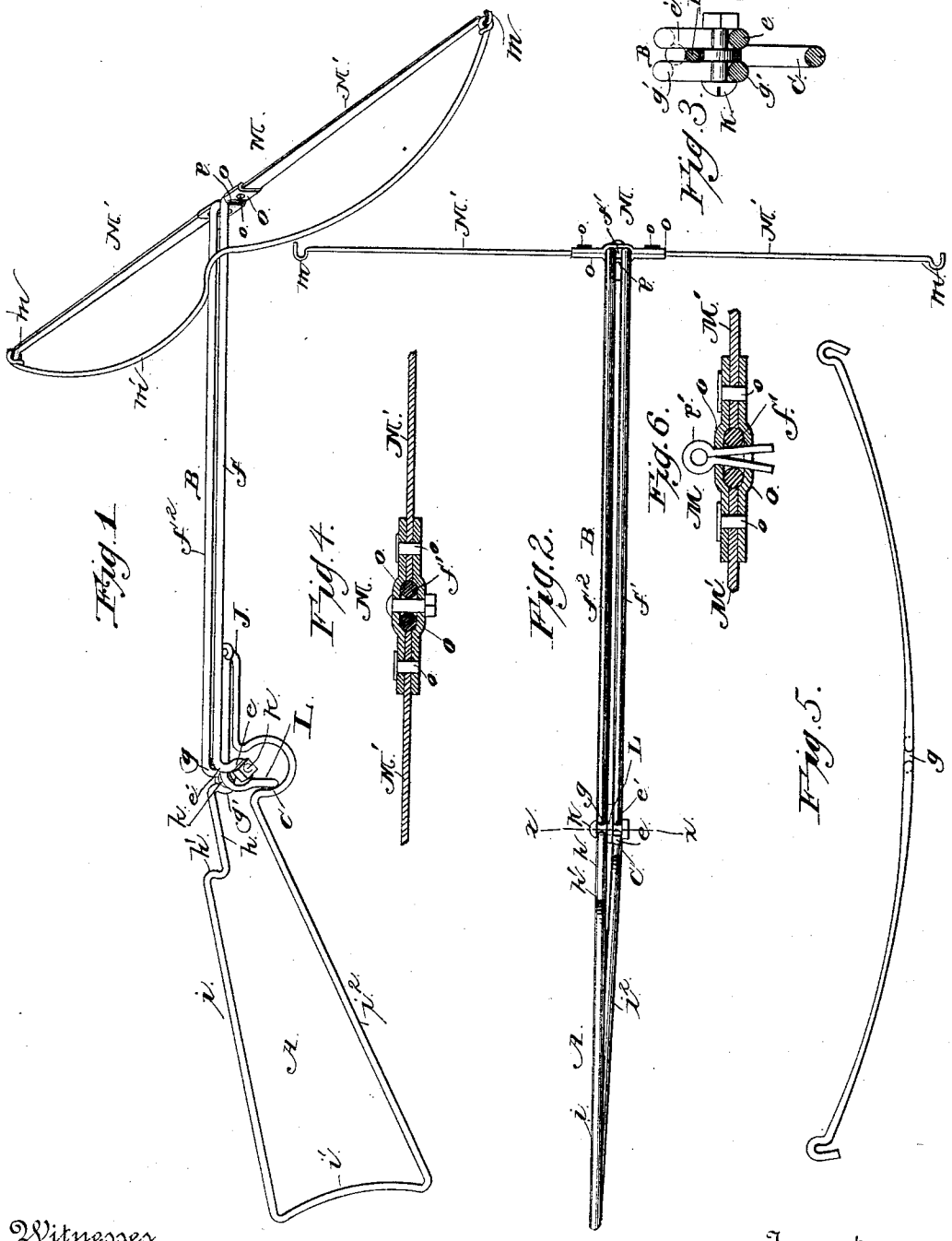
(No Model.)

J. G. NEWBURY.

TOY GUN.

No. 348,860. Patented Sept. 7, 1886.



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TOY GUN.

SPECIFICATION forming part of Letters Patent No. 348,860, dated September 7, 1886.

Application filed March 3, 1886. Serial No. 193,844. (No model.)

To all whom it may concern:

Be it known that I, JAMES G. NEWBURY, a citizen of the United States, residing at Albany, in the county of Albany and State of New York, have invented new and useful Improvements in Toy Guns, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to improvements in toy guns; and the novelty consists of the peculiar construction and combination of parts, substantially as hereinafter fully set forth, and specifically pointed out in the claims.

The objects of my invention are to provide an improved toy gun that shall be simple, strong, light, and durable in construction, thoroughly effective for the purposes designed, and cheap and inexpensive of manufacture.

The device is bent or formed from a single piece of wire that is bent to provide the stock, barrel, and guard, thus effecting a saving of material and reducing the cost of manufacture. A cross-bow is detachably connected to the front end of the barrel, below the plane of the mouth thereof, so as to be out of the way of a dart or arrow, which is placed in the barrel and guided therein to render the aim more effective.

In the accompanying drawings, Figure 1 is a perspective view of my improved toy gun with a cross-bow applied thereto. Fig. 2 is a plan view of the same. Fig. 3 is a detail transverse sectional view on the line *x x* of Fig. 2. Fig. 4 is a horizontal sectional view of a portion of the cross-bow detached from the gun. Fig. 5 is a view of a modified form of the cross-bow. Fig. 6 is a horizontal sectional view corresponding to Fig. 4, showing a spring-pin to detachably connect the clamping plates to the loop of the barrel.

Referring to the drawings, in which like letters of reference denote corresponding parts in all the figures, A designates the stock of my improved toy gun, B the barrel, and C the finger-guard, all of which are formed and bent from a single piece of wire, for the purpose of economy in the material and reducing the cost of manufacture, while at the same time the device is very light, strong, and durable, and not liable to be broken and get out of order.

To illustrate the method of making the improved gun of wire, I proceed as follows: I first take a straight piece of wire of proper size and strength and bend one end thereof to form an open loop, *e*, and a detent, *e'*. The wire is then left to provide a straight bar or rod, *f*, that forms one-half of a barrel, and at a proper point it is bent downwardly at an angle, and then upwardly, to provide a ring or loop, *f'*, which is afterward flattened. The wire is then bent to provide a straight rod, f^2, that lies parallel with and at a short distance from the rod *f*, these rods *f* f^2 forming the barrel of the gun, and having a space or opening left between them. At the rear end of the bar f^2 it is bent to provide a detent and loop, *g g'*, that correspond to the detent and loop *e e'*, and is arranged in the same plane therewith, and the wire is continued rearwardly to form the stock A. The stock comprises, essentially, an arm, *h*, having an abutment or shoulder, *h'*, that provides a "grip," an upper inclined rod, *i*, a curved butt, *i'*, and a lower inclined rod, i^2, that is curved or bent near its end to form a finger-guard, C, the free end of said wire being bent into a long loop, J, that is arranged beneath the barrel, and one arm thereof secured to the under surface of the barrel by means of solder or otherwise, and arranged between the bars or rods *f* f^2 to brace and strengthen the same. A washer, *k*, is fitted between the loops *e' g'* to brace the same, and through the said loops and washer is passed a rivet or pin, K, the head or one end of said bolt bearing against one of the loops, and the other end of the rivet or pin being headed down and bearing against the other loop, thus firmly bracing and strengthening the parts.

L designates a trigger that is arranged below the rear end of the barrel, within the loop J. The front end of the trigger is bent around the vertical portion of the loop to pivotally connect the trigger thereto, and the rear end of the trigger is provided with an angular curved arm, *l*, that fits over the rivet or pin and washer K *k*, and is movable vertically at its rear end to force the string or cord of the bow from engagement with the detents *e g*, to propel the arrow or dart.

M designates the bow, that is made in two sections or pieces, and detachably secured to the front end of the gun-barrel. The sections M' of the bow are made from steel or other elastic metal, and they are tapered longitudi-

nally from their inner toward the outer ends, as shown, the free outer ends of the bow-sections being provided with hooks *m*, to which are connected the ends of a bow cord, string, or other flexible connection, *m'*, that is adapted to be drawn rearwardly at its middle to engage the detents of the gun, for the purpose of setting the device for operation. The inner ends of the bow-sections are fitted between supporting-plates O, and they are rigidly secured in said plates by short rivets *o*, and each of the plates O has a depressed central seat, *p*, that forms a socket, in which is fitted the loop *f'* of the front end of the gun-barrel, the depressed seats of the plates having openings therein that are aligned with the opening in the loop; and to detachably, rigidly, and firmly secure the bow to the barrel, a spring-pin of any ordinary or preferred construction, *p'*, is passed through the opening of the loop *f'* and the seats of the plates, as will be very readily understood by reference to Fig. 6 of the drawings; but I do not limit myself to this particular means of securing the clamping-plates to the loop, as they can be secured in place by means of a bolt and nut.

In Fig. 5 of the drawings I have shown a bow made of one piece of wire, and having hooks at its ends, and a loop, *q*, at its middle for the passage of a spring-pin to secure the bow to the barrel, the arms of the bow being curved and tapered longitudinally to render it more effective.

The operation of my invention is obvious from the foregoing description, taken in connection with the drawings.

The bow is properly adjusted on the barrel and secured rigidly in place by means of the spring-pin, and the string thereof drawn back to engage the detents. The arrow or missile is placed in the barrel so that the rear end thereof will be struck by the cord when it is released from the detents by operating the trigger to force the rear end upwardly, and the tension of the bow draws it forward.

Various slight changes in the form and proportion of parts and details of construction may be made without departing from the principle or sacrificing the advantages of my invention. A brace rod or wire may be secured to the parallel bars or rods that compose the barrel on the under surfaces thereof, and the stock may be formed to resemble a pistol-stock, to adapt the device to be grasped and fired by the hand instead of from the shoulder.

The spring-pin *p'* enables the bow to be quickly and readily detached from the gun, while at the same time it is capable of adjustment on the gun and rigidly held thereon.

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

1. The combination of a barrel having a loop, the parallel clamping-plates removably secured to the loop, and the sectional cross-bow having the inner ends detachably secured in opposite ends of the plates, substantially as described.

2. The combination of a gun having an angular loop, *f'*, the clamping-plates O, having a socket in which the loop is fitted and bolted, and a cross-bow having its sections M' secured between the opposite ends of the clamping-plates, substantially as described.

3. As a new article of manufacture, a toy gun made of a single piece of wire, and having its barrel formed of the parallel wires *f* *f²*, provided at the rear ends thereof with detents *e' g*, by turning or bending down the wires that form the barrel, and a cross-bow secured to the front end of the barrel, below the plane thereof, substantially as described, for the purpose set forth.

4. As a new article of manufacture, a toy gun made of a single piece of wire, and having the rear end of the barrel thereof provided with the detents *e' g*, a trigger pivoted on the gun, and having its free end arranged below the plane of the said detents, and a cross-bow secured to the front end of the barrel, substantially as described, for the purpose set forth.

5. As a new article of manufacture, a toy gun formed of a single piece of wire, and having the detents *e' g* arranged parallel with each other and at the rear end of the barrel of said gun, a transverse pin or bolt arranged below the plane of the detents, the trigger pivoted at one end upon the gun, and having its free end supported by the bolt or pin and arranged below the detents of the barrel, and a cross-bow secured to the front end of the barrel, substantially as described, for the purpose set forth.

6. A toy gun having the depending loop at the front end and below the plane of the barrel thereof, in combination with the clamping-plates arranged parallel with each other and on opposite sides of the said depending loop, a cross-bow secured in the plates, and a pin for securing the clamping-plates to the barrel, substantially as described.

7. A toy gun having the depending loop at the front end of the barrel thereof, in combination with the rigid and straight clamping-plates arranged parallel with each other and on opposite sides of the loop, a single pin or bolt passing through the plates and loop, to detachably secure the former to the latter, and a cross-bow carried by the clamping-plates, substantially as described.

8. As a new article of manufacture, a toy gun having its stock, barrel, and guard bent from a single piece of wire and forming a rigid skeleton frame, and an inflexible trigger formed from a single piece of wire separate from the gun, and pivoted on the gun-frame so as to move on its pivot without moving or affecting the rigidity of the wires that form the gun-frame, as set forth.

9. As a new article of manufacture, a toy gun formed of a single piece of wire, and hav-

ing a loop, e', at the rear end of the barrel, one end of the wire being bent to form a loop, J, which connects with the barrel, and the other end of the wire forming the loop e, that aligns with the loop e', a transverse pin or rivet passing through the aligned loops, and a trigger arranged parallel with the barrel, and having one end pivoted on the loop J and its free end supported by the transverse pin or rivet, substantially as described.

10. As a new article of manufacture, a toy gun having its stock and barrel formed of a single piece of wire, the rear end of the barrel having the parallel detents and the loops located below the detents, a pin or rivet passing through the loops, and a washer interposed between the loops and supported by the pin or rivet, substantially as described.

11. As a new article of manufacture, a toy gun having its barrel made of a single piece of wire and comprising the parallel rods f' f^2, and having the detents at its rear ends, and the loops located below the detents, a stock formed from the same piece of wire, and comprising the inclined rods i i^2, and the rod i' connecting the free ends of the said rods, and a curved guard, k, arranged beneath the loops of the barrel, substantially as described.

12. In a toy gun, the combination of a barrel having the depending loop arranged at the front end and below the plane thereof, the parallel clamping-plates having the socket in which the loop of the barrel is fitted, a spring-pin passing through the plates and loop, to detachably connect the former to the latter, and a cross-bow having the inner ends of its sections held in opposite ends of the clamping-plates, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JAMES G. NEWBURY.

Witnesses:
JOSEPH W. LARCHAR,
S. B. BREWER.