A. Hall,

Spring Gun,

No. 61,419. Patented Jan. 22, 1867.

Fig. 1.

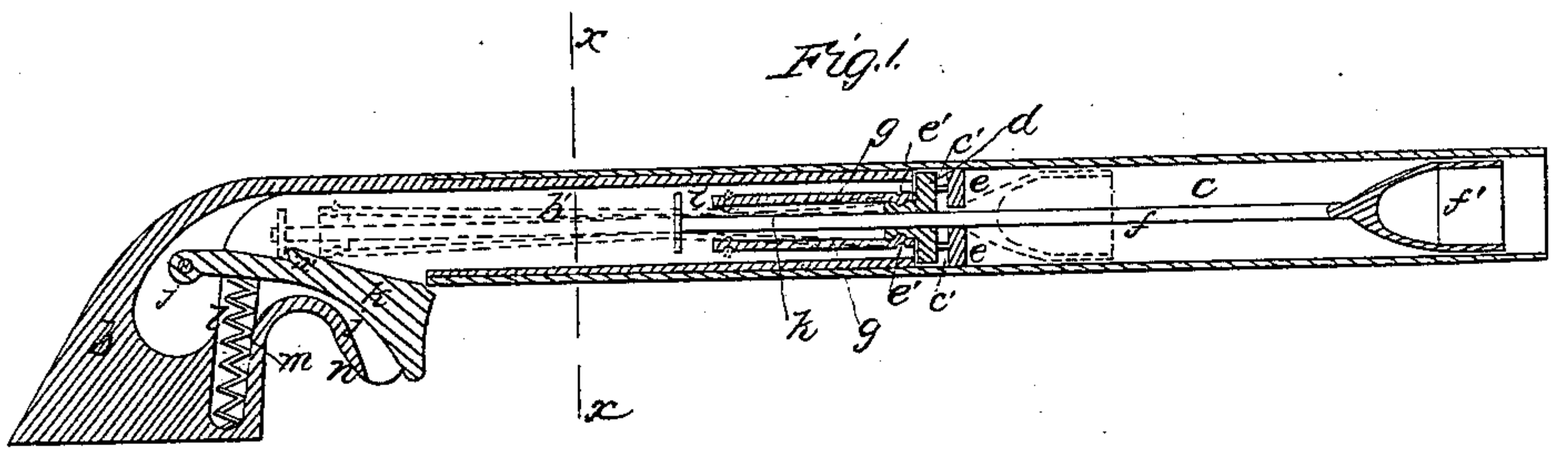


Fig. 2.

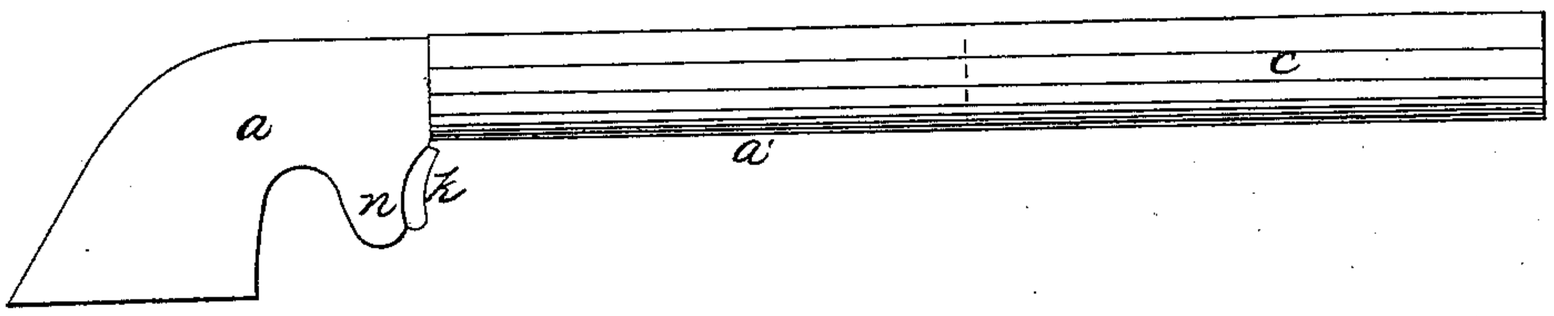
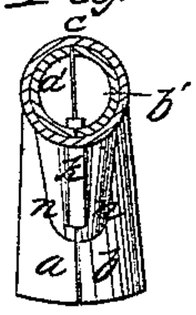


Fig. 3.



Witnesses:
A. de Clercq
Geo. Reed.

Inventor:
A. Hall

United States Patent Office.

ALBERT HALL, OF NEW YORK, N. Y.

Letters Patent No. 61,419, *dated January* 22, 1867.

TOY GUN.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, ALBERT HALL, of the city, county, and State of New York, have invented certain new and useful improvements in Spring Toy Guns; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a portion of this specification, in which—

Figure 1 is a longitudinal section of a spring toy gun, constructed according to my invention.

Figure 2 is a side view of the same.

Figure 3 is a transverse section of the same, taken in line *x x* of figs. 1 and 2.

Similar letters of reference indicate corresponding parts in all the figures.

This invention consists in the construction of the stock of a spring toy gun in two longitudinal halves or portions, confined together by the barrel thereof, whereby the care and labor required in the manufacture of this class of toys are very materially reduced. The invention further consists in a novel arrangement of a cylindrical India-rubber spring in relation with the piston, barrel, and trigger of the toy gun, whereby a very simple and effective means of propelling missiles is obtained.

To enable others to understand the construction and operation of my invention, I will proceed to describe it with reference to the drawings.

The stock of the toy gun is made preferably of cast metal, and is composed of two longitudinal sections, marked respectively *a* and *b*, and placed side by side, as shown more clearly in fig. 3. The forward portion of the stock thus formed is made tubular, and of cylindrical form, as at *a' b'*. The barrel *c* consists of a cylindrical tube of tin or other suitable sheet metal or material, and has its rearmost portion fitted tightly upon the cylindrical forward part, *a' b'*, of the stock, (as represented more clearly in figs. 1 and 2,) in such manner as to hold the two longitudinal sections of the stock firmly and securely together, at the same time that it is itself properly fixed upon the said stock. Each of the halves or sections *a* and *b* has formed in each of the opposite innermost edges of its semi-cylindrical forward portion, *a'* or *b'*, as the case may be, and near the forward extremity thereof, a notch or recess, *c'*, in such a way that when the aforesaid sections are secured together, as just hereinbefore explained, slots will be formed opposite each other in the aforesaid forward end of the stock, into which are fitted the opposite sides or ends of a block, *d*, as represented in fig. 1. This block *d* is furnished with a central rearwardly projecting extension, *d'*, of cylindrical shape, and formed centrally through the said block *d*, and its extension *d'* is a circular slot. The forward end of each of the sections *a* and *b* is covered by a transverse brace or bar, *e*, cast or formed thereon, and has formed in its edge a semicircular notch in such manner that when the two sections are secured in place a cylindrical slot will be formed thereby in line with the central slot just mentioned of the block *d*. The piston or sliding-stem which propels the missile from the barrel is marked *f*. This piston has a cup, *f'*, formed upon its forward end, and is passed longitudinally through the slots just mentioned in the forward end of the stock *a b*, and in the block *e*, and has placed around it, in rear of the said block *e*, a cylindrical spring, *g*, of India rubber or other similar elastic material, the forward end of which is firmly attached to the extension *d'* of the block *e* by being bound tightly thereto with wire, as shown at *e'*; the rearmost end of the said spring being secured in the same manner to a cylindrical block, *h*, attached to the piston *f*, near the rearmost end thereof. The said rearmost extremity of the piston *f* has secured transversely upon it a small circular plate or stud, *i*. Formed in the flat or inner surface of the rearmost part of each of the sections of the stock *a b* is a shallow recess, *j*, in the rearmost end of which is pivoted the trigger *k*, either by means of a short cylindrical spur formed upon one of the sections and passing through a suitable hole in the rear end of the trigger *k*, or by means of a similar spur formed upon the trigger and fitted into a socket of corresponding shape in one of the sections. Also formed in each of the said sections, and below the trigger *k*, is a groove, *l*, in which is placed a small spiral spring, *m*, which presses the trigger upward with its forward end projecting from the guard *n*, one-half of which is formed upon each of the sections of the stock. When the said sections are fitted together, as hereinbefore explained, the recesses *j* constitute in fact a slot in which the trigger *k* with its spring *m* is situated.

In using the toy the piston *f* is pushed back or downward in the barrel and forward part of the stock by means of a rod or stick inserted at the muzzle of the barrel until the plate or stud *i* catches in the notch *n'*

of the trigger, which thus holds the said piston back, as represented in red lines in fig. 1, the cylindrical India-rubber springs *g* being elongated, as shown by the said red lines. The missile is then dropped into the barrel and falls into cup *f'*, whereupon, by pulling the trigger *k* downward and backward, it is withdrawn from the stud *i*, and the contraction of the cylinder spring *g* forces the piston *f* forward, and thus ejects the missile from the barrel *c* with the required degree of force and velocity.

What I claim as new, and desire to secure by Letters Patent, is—

1. The construction of the stock of a spring toy gun in two longitudinal halves or sections, *a b*, secured together by the barrel *c*, substantially as herein set forth.

2. The cylindrical India-rubber spring *g*, arranged in relation with the piston *f*, barrel *c*, and trigger *k*, substantially as herein set forth for the purpose specified.

A. HALL.

Witnesses:

G. W. REED,

W. MORRIS SMITH.