June 14, 1932. W. DASPIT 1,863,438

TOY MACHINE GUN

Filed Sept. 9, 1931

Fig. 1.

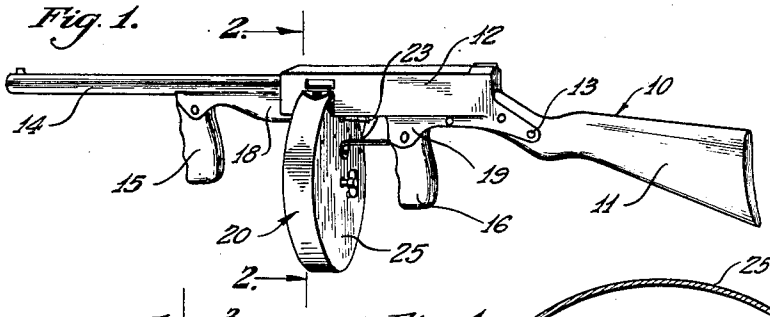


Fig. 2.

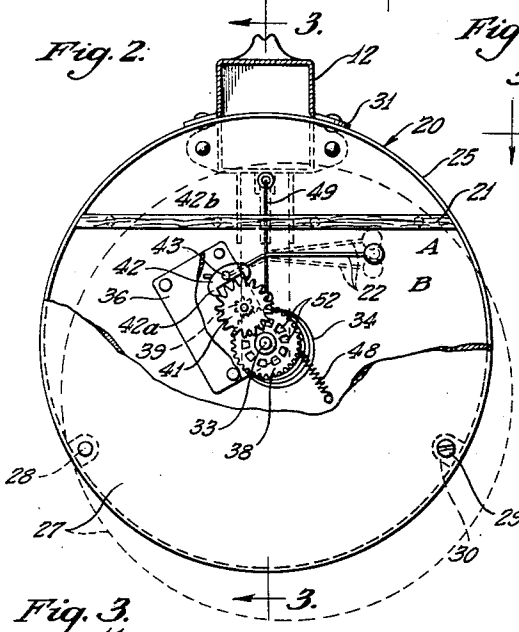


Fig. 4.

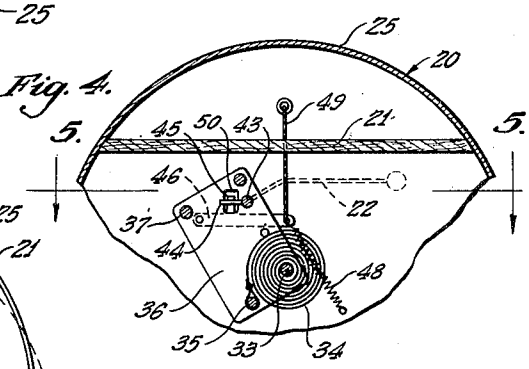


Fig. 5.

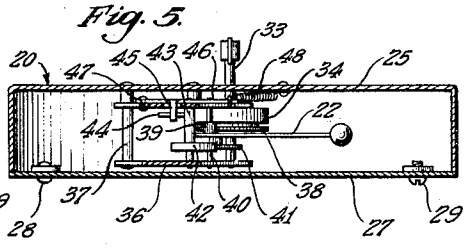


Fig. 3.

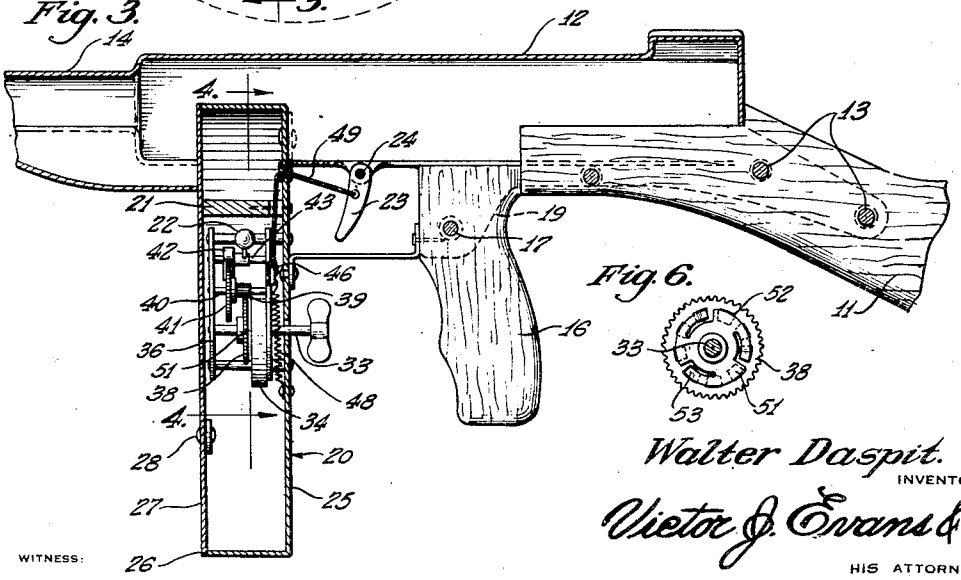


Fig. 6.

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WITNESS:

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UNITED STATES PATENT OFFICE

WALTER DASPIT, OF CHICAGO, ILLINOIS

TOY MACHINE GUN

Application filed September 9, 1931. Serial No. 561,950.

This invention relates to certain novel improvements in toy machine guns, and has for its principal object the provision of an improved construction of this character which will be highly efficient in use and economical in manufacture.

It is an object of this invention to provide a novel and amusing toy gun which in operation produces a series of audible sounds rapidly following each other in close succession and simulating the closely following succession of reports produced by a machine gun, sub-machine gun, or the like.

Another object of the invention is to provide novel and unique means to produce the above referred to closely following rapid succession of audible sounds or reports to effect the simulation of the reports of machine gun or the like.

Other objects will appear hereinafter.

The invention consists in the novel combination and arrangement of parts to be hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawing showing the preferred form of construction, and in which:

Fig. 1 is a perspective view of the invention;

Fig. 2 is a sectional view on line 2—2 in Fig. 1;

Fig. 3 is a sectional view on line 3—3 in Fig. 2;

Fig. 4 is a sectional view on line 4—4 in Fig. 3;

Fig. 5 is a sectional view on line 5—5 in Fig. 4; and

Fig. 6 is an elevational view of a detail of the invention.

Referring to the drawing, which illustrates a preferred and practical embodiment of the invention, the latter is indicated generally at 10 and includes a stock 11 to which is secured, as at 13, a breech 12 to which may be attached, in any suitable manner, or formed integrally therewith, as in the present instance, a barrel 14. Depending from the barrel is a finger grip 15 and a similar grip 16 depends from the breech 12, these grips being suitably attached, as at 17, to skirts such as 18 and 19 which are in the present instance integral with the barrel 14 and breech 12 respectively, though these skirts may be separate parts and suitably attached to the barrel and breech.

A casing 20 is provided and this casing is adapted to resemble the magazine of a machine gun. The casing 20 has extending therethrough a sounding board 21 against which a vibratory arm or knocker 22 strikes a series of rapidly following blows to produce a series of rapidly following audible sounds when mechanism in the magazine is set in operation by the trigger 23, in a manner to be described presently, said trigger being pivotally mounted on the breech 12, as at 24.

The magazine 20 includes a body 25 having an open side 26 over which is arranged a closure plate 27 that is pivotally connected to the body 25, as at 28, whereby the plate 27 may be moved from full to dotted line position of Fig. 2 to gain access to the mechanism in the magazine for repair of the latter or for other purpose. The plate 27 is latched to the body 25 by a screw 29 extended through a threaded opening in the plate into a corresponding opening in a lug 30 on the body 25. The body 25 is attached to lugs 31 projecting from the breech 12 as at 31, and to the grip 16 by a bracket 32.

Extending into the body 25 is a key wind shaft 33 to which is fixed a disc 51 that carries beveled cams or lugs adapted to ride over the face of the gear 38 that floats on the shaft 33 and to engage in apertures 52 in the gear 38. This mechanism is of a conventional spring motor type and includes a coil spring 34, one end of which is attached to the disc 51, the other end of said spring being anchored to a post 35 carried by a bracket 36 that is attached to the body 25 by posts 37, the spring wind shaft 33 being journaled in the bracket 36. The gear 38 meshes with a pinion gear 39 fixed on a shaft 40 that is journaled in the bracket 36. Also fixed to the shaft 40 is a ratchet 41. An escapement dog 42 is fixed on a rock shaft 43 that has its ends journaled in the bracket 36. It is therefore apparent that by turning the key on shaft 33 the lugs

53 on disc 51 will ride over the face of gear 38 and move into and out of the apertures 52 thereby to wind the spring 34 and since the gear 38 on shaft 33 meshes with the pinion 39 on shaft 40, tensioning of the spring will tend to rotate disc 51 and its lugs which engage in the apertures 52 to rotate gear 38, pinion 39 and shaft 40, this rotation of the parts being inhibited by the dog 42 which engages with the ratchet 41. Means now to be described and controlled by the trigger 23, are provided for rocking the dog 42 alternately clockwise and counterclockwise (Fig. 2) to permit step by step escapement or rotation of the ratchet and the shaft 43 to which is fixed the vibratory arm or knocker 22.

In this connection there is provided on the shaft 43 a pin 44 which is normally engaged by a stop arm 45 that works in a slot 50 in the bracket 36, said stop arm being carried by a lever 46 pivotally mounted on the bracket 36, as at 47, and said stop arm 45 being urged into engagement with the arm 44 by a spring 48 that has one end attached to the body 25 and the other end to the lever 46, whereby to keep the dog 42 engaged with the ratchet 41. Attached to the lever 46 is one end of a flexible element 49 which extends through an opening in the body 25 and has its other end connected to the trigger 23.

Operation: To use the toy gun the operator grasps the grips 15 and 16. By squeezing the trigger 23 the cord 49 will lift the lever 46 (Fig. 4) to rotate the same counterclockwise (Fig. 4) thereby lifting the stop arm 45 off the pin 44 that is carried by shaft 43, thereby permitting movement of shaft 43 and dog 42 thereon which movement is at this time brought about by the energy stored in spring 34 acting through disc 51 and its lugs, gear 38, pinion 39, and shaft 40 to rotate ratchet 41 (clockwise, Fig. 2) with the teeth of the dog 42 escaping thereover. As the ratchet revolves the tooth 42*a* of the dog is lifted off the ratchet teeth which rocks the dog and the shaft 43 (clockwise, Fig. 2) thereby moving the vibratory arm 22 from position A to position B, at which time the tooth 42*b* of the dog will engage with the ratchet teeth. The tooth 42*b* of the dog will then be raised off the ratchet, rocking the dog and shaft 43 counterclockwise (Fig. 2) and moving the arm 22 from position B to position A and causing the arm to strike the sounding board 21 to produce an audible sharp sound that resembles the report of a gun. Thus, continued oscillatory motion of the dog 42 and shaft 43 oscillates the arm 22 back and forth to produce a series of rapidly following sounds, thereby simulating the reports of a machine gun. The motion of the arm 22 will continue as long as the trigger is squeezed; release of the trigger causing spring 48 to pull lever 46 downwardly (Fig. 4) and bringing the stop arm 45 onto pin 44 to prevent motion of shaft 43 and vibratory arm 22.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

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

1. A toy gun comprising a movable sound producing element, a trigger, a mechanism controlled by the trigger to operate the sound producing element, a motor for said mechanism, and a gun body supporting the aforementioned parts.

2. A toy gun comprising a movable sound producing element, a sounding plate against which said element is adapted to strike, a finger operated element, a mechanism controlled by the finger operated element to operate the sound producing element, a motor for said mechanism, and a gun body supporting the aforementioned parts.

3. A toy gun comprising a vibratory sound producing element, a sounding plate against which said element is adapted to strike, a trigger, a mechanism controlled by the trigger to operate said element, a motor for said mechanism, and a gun body supporting the aforementioned parts.

4. A toy machine gun comprising a vibratory sound producing element, a sounding plate against which said element is adapted to strike, a trigger, a mechanism to vibrate said element, a motor for said mechanism, means controlled by the trigger to retain said element in ineffective position, and a gun body supporting the aforementioned parts.

In testimony whereof I affix my signature.

WALTER DASPIT.