(No Model.)

E. R. LEWIS.

SPRING GUN.

No. 362,096. Patented May 3, 1887.

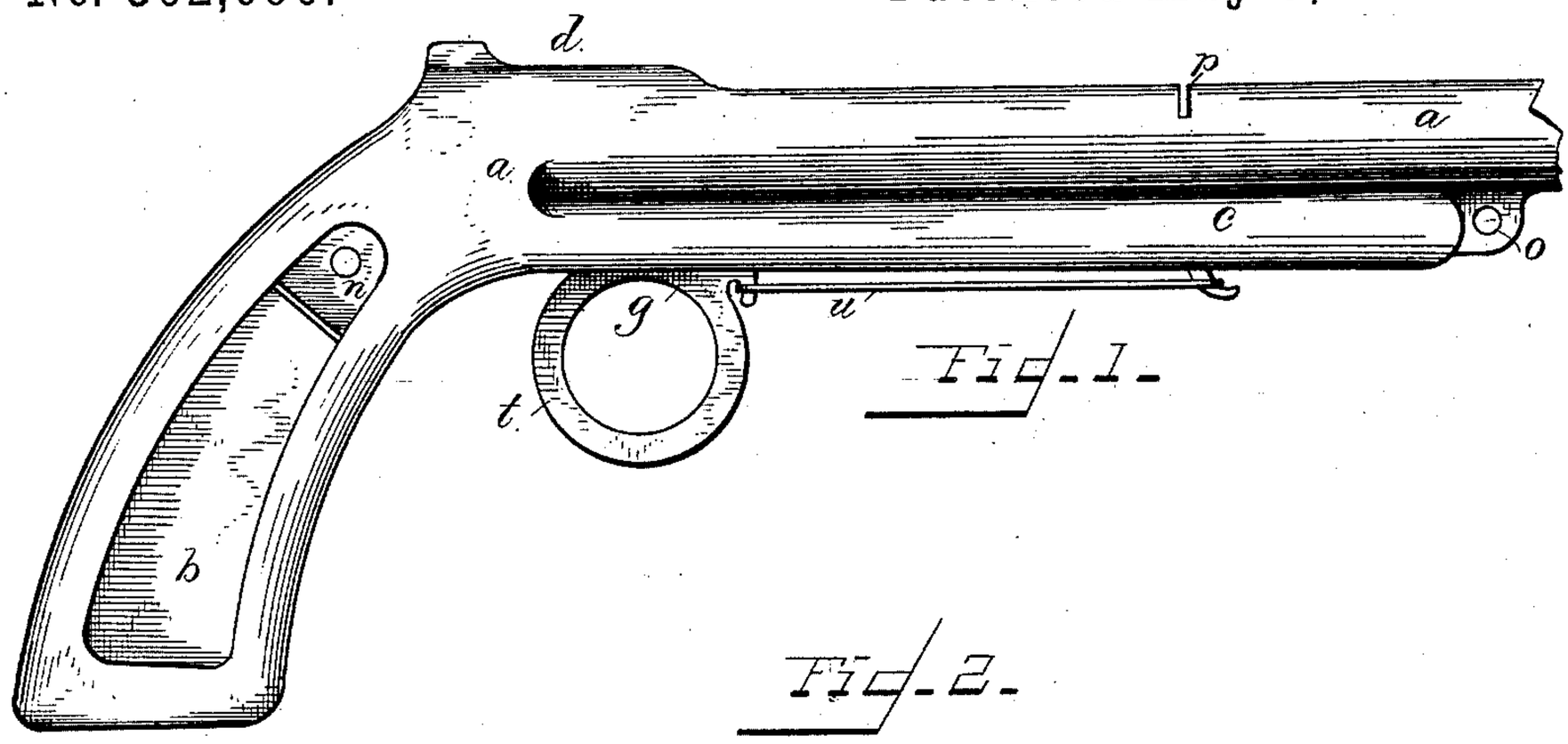

Fig. 1.

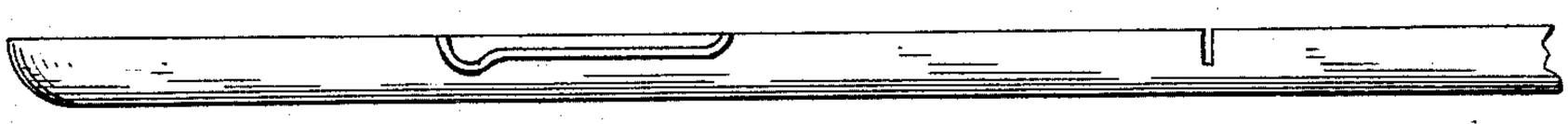

Fig. 2.

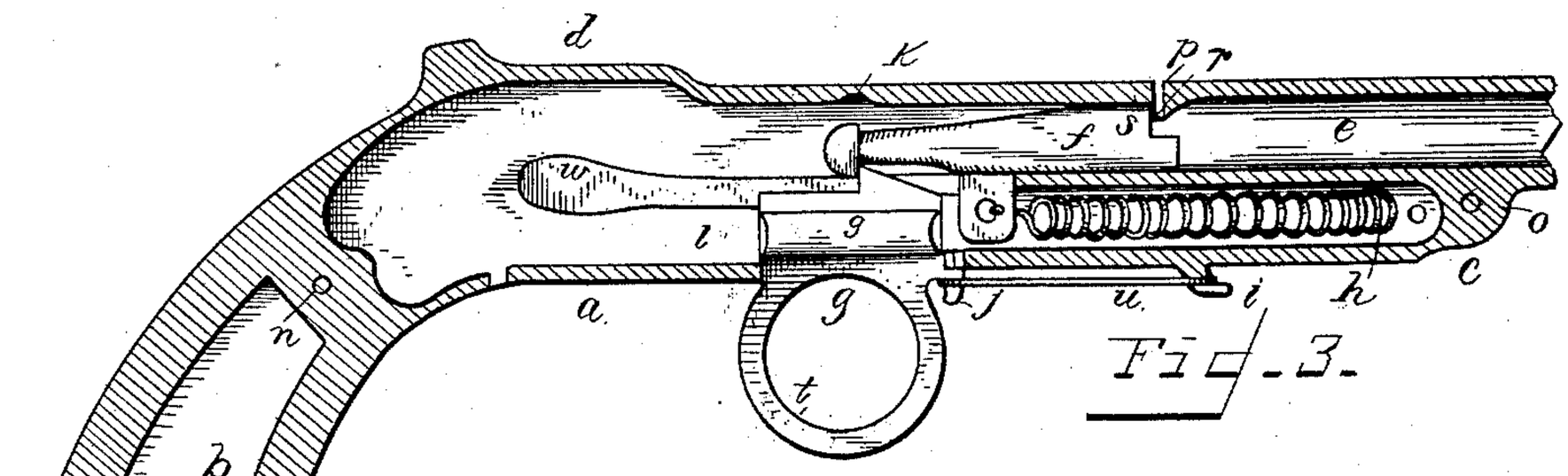

Fig. 3.

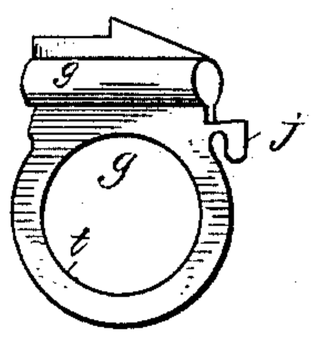

Fig. 4.

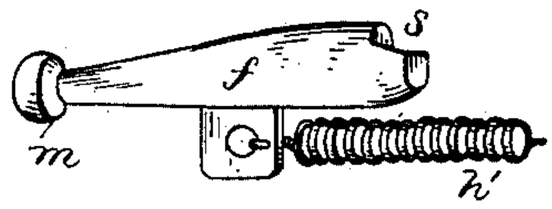

Fig. 5.

Witnesses
Geo. O. Kingsbury
Chas. R. Culver

Inventor
Edward R. Lewis
By Allen Webster
Attorney

UNITED STATES PATENT OFFICE.

EDWARD R. LEWIS, OF SPRINGFIELD, MASSACHUSETTS.

SPRING-GUN.

SPECIFICATION forming part of Letters Patent No. 362,096, dated May 3, 1887.

Application filed June 14, 1886. Serial No. 205,175. (No model.)

To all whom it may concern:

Be it known that I, EDWARD R. LEWIS, a citizen of the United States, residing in Springfield, Hampden county, State of Massachusetts, have invented new and useful Improvements in Spring Guns or Pistols, of which the following is a specification, reference being had to the accompanying drawings, in which like letters of reference indicate like parts.

Figure 1 is a side view of a pistol constructed in accordance with my improvements. Fig. 2 is a top view of one-half the pistol-frame. Fig. 3 is a side sectional view showing the operative mechanism; and Figs. 4 and 5 are views of the projector or hammer with spring and the trigger.

The object of my invention is to produce a simple and cheap device for spring guns or pistols, more especially designed for a toy, and to construct a spring gun or pistol which shall be in part automatically operating, or requiring but one motion to strain and release the operative mechanism.

I prefer to construct the handle or stock and barrel of cast-iron, cast in two parts, as shown, each half of which contains a hammer-groove inclined at its rear end, and a groove, *l*, below the barrel for the projecting-spring and trigger. These two grooves are separated by the wall *w*, substantially as shown in the drawings.

A projector or hammer, *f*, fits within the barrel-groove *e*, and is impelled forward by the action of a spring, *h*. A trigger-piece, *g*, moves in the groove *l*, and is adapted to engage the hammer *f*, as shown.

The operation of the parts is as follows: The parts being in the position indicated in Fig. 3, the pistol being grasped in the usual manner, and the finger being inserted in the trigger-ring *t*, the trigger is drawn backwards, carrying with it the projector, until the head of the projector has traveled so far up the incline of the partition *w* as to free it from the trigger-catch, when, being left free, it is drawn suddenly forward by the action of the spring *h*, and the arrow or other projectile being within the gun-barrel will be thrown outward with a force proportioned to the force exerted by the projecting-spring. The trigger is then allowed to be moved forward by the action of a trigger-spring, *u*, and when in position to again engage the projector the end of the projector will ride up on the incline upon the trigger-catch until past its highest point, when it will return to its normal position and engage the latch. The rear of the projector is free to move upward while in its normal position sufficiently to allow the trigger-catch to pass beneath, because of a slight recess, *k*, in the barrel.

The projector is adapted to operate as a hammer as well as to throw the projectile outward. An opening, *p*, in the barrel is made of a sufficient size to allow of the insertion of a wafer-cap or other kind of explosive, a wafer-cap fitting snugly therein being the best. A projection, *r*, forms an abutment to receive the blow, and the explosive, being between the projection *r* and the projector or hammer, will receive the blow and be exploded. The portion of the hammer or projector, however, which strikes the arrow or pellet projects a short distance in advance of the portion which explodes the cap, so that the arrow or pellet is thrown outwards an instant before or simultaneously with the explosion of the cap.

The two castings of the frame are secured together by screws passing through the parts *n o*.

The trigger-spring is made of rubber, though any other sort of spring may be substituted.

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

1. A frame, *a*, having a groove, *e*, located forward of the projecting mechanism, and recess *l* at the stock-end, adapted to receive the parts *f* and *p*, and part *w*, broadest at its rear end, in combination with a projector, *f*, located within the recess above the part *w*, and a trigger, *g*, adapted to engage therewith and located within the groove or recess below the part *w*, and a projecting-spring, substantially as shown.

2. In a spring gun or pistol, a barrel having a cap-exploding ledge located interiorly between the muzzle and stock and having a cap-opening, *p*, located adjacent to said ledge, in combination with a hammer, *f*, trigger, and actuating-springs, substantially as shown.

3. The stock *a*, made in two parts and having a wedge-shaped partition or part, *w*, widest at the rear, in combination with projector *f*, having latch-head *m*, and trigger *g*, having a latch to engage the projector, all located and operating substantially as shown.

4. A spring gun or pistol having two guides or grooves which are nearer together at their forward portions, one for the reception of a projector, *f*, and one for a trigger and catch, *g*, each of which moves forward and backward in or upon said guides, the catch being adapted to engage with the projector when both are at the forward portion of the guides, and being released therefrom by the divergence of the guides, causing the separation of the projector and trigger when drawn backward, substantially as shown.

EDWARD R. LEWIS.

Witnesses:
ALLEN WEBSTER,
SAML. E. BERRETT.