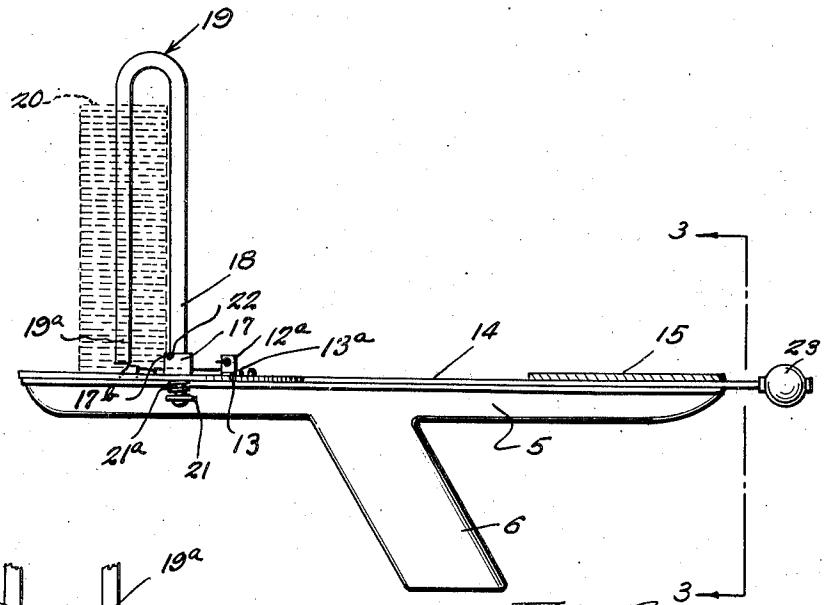


Fig. 2

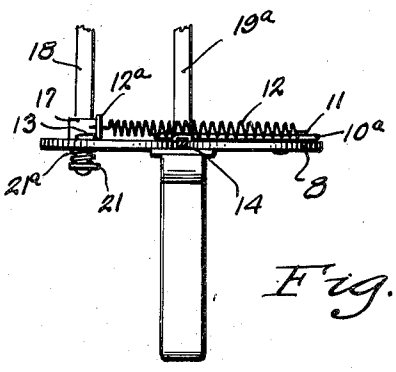


Fig. 3

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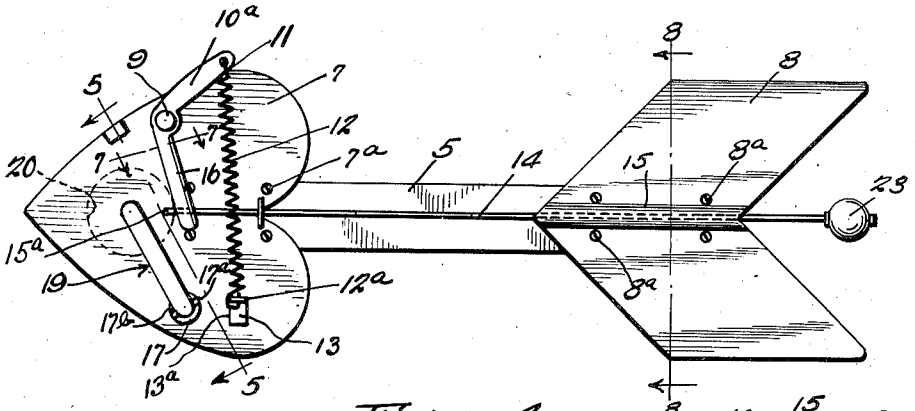


Fig. 4.

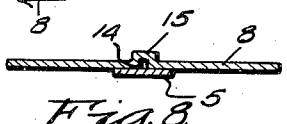


Fig. 8.

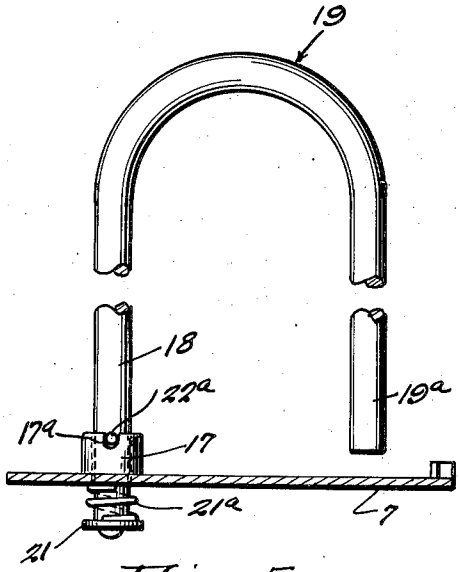


Fig. 5.

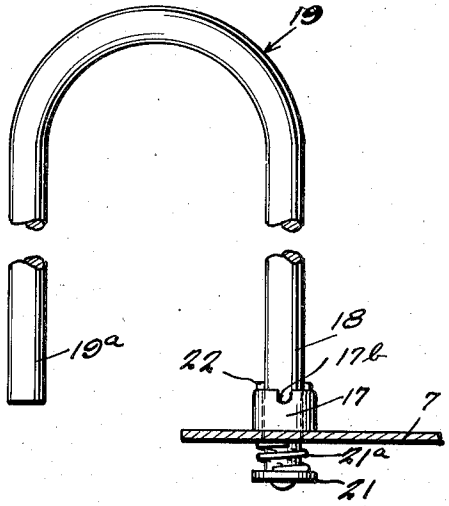


Fig. 6.

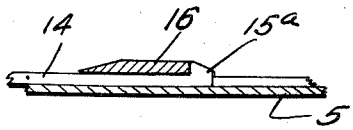


Fig. 7.

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UNITED STATES PATENT OFFICE

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GRAVITY FED DISK MAGAZINE

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Application December 12, 1946, Serial No. 715,752

5 Claims. (Cl. 124—47)

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This invention relates to new and useful improvements in toy guns and more particularly to a toy adapted to project cork or other discs.

The primary feature of this invention is to provide a device of the character referred to that is adapted to project the discs upon release of a striker mechanism.

Another important feature of this invention is to provide a device which reloads itself automatically upon retraction of said striker mechanism.

A further feature of this invention is to provide a device of the character referred to that is particularly adapted to project cork discs whereby said device may be used as a toy by children without in any way endangering said children or objects that said projectiles may contact.

A still further feature of this invention is to provide a toy gun of the class described that is neat and attractive in appearance, strong and durable in construction, efficient and reliable in operation, relatively inexpensive to manufacture and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout and in which:

Figure 1 is a top plan view of the toy gun constructed in accordance with the present invention showing the striker in a forward or released position;

Figure 2 is a side elevational view thereof with parts shown in section;

Figure 3 is an end view taken in the direction of line 3—3 of Figure 2;

Figure 4 is a top plan view of the device showing the striker in a rearward or retracted position;

Figure 5 is an enlarged sectional view taken on the line 5—5 of Figure 4;

Figure 6 is a similar view of Figure 5 with the feeding mechanism in an outwardly swung reloading position;

Figure 7 is an enlarged sectional view taken on the line 7—7 of Figure 4, and

Figure 8 is a sectional view taken on the line 8—8 of Figure 4.

Referring now to the drawings in detail, wherein for the purpose of illustration I have disclosed a preferred embodiment of the invention, the numeral 5 represents a stock having a flat upper face.

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Inclined downwardly and rearwardly from the center of said stock is a hand-grip 6.

Secured to the forward end of stock 5 by screws or the like 7a is a preferred heart-shaped platform 7, and secured to the rear end of stock 5 by screws or the like 8a is a preferably arrowhead-shaped tail or rear platform 8.

Pivotally connected at 9 to platform 7 is a bell-crank or substantially L-shaped striker arm 10, one end 10a of said striker arm having attached thereto one end 11 of a coil spring 12 extending transversely across platform 7 and the opposite end of said spring 12 engaging the upper eye end 12a of an L-shaped bracket 13 secured to platform 7.

A striker operating rod 14 extends longitudinally on the upper face of stock 5, the rear portion of said rod extending in a longitudinal groove 15 formed in the underside of rear platform 8, and the forward end of said rod bearing on the forward platform 7.

An upwardly extending tongue 15a is formed at the forward end of said operating rod 15, said tongue being adapted to engage the end 16 of striker arm 10.

A socket 17 having a pair of notches 17a and 17b in its upper edges at diametrically opposite sides thereof extends upwardly from platform 7, and workable in said socket is the lower arm 18 of a substantially inverted U-shaped feeder designated generally at 19.

The opposite arm 19a of said feeder is adapted to hold a plurality of circular, preferably cork, disks 20 in stacked relation, and the lower end of said arm 19a is spaced slightly above platform 7, thereby allowing the lower disc on said arm to rest on said platform without contacting the lower end of arm 19a.

A washer 21 is suitably secured to the lower end of arm 18 which extends downwardly below platform 7 and loosely carried on said arm 18 between washer 21 and the lower face of platform 7 is a coil spring 21a.

Lugs 22 and 22a extend laterally from arm 18 on diametrically opposite sides of said arm and are adapted to fit in notches 17b and 17a respectively for locking said feeder 19 in a normal position as shown in Figure 1, against swinging movement.

To reload the feeder, the arm 19a of said feeder is swung outwardly and additional discs 20 are inserted upwardly on said arm, and said arm upon being released swings inwardly by virtue of tension in spring 21a and lugs 22 and 22a re-

engage notches 17*b* and 17*a*, thereby locking said feeder in its normal position.

To operate the device for projecting discs 20 a finger gripping knob 23 carried by the rear end of operating rod 14 is pulled rearwardly, the operating rod also being pulled rearwardly and being guided by a guide plate 24 extending upwardly from platform 7.

The forward end of said operating rod also pulls rearwardly the striking end 16 of striker arm 10, said striker arm being in tension due to coil spring 12.

The finger knob is then released causing the forward end 16 of said striker arm 10 to swing forwardly with great force striking the bottom disc lying on platform 7, said disc being projected forwardly and outwardly from said platform 7, the weight of said discs above said bottom disc being negligible and in no way preventing direct projection of said bottom disc.

The next disc then falls by gravity onto platform 7 replacing the projected disc and thereby permitting automatic projection of said discs as rapidly as the operating rod can be pulled rearwardly.

Upon firing of the last disc on arm 19*a* the feeder is reloaded as previously described.

In view of the foregoing description taken in conjunction with the accompanying drawings it is believed that a clear understanding of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and by the scope of the appended claims.

I claim:

1. A toy comprising a stock having a hand grip, a forward striker-supporting platform carried by said stock at one end thereof, and a U shaped feeder mechanism having one leg pivoted on said platform, the remaining leg of said feeder supporting a plurality of stacked discs, said last-mentioned leg of said U shaped feeder being spaced above said platform and being adapted to swing outwardly relative to said platform for reloading discs thereon.

2. A toy comprising a stock having a hand grip, a striker-supporting platform carried by said stock, a socket carried by said platform and projecting upwardly therefrom, a substantially U shaped feeder mechanism having one leg rotatable in said socket, the remaining leg of said feeder mechanism being spaced above said platform and being adapted to support a plurality of discs, the last-mentioned leg of said feeder mechanism being mounted for pivotal movement outwardly relative to said platform for reloading discs thereon, and spring means for releasably locking the last-mentioned leg of said feeder mechanism in a position above and aligned with said platform.

3. The combination of claim 2 wherein said last-mentioned means includes a coil spring.

4. A toy comprising a stock having a hand grip, a striker-supporting platform carried by said stock at one end, a socket carried by said platform, a substantially U shaped feeder mechanism including a pivot leg and a disc holding leg, said platform having an opening communicating with said socket, said pivot leg engaging said socket and projecting outwardly from said opening, locking lugs carried by said pivot leg bearing upon said socket, said socket having notches engageable with said lugs to hold said feeder mechanism in a normally locked position with said disc holding leg aligned with said platform, and means for yieldingly retaining said lugs in said notches.

5. The combination of claim 4 wherein said last-mentioned means includes a coil spring embracing said pivot leg adjacent the free end thereof.

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