

June 14, 1949.

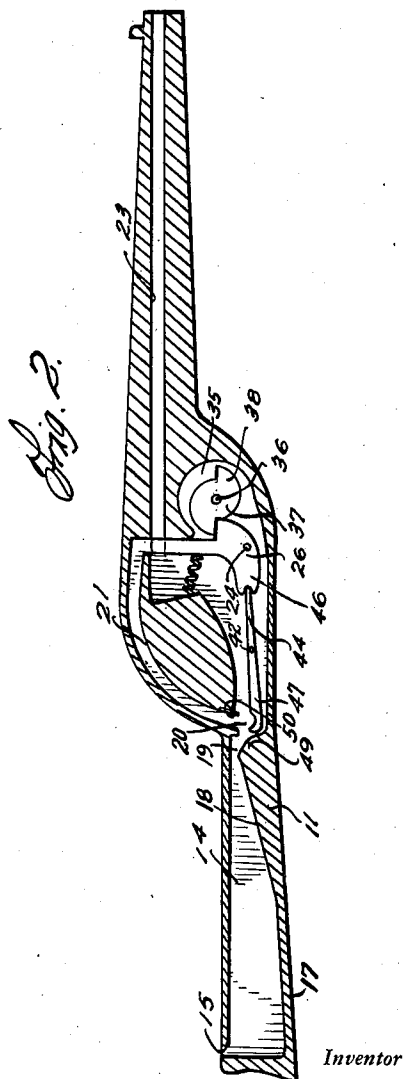
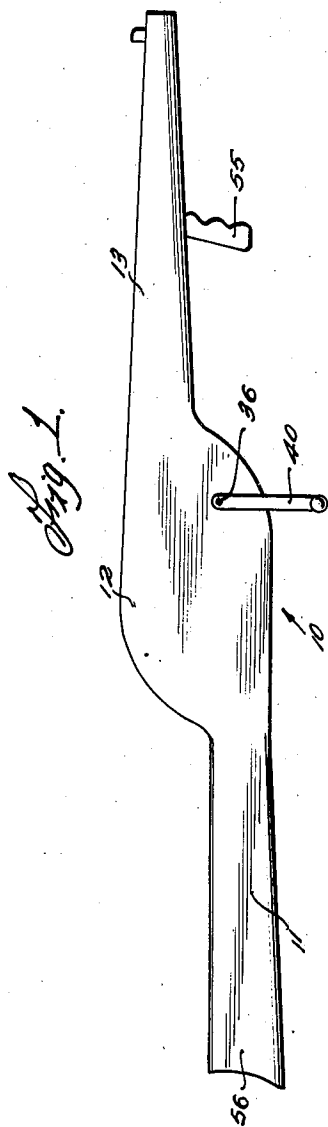
W. O. BLAKE

2,473,272

TOY MACHINE GUN

Filed Nov. 18, 1944

2 Sheets-Sheet 1



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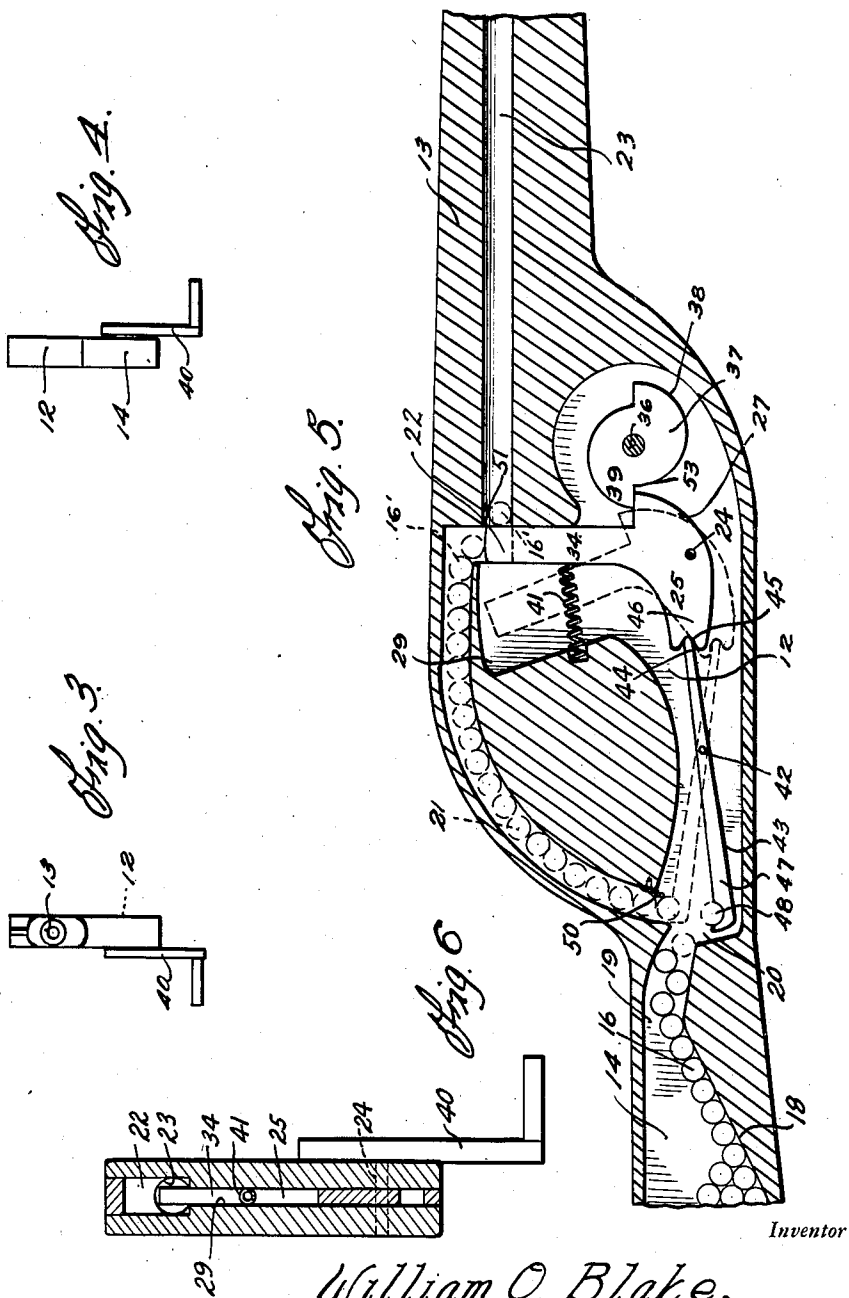
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UNITED STATES PATENT OFFICE

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TOY MACHINE GUN

William O. Blake, Newport, Wash.

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2 Claims. (Cl. 124—27)

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This invention relates to toys and has for its object to provide a toy machine gun having very rapid firing facilities.

Another object of this invention is to provide a gun having automatic self-reloading facilities.

Another object of this invention is to provide a gun in which the projectiles are caused to be delivered to the barrel through pressure on on-coming charges.

A further object of the invention is to provide a gun having an upright projectile feed channel through which the projectiles are forced through a hammer operated lever.

A still further object of the invention is to provide a gun having a cam and spring actuated hammer.

Another object of the device is to provide a gun formed in two longitudinal sections, machined or moulded out for forming the interior structural cavities in which the operating mechanism is confined.

Other features and advantages will become more apparent from the following description and the accompanying illustrative drawings, in which:

Figure 1 is a side elevational view of my toy gun.

Figure 2 is a longitudinal elevational view of one-half section of the gun.

Figure 3 is a front end elevation thereof.

Figure 4 is a rear end elevation.

Figure 5 is an enlarged elevation of one section of the stock end of the gun; and

Figure 6 is a sectional view taken on a vertical section line immediately to the rear of the barrel and looking toward the muzzle of the gun.

Like reference characters indicate like parts throughout the following specification, and in the several views in the drawings in which 10 indicates my improved toy machine gun, which includes a stock 11, an enlarged hammer and loading portion 12, and a barrel 13. The stock 11 is hollowed out to provide a projectile storing chamber 14 having an opening 15 to receive the projectiles, which may preferably be either marbles, or shot 16. The bottom wall 17 of the chamber 14 inclines to form a ramp 18 leading to a reduced passage 19 into a loading compartment 20.

From the compartment 20 there is provided, in the enlargement 12, an arcuate cylindrical passageway 21, leading from the compartment 20 to a receptacle 22 aligning with the bore 23 of the gun barrel 13.

Pivotally mounted upon the pin 24 is the part 25 of an angularly formed hammer 26, said part 25 being extended forward to form an arcuate belly 27. The head portion of the hammer moves back

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and forth in the recess 29, which recess is of narrower width in cross section than that of the passage 21 and the shot 16, whereby the same cannot fall back into the recess 29 or out of the receptacle 22 into which the ammunition falls ready for projection by the hammer.

In a recess 35 is pivotally mounted, a shaft 36, and an actuating wheel 37, provided with projecting cams 38 and 39. Keyed on the outwardly projecting end of said shaft 36 is a crank handle 40, by which the wheel 37 is rotated. As this wheel is rotated the cams 38 and 39 alternatively operate against the belly 27, which action drives the hammer 26 rearwardly and, as the cam passes from said belly, the spring 41, which has been compressed by the rearward movement of the hammer against which it seats, comes into action and drives the hammer end 34 forcibly against the shot in the receptacle 22.

Pivoted at 42 is a lever 43 the forward end 44 of which is seated in the recess 45 provided in the lower terminal 46 of the part 25 of the hammer, and the rear end 47 of lever 42 is provided with a pocket 48 for receiving one shot 16 from the ramp 49 of the compartment 20. The pocket 48 is movable in the substantially same arc as that of the lower part of passageway 21.

A leaf spring 50, normally bears against the lower shot in the passageway 21, and a smaller leaf spring 51 is provided in the bore 23 of the gun, adjacent the receptacle 22.

In operating the gun, when the crank 40 is turned the shaft 36 revolves wheel 37 causing the cams 38 and 39 alternately to drive the hammer 26 rearwardly against the tension of spring 41, and then as the cams pass the tip 53 of the belly cam 27, the spring drives the hammer end 34 against the shot in the receptacle 22 with sufficient force to drive it rapidly past spring 51, and out through the bore 23, the tension of spring 41 determining the distance to which the shot are driven. As the hammer 26 is again driven rearwardly and out of the path of the oncoming shot 16, that shot drops into the receptacle 22 ready for discharge. As the hammer member is driven rearwardly its end 46 is driven down, pressing the end 47 of lever 43 up causing the shot in the pocket 48 to push past spring 50, and into the passageway 21, thus supplying another shot in passage 21 for each one dropped therefrom.

Due to the two cams on wheel 37, two shots are fired with each revolution of the shaft 36, it being obvious that upon increasing the number of these cams an equal number of shots will be fired with each revolution. It is also obvious

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that the shaft 36 may be rotated through a clock spring instead of through manual operation. There is provided a depending hand grip 55 with which the gun may be supported at its barrel end, and by means of which the butt 56 of the stock 11 may be forced firmly and securely to the arm pit of the user in order that his right hand will be free to operate crank 40. In case the toy is to be used by a left handed child, it will only become necessary to change the crank handle to the reverse or left end of the shaft 36.

The stop spring 51 permits of aiming down without permitting the shot from rolling from the barrel. Every time the gun is pointed down the compartment 29 is automatically recharged with shot from the magazine 14.

The construction of the gun is such that it may be made entirely of wood with the exception of the three metal springs used therein, or it may be made entirely of metal. It may be formed in two longitudinal sections if desired in order that said sections may be either cast or pressed into formation and consequently manufactured at a minimum cost while producing a toy of maximum durability. Such sections may be secured together either by screws or bolts, or otherwise.

It is thought that persons skilled in the art to which the invention relates will be able to obtain a clear understanding of the invention after considering the description in connection with the drawings. Therefore, a more lengthy description is regarded as unnecessary.

Minor changes in shape, size and rearrangement of details and parts such as come within the purview of the invention claimed, may be resorted to in actual practice if desired.

Having now described my invention that which I claim to be new and desire to procure by Letters Patent is:

1. In a toy gun, a projectile feeding and projecting assembly including a magazine, a spring biased pivoted lever having a hammer end, a projectile-receiving recess at the breech end of

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the bore of a gun barrel, a chute communicating with said magazine and proportioned to receive a single row of projectiles, a second lever actuated by said spring biased lever for singly transferring said projectiles from said magazine into one end of said chute, the other end of said chute communicating with said recess to singly deliver projectiles when said hammer end is retracted from said recess, and means for intermittently retracting said spring biased lever.

2. In a toy gun, a projectile feeding and projecting assembly including a magazine, a spring-biased pivoted lever having a hammer end, a projectile-receiving recess at the breech end of the bore of the gun barrel, a chute communicating with said magazine and proportioned to receive a single row of projectiles, a second lever actuated by said spring-biased lever for singly transferring said projectiles from said magazine into one end of said chute, the other end of said chute leading into said recess for singly delivering projectiles when said hammer end is in one position, and means for intermittently retracting said hammer end.

WILLIAM O. BLAKE.

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