

UNITED STATES PATENT OFFICE.

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SPRING-GUN.

SPECIFICATION forming part of Letters Patent No. 441,512, dated November 25, 1890.

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To all whom it may concern:

Be it known that I, GEORGE W. SEEBACH, of the city, county, and State of New York, have invented a new and Improved Toy Gun, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved toy gun which is simple and durable in construction and has its follower actuated by means of springs, the recoil of which and of the follower is taken up so as to prevent breakage and rapid wear of the parts.

The invention consists of a barrel having a bore and slots leading to the bore, a follower adapted to travel in the said bore and slots, springs connected with the said follower, and a recoil-spring held on the said barrel and adapted to be engaged by the follower.

The invention also consists in certain parts and details and combinations of the same, as will be described hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the improvement with parts in section. Fig. 2 is a longitudinal section of the same on the line $x x$ of Fig. 1. Fig. 3 is an end view of the improvement, and Fig. 4 is a transverse section of the same on the line $y y$ of Fig. 2.

The improved toy gun is provided with a barrel A, held on a suitable stock B and provided with a bore C, adapted to receive the ball D or other projectile to be fired by the gun. Into the bore C lead from opposite sides of the barrel A two slots E, in which is adapted to travel the follower F, formed of a cross-bar provided on its outer ends with eyes F', through which are passed the ends of rubber springs G, each having a head G' resting on one side of the eye F', as is plainly shown in Fig. 1. The outer ends of the springs G are passed into and secured in eyes H', formed on a ring H, secured to the outer end of the barrel A, as is shown in Figs. 1, 2, and 3. The outer ends of the springs are held in the eyes H' by means of set-screws I screwing into the said eyes against the ends of the rubber

springs G. The latter also pass between the eyes F' and H' through eyes J', formed on a ring J, secured on the barrel A at or near the outer ends of the slots E. Against the ring J presses one end of a spring K, coiled on the barrel A and projecting rearwardly to take up the recoil of the follower F, as hereinafter more fully described. The rear ends of the slots E lead into a transversely and downwardly extending recess E', in which the follower is passed when moving into position ready for firing.

In the bottom of the barrel A, near the rear end of the bore C, is arranged a trigger L, pivoted at L' and provided on its free end with an upwardly-projecting lug L², adapted to engage the under side of the transverse bar of the follower F. The trigger is also provided with the usual finger-piece L³, extending into a suitable guard N, held on the under side of the barrel and the stock B. The shoulder O, against which the cross-bar of the follower abuts when moved into position ready for firing, is preferably lined with sheet metal, so as to prevent wear of the shoulder.

The operation is as follows: When the follower F is in its outermost position, the tension of the springs G is relaxed and the follower stands or abuts against the free end of the coiled spring K. When it is desired to load the gun, the operator pulls the follower F rearward by taking hold of the eyes F', so as to move the cross-bar back through the slots E into the recess E' to abut against the shoulders lined with metallic strips O. The ball D or other projectile is then introduced into the open end of the bore, so as to roll down onto the transverse bar of the follower, which interrupts the inward movement of the ball. When the operator is ready to fire, he levels the gun, then pulls on the trigger, so that the projection L² is swung upward, lifts the transverse bar of the follower off the shoulders O, and the tension of the springs G then draws the follower outward, so that the ball D is fired through the bore. The follower in its rapid outward movement flies against the free end of the spring K, so that the latter is slightly compressed, but prevents the follower from passing farther outward to the ends of the slots E. Thus the recoil of the springs G, as well as of the fol-

lower F, is taken up and breakage and rapid wear of the moving parts are prevented. The tension of the springs G may be increased by loosening the set-screws I and drawing the said springs still farther out through the eyes H', and then screwing up the set-screws I against the said rubber springs. In case one of the springs G breaks a new one can readily be inserted by first passing it through the eyes F', so that the head G' abuts against the eye, and then passing the spring through the eye J' and through the eye H' to fasten the spring therein by the set-screw I. It is understood that the trigger L always hangs downward in its normal position, so as not to accidentally discharge the gun when the follower is in the recess F'.

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

1. A toy gun comprising a barrel having a bore, slots leading to the bore at opposite sides of the barrel, and a transverse recess at the rear ends of the slots, a follower adapted to travel in the said bore and slots and to pass into the said recess, springs connected with the said follower, and a recoil-spring surrounding the said barrel and adapted to be engaged by the said follower, substantially as shown and described.

2. In a toy gun, the combination, with a barrel having a bore and slots leading to the said bore at opposite sides of the barrel, of a follower extending transversely and passing through the said slots and the said bore, springs connected at their inner ends with the outer ends of the said follower, a ring having eyes through which pass the outer ends of the said springs, and screws screw-

ing into the said eyes for fastening the outer ends of the said springs, substantially as shown and described.

3. In a toy gun, the combination, with a barrel having a bore and slots leading to the said bore at opposite sides of the barrel, of a follower extending transversely and passing through the said slots and the said bore, springs connected at their inner ends with the outer ends of the said follower, a ring having eyes through which pass the outer ends of the said springs, screws screwing in the said eyes for fastening the outer ends of the said springs, and a trigger pivoted in the said barrel and provided on its free end with an upwardly-projecting lug adapted to engage the said follower, substantially as shown and described.

4. In a toy gun, the combination, with a barrel having a bore and slots leading into the said bore from opposite sides of the barrel, of a follower extending through the said slots and bore, springs connected with the said follower at its outer ends, a ring secured on the outer end of the said barrel and provided with eyes in which the outer ends of the said springs are secured, a second ring held on the said barrel and provided with eyes through which pass loosely the said springs, and a recoil-spring held on the said barrel and resting at one end against the said ring, the other end being adapted to be engaged by the said follower, substantially as shown and described.

GEORGE W. SEEBACH.

Witnesses:

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C. SEDGWICK.