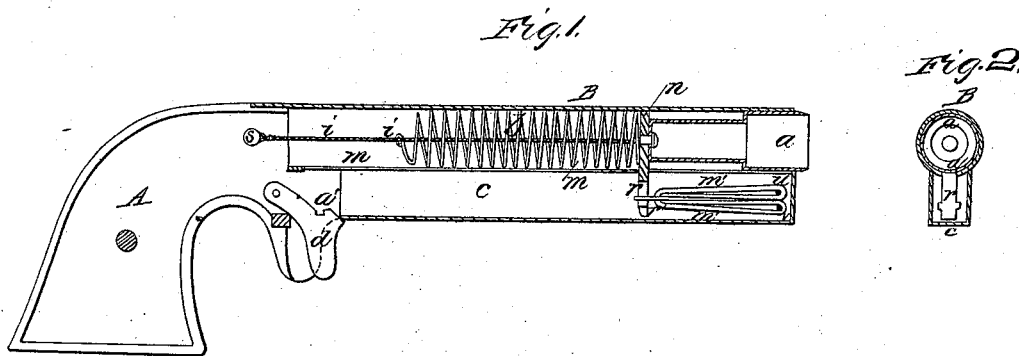


A. Hall,
Toy Spring-Gun,
N^o 55,089. Patented May 29, 1866.



Witness:
J. W. Cornly
Attorney

Inventor:
A. Hall

UNITED STATES PATENT OFFICE.

ALBERT HALL, OF NEW YORK, N. Y.

TOY SPRING-GUN.

Specification forming part of Letters Patent No. 55,089, dated May 29, 1866.

To all whom it may concern:

Be it known that I, ALBERT HALL, of the city, county, and State of New York, have invented a new and useful Improvement 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 annexed drawings, making a part of this specification, in which—

Figure 1 is a longitudinal section, and Fig. 2 a transverse section taken in the line *xx* of Fig. 1.

Similar letters of reference indicate corresponding parts in both figures.

This invention consists in a novel and cheap construction of a spring toy gun, whereby it is made more durable and to present a neater appearance than those heretofore devised.

To enable those skilled in the art to understand the nature and operation of my invention, I will proceed to describe it with reference to the drawings.

A represents the stock, which may be made of one or more pieces of wood or metal, and to the forward end of which are secured the barrel B and the tubular case C, which is situated immediately underneath the barrel. The interiors of the barrel B and of the case C communicate with each other by means of a longitudinal slot, *m*, extending nearly their whole length.

a is the cup or receiver in which the torpedo or other missile is placed, and is inserted loosely in the barrel, so as to slide freely therein. Secured upon the rearmost end of this receiver is a flat plate or block, *n*, the lower end, *r*, of which is made narrow and passes down through the slot *m* into the case C.

Extending from a transverse pin, *s*, in the stock A to the rear end of the cup *a* is a string or cord, *i*, which prevents the said cup from being thrown out from the nozzle of the barrel. This string *i* passes through the coiled wire *b*, which is placed loosely in the barrel behind the cup *a*, and which is equivalent to an expanding and contracting tube for retaining the string *i* and preventing it from falling through the slot *m* and thus becoming entangled. It is not necessary that this coiled wire should extend the whole length of the space behind the cup *a*, and it is accordingly made considerably shorter than the said space, and is loose and free within the barrel when the cup *a* is in the position represented in Fig. 1.

m' is the spring that operates the cup *a* to

project the charge, and consists of an endless band of india-rubber. This band, being folded as shown in Fig. 1, is passed through a staple, *r'*, attached to the lower end, *r*, of the plate *n*, and has its two loops placed upon two transverse pins, *u v*, situated in the forward end of the case C in such a way that the band will draw the cup *a* forward to the nozzle of the barrel.

d is the trigger, pivoted in the stock A and pressed forward by a small india-rubber or other suitable spring, *n'*. A notch, *a'*, is formed in the upper side of the trigger in such a way that when the cup *a* is forced back to the rear of the barrel the lower extremity, *r'*, of the plate *r* will catch into it, so that the said cup will be held back in the rearmost part of the barrel until released by pulling the trigger, which causes the notch to lose its hold upon the lower extremity, *r'*, of the plate *r* aforesaid.

It should be mentioned that, while the cup is cylindrical in shape, its rearmost portion is of less diameter than its forward part, in order to better accommodate the tip of the torpedo, and thus insure its more accurate flight when expelled therefrom.

When this toy gun is to be used, the cup *a* is forced back to the rearmost end of the barrel by inserting a ramrod into the same, the notch *a'* of the trigger catching hold of the lower extremity, *r'*, of the plate *r* and holding the same, as just hereinbefore set forth, the india-rubber band *m* being stretched when the cup is in this position. The torpedo or other missile is then passed down the barrel into the cup *a*. On pulling the trigger it releases the said cup, which is thrown forward by the retraction of the india-rubber spring *m'*, but is prevented by the spring *i* from leaving the barrel. This sudden and forcible forward motion of the cup projects the torpedo or other missile from the barrel to a distance proportioned to the elasticity or retractive force of the india-rubber spring *m'*.

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

The coiled wire *b*, cord *i*, plate *r*, and spring *m'*, arranged and operating in relation with the barrel B and case C as herein shown and described.

A. HALL.

Witnesses:

A. LE CLERC,
J. W. COOMBS.