

No. 859,562.

PATENTED JULY 9, 1907.

D. W. JOHNSON.

TOY GUN.

APPLICATION FILED MAY 17, 1907.

Fig. 1.

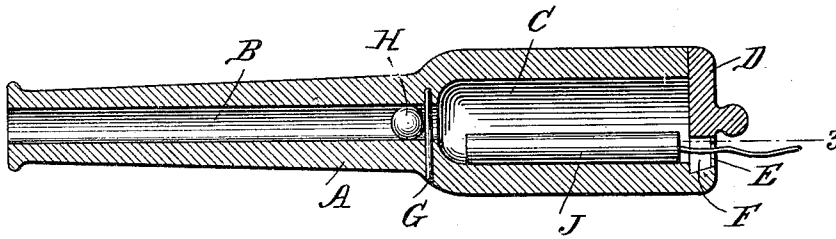


Fig. 2.

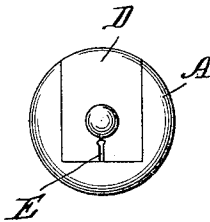
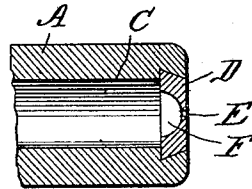


Fig. 3.



Witnesses

Joseph T. Brennan.
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UNITED STATES PATENT OFFICE.

DOUGLAS WILSON JOHNSON, OF CAMBRIDGE, MASSACHUSETTS.

TOY GUN.

No. 859,562.

Specification of Letters Patent.

Patented July 9, 1907.

Application filed May 17, 1907. Serial No. 374,274.

To all whom it may concern:

Be it known that I, DOUGLAS WILSON JOHNSON, a citizen of the United States, and a resident of Cambridge, in the county of Middlesex and State of Massachusetts, have invented new and useful Improvements in Toy Guns, of which the following is a specification.

My invention relates to the construction and operation of toy guns, and is particularly addressed to the production of a toy gun adapted to use ordinary fire crackers as ammunition.

In the drawings hereto annexed, Figure 1 is a longitudinal section of the gun embodying my invention and improvements; Fig. 2 is an elevation showing the breech thereof; and Fig. 3 is a horizontal cross section through the breech and breech block at the line 3 of Fig. 1.

The gun barrel A may be constructed of wood or metal, preferably of the latter. The barrel bore B is enlarged at C to form a gas chamber of liberal proportions, and in order that the gun may be employed to throw light projectiles such as a cork or wood ball as H, I provide a stop at the rear of the smaller forward portion of the bore such as the pin C which is inserted through the body of the gun and stands across the bore thereof forward of the gas chamber.

The breech block D may be movably mounted on the breech of the gun in any suitable manner; I prefer to make the breech block slide vertically in dovetail grooves in the gun barrel as shown in Fig. 3. The breech block D is slotted at E in its lower portion and is cut away at F so as to form a ventilation chamber just forward of the slot.

The operation of this device is as follows: A fire cracker J is inserted in the gas chamber C with its fuse protruding through the slot E in the breech block D, and if desired, the projectile H may be inserted in the barrel. The cracker J is set off in the usual manner. As the slot E has but little depth the ventilation cham-

ber F provides enough air to insure the complete burning of the fuse of the cracker. Experience has shown that unless some such chamber is provided there is liability of the flame slot of the fuse being smothered so that the gun misses fire. The slot E nevertheless is quite small so that a very small proportion of the gases of explosion are projected through this slot; the major portion of the effort due to generation of the gases of explosion being directed forward through the barrel of the gun. The enlarged gas chamber C makes the gun much more effective than would be the case if the bore were of uniform size throughout and moreover affords sufficient space for the explosion, so that flame or sparks will not be emitted either from the muzzle or the breech of the gun. This enlarged chamber serves as a momentary storage chamber for gases, so that the projectile receives a continuous increment of effort in its passage toward the nozzle of the gun.

The gun constructed aforesaid is a perfectly safe and convenient instrument for the explosion of fire crackers, and by its use a great deal of the danger due to the scattering of smoldering fire cracker fragments is avoided.

What I claim and desire to secure by Letters Patent is:

1. In a toy gun, the combination of a gun barrel, a slotted breech-block, the barrel bore enlarged at the breech to form a gas chamber, and provided with a stop forward of the gas chamber.

2. In a toy gun, the combination of a gun barrel, a slotted breech-block, the barrel bore enlarged at the breech to form a gas chamber, and provided with a stop forward of the gas chamber, the breech block formed with a ventilation chamber in advance of the slot therein.

Signed by me at Boston, Suffolk county, Massachusetts, this sixteenth day of May 1907.

DOUGLAS WILSON JOHNSON.

Witnesses:

ODIN ROBERTS,
JOSEPH T. BRENNAN.