No. 729,453. PATENTED MAY 26, 1903.

E. N. TUTTLE.

TOY CANNON.

APPLICATION FILED MAR. 15, 1901. RENEWED APR. 7, 1903.

NO MODEL.

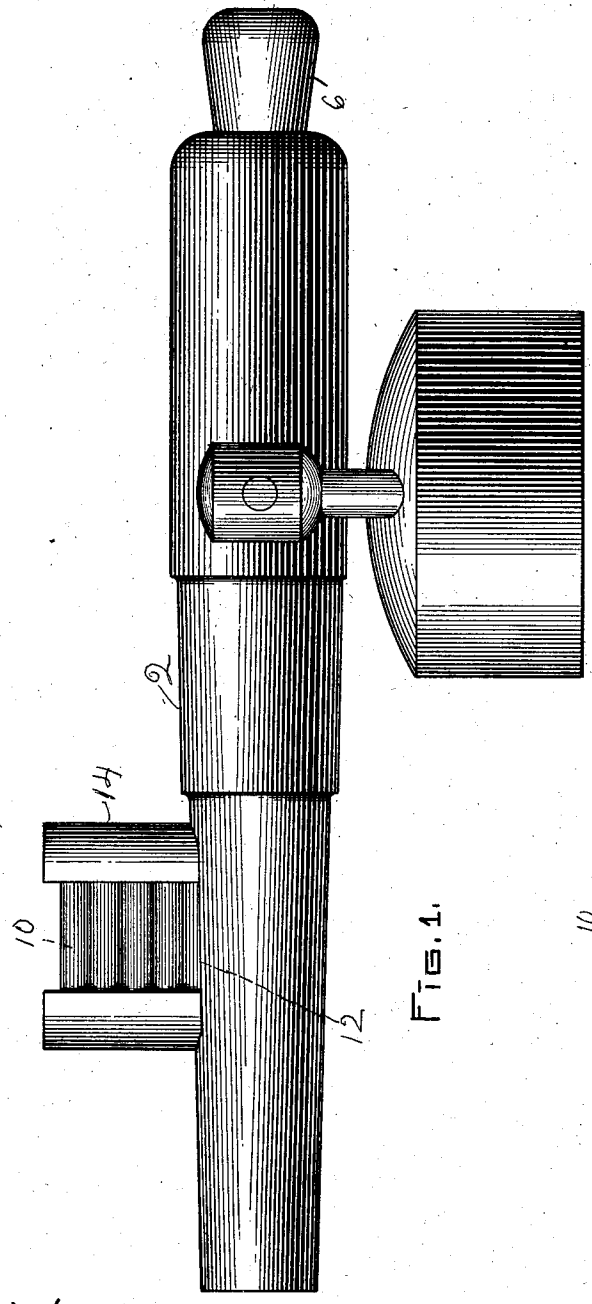


FIG. 1.

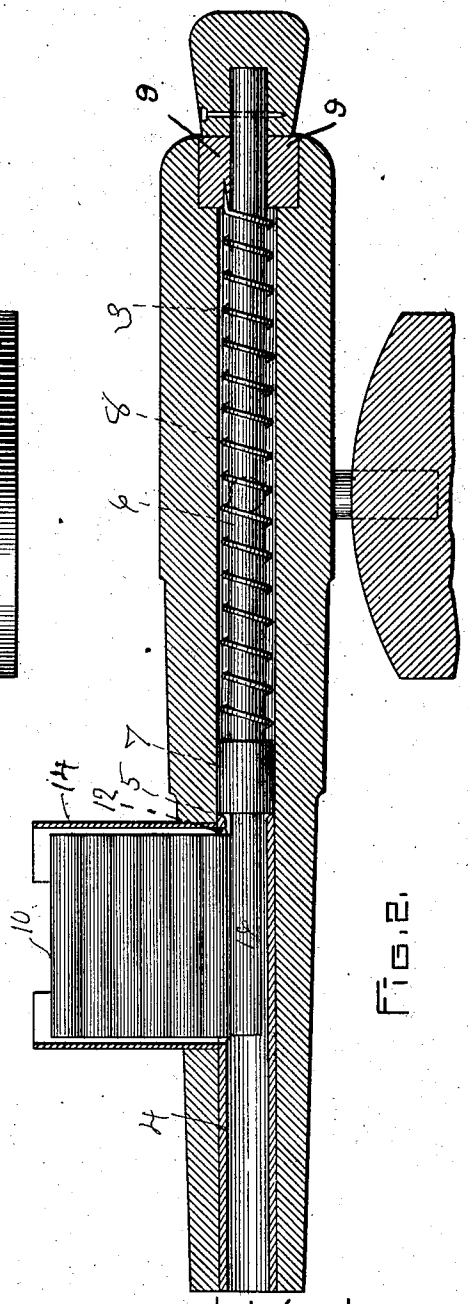


FIG. 2.

WITNESSES:

M. M. Tuttle

A. M. Tuttle

INVENTOR:

Edwin N. Tuttle

By E. N. B. Tuttle

his atty.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 729,453. Patented May 26, 1903.

UNITED STATES PATENT OFFICE.

EDWIN N. TUTTLE, OF BEVERLY, MASSACHUSETTS.

TOY CANNON.

SPECIFICATION forming part of Letters Patent No. 729,453, dated May 26, 1903.

Application filed March 15, 1901. Renewed April 7, 1903. Serial No. 151,539. (No model.)

To all whom it may concern:

Be it known that I, EDWIN N. TUTTLE, a citizen of the United States of America, residing at Beverly, county of Essex, Commonwealth of Massachusetts, have invented certain Improvements in Toy Cannon, of which the following, read in connection with the accompanying drawings, is a specification.

In the drawings, Figure 1 is a side elevation showing my invention, and Fig. 2 is a longitudinal central section.

In carrying out this invention the cannon-body 2 is provided with a longitudinal bore, in the present instance formed of the section 3, and a section 4 of reduced diameter, whereby is formed the shoulder 5. The plunger 6 has a section 7, fitting, approximately, in the section 3 of said longitudinal bore, and on the plunger is a spiral spring 8, having one end bearing on the plunger-section 7 and the other on a bushing 9. The projectiles 10 are introduced into the section 4 of said bore through a side opening 12, around which is fitted a magazine-case 14, adapted for holding a plurality of said projectiles piled one upon another, the bottom one normally resting on section 16 of said plunger. (See Fig. 2.) The plunger is of such a length that it projects rearwardly through the integral body portion of the cannon, and to this outer extension is secured a knob or handle 15, by means of which the plunger is withdrawn when it is desired to propel a projectile.

In operation the gunner lays hold of the ball end of the plunger and draws it backward. In this operation the spring 8 becomes contracted or compressed, and the section 16 of the plunger is withdrawn from under the projectiles, whereupon the projectiles drop down to a position where the bottom one stands in line with the outer end of section 16 of the plunger. The plunger is now released and is driven forwardly by spring 8 for discharging the projectile. The enlarged section 7 of the plunger going forwardly brings up against the shoulder 5 and with its section 16 again under the body of said projectiles already for the next operation. The section 16 of said plunger should be cut away or made smaller in diameter than the projectile used in order to avoid the possibility of engaging with the end of a projectile adjacent to the one being discharged; but another and more important reason for this is that it supports the projectile at a lower level, which operates to prevent the projectile from being tilted too much while the plunger is being drawn from under it.

The bore of the cannon is provided with a metallic bushing 5, which affords a smooth exit for the projectile and is a great advantage over the plain wooden bore heretofore in use, which bore was liable to indentation caused by contact of the expelled projectiles therewith.

I claim—

1. A cannon provided with supports on which the cannon may be swung, a bore in the cannon and a magazine communicating with the bore, of a tension-actuated plunger adapted to reciprocate in the bore, the plunger provided with a reduced front section, a central enlarged section and a main rear section, the main section adapted to project rearwardly outside of the cannon and means on the rearward extension whereby to directly operate the plunger.

2. A cannon provided with a bore and a magazine containing projectiles communicating therewith, of a plunger provided with a reduced front end adapted to project under the magazine, a bushing provided at the rear of the cannon, the plunger of such a length as to extend therethrough and outside of the cannon, and means on the extension whereby to directly operate the plunger.

3. A cannon provided with a bore and a magazine communicating therewith, of a plunger provided with an enlarged section, and adapted to reciprocate in the bore, the plunger of such a length as to extend rearwardly outside of the bore of the cannon, a bushing through which the plunger projects, a tension device, one end of which bears against the bushing and the other end bearing against the enlarged section and means on the extended end of the plunger whereby to withdraw the latter to the limit of its backward movement against the bore of the tension device.

4. A cannon provided with a bore, a magazine communicating with the bore, and a lining in the bore extending to a point therein behind the magazine, of a tension-actuated plunger operating in the bore, the plunger

provided with an enlarged section adapted to abut against the inner end of the lining whereby the movement of the plunger is limited in one direction.

5. A cannon provided with a bore, a magazine in communication therewith, and a tension-actuated plunger operating in the bore, the plunger having a reduced end adapted to lie under the magazine, an enlarged section adjoining this reduced end, and a stop adapted to be engaged by the enlarged section whereby to limit the movement of the plunger in one direction.

6. In a cannon provided with a bore having a lining therein, the combination with a skeleton magazine composed of plates or guides surrounding an elongated opening leading to the bore of the cannon, of a plunger provided with a reduced section lying beneath the opening and adapted to receive a projectile thereon, an enlarged section adjoining the reduced section and adapted to abut against the lining whereby to limit the movement of the plunger in one direction, the main section of the plunger adapted to extend rearwardly through and outside of the cannon, a spring adapted to be compressed between the enlarged central section of the plunger and the rear of the cannon, and means secured to the extended rear end of the plunger whereby to withdraw the plunger to its extreme limit of movement.

7. In a cannon provided with a bore having a lining therein, the combination with a skeleton magazine composed of plates or guides surrounding an elongated opening leading to the bore of the cannon, of a plunger provided with a reduced section lying beneath the opening and adapted to receive a projectile thereon, an enlarged section adjoining the reduced section and adapted to abut against the lining whereby to limit the movement of the plunger in one direction, the main section of the plunger adapted to extend rearwardly through and outside of the cannon, a bushing in the end of the cannon through which the plunger extends, a spring adapted to be compressed between the enlarged central section of the plunger and the bushing, and means secured to the extended rear end of the plunger whereby to withdraw the plunger to its extreme limit of movement.

8. A cannon provided with a bore, a magazine communicating therewith, a plunger located and operating in the bore, tension means surrounding the plunger to actuate it in one direction whereby to propel projectiles dropping into the bore from the magazine, the bore provided with a smooth metallic bushing whereby to reduce friction to a minimum and protect the material of which the cannon is composed.

Signed by me at Lynn, Massachusetts, this 14th day of March, 1901.

EDWIN N. TUTTLE.

Witnesses:
C. B. TUTTLE,
A. M. TUTTLE.