C. S. LOCKE.

TOY GUN.

No. 82,536. Patented Sept. 29, 1868.

Fig. 1.

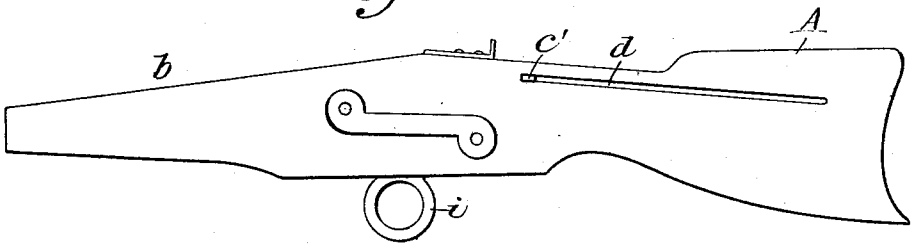


Fig. 2.

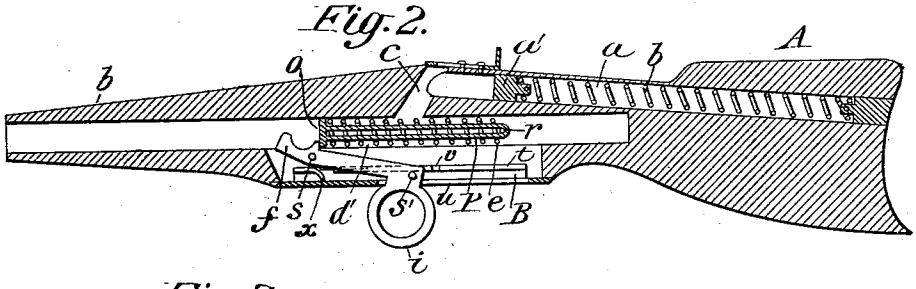


Fig. 3.

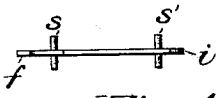


Fig. 4.

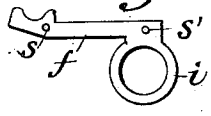


Fig. 5.

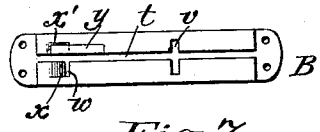


Fig. 6.



Fig. 7.

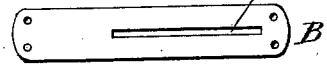


Fig. 8.

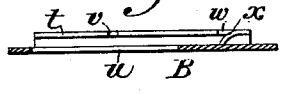
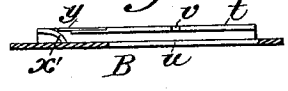


Fig. 9.



Witnesses:

Inventor:

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

United States Patent Office.

CHARLES S. LOCKE, OF WATERTOWN, ASSIGNOR TO JOHN HALL, OF THE SAME PLACE, RENSELAER TUTE, OF CAMBRIDGE, AND SAMUEL A. BRACKETT, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 82,536, *dated September* 29, 1868; *antedated September* 17, 1868.

TOY-GUN.

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

TO ALL PERSONS TO WHOM THESE PRESENTS MAY COME:

Be it known that I, CHARLES S. LOCKE, of Watertown, in the county of Middlesex, and State of Massachusetts, have invented an Impre ed Toy Spring-Gun; and do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a side view, and

Figure 2 a longitudinal section of it.

This invention has reference to the toy-pistol or gun which is the subject of Letters Patent, No. 71,162, dated November 19, 1867, and granted to me and John Hall.

Instead of arranging the magazine entirely and directly over and parallel with the barrel, as it is in the patented pistol, I place it in rear of and partly over the barrel, and within the stock, and provide it with a slider or piston, and a spring to actuate such slider or piston, so as to force the several balls forward toward the passage leading from the magazine to the barrel. Furthermore, I arrange the said passage obliquely with respect to the bore of the barrel, so that when a ball is pressed by the spring-slider into the passage and against its front part, the inclination of the latter, co-operating with the spring, will direct the ball toward or cause it to pass into the barrel, and in front of the discharger or piston thereof.

I have also improved the piston or discharger-retracting mechanism.

In the drawings, A denotes a stock as provided with a barrel, *b*, and also with a magazine, *a*, the latter being disposed within the stock and in rear of and to lap partially over the barrel *b* in manner as shown in fig. 2.

Within the magazine is a slider, *a'*, and a helical spring, *b'*. A stud or pin, *c'*, extends laterally from the slider through a long slot, *d*, made in the stock, and out and lengthwise of the magazine. By applying the thumb-nail to the stud, the slider and spring may be retracted by the thumb, when it may be desirable to charge the magazine with pellets, balls, or peas, which are to be dropped into it through the passage leading from the magazine into the same. A passage, *e*, inclining downward from the front end of the magazine, enters the barrel.

Within the barrel *b* is a piston or discharger, *d'*, consisting of a disk, *o*, connected to the ends of a long staple or wire, *p*, formed as represented. A helical spring, *e*, encompasses the shank or staple *p*, and at one end bears against the disk. At its opposite or rear end, the spring rests against a pin, *r*, which goes through the stock, and serves as a rest to the spring, and to check the advance of the piston.

Under the piston is a catch-lever or arm, *f*, which projects from and is in one piece with an annular trigger, *i*, and having two studs, *s s'*, extended from it in opposite directions, in manner as represented in Figures 3 and 4, one of which is a top view and the other a side view of the arm *f* and trigger.

This arm *f* plays or slides in a slotted flat tube, B, formed as shown in top view in Figure 5, and in transverse section in Figure 6, and in under side view in Figure 7.

This tube is slotted lengthwise at top, as shown at *t*, and also at bottom, as shown at *u*. It also has a slit, *v*, which crosses the slit *t*, near the middle of the tube, and is of a size sufficient to admit the studs *s s'* to pass down through it into the tube. The tube also has an opening, *w*, leading upward from its front part, with an inclined plane, *x*, arranged, with respect to the opening, as shown in fig. 8, which is a longitudinal section of the tube. There is also another such inclined plane, *x'*, arranged on the opposite side of the slit *t*, and directly opposite to the plane *x*, and underneath a spring, *y*, forming part of the tube, as shown in fig. 9.

Figure 9 is another section of the tube B, made so as to show the plane *x'* and the spring *y*.

While the trigger and its catch-arm are being advanced within the tube B, the studs *s s'* will be carried in contact with the inclined planes *x x'*, and by them (the two, in fact, being equivalent to one plane) will be forced upward so as to raise the arm and cause one of the studs to bear upward and pass the spring and rise above it. The arm-rest will catch upon the head of the piston, in manner as shown in fig. 2. On drawing the trigger backward to the end of the slit *u*, the piston will be retracted until the pins *s s'* may be brought directly over

the slit *v*. The leverage of the trigger will next force the arm downward out of engagement with the piston, and the latter will be driven forward by its spring, and will eject the ball from the barrel.

The arm is also formed with a notch, or recess, or hook, *z*, into which the ball drops, and by which it will be drawn back with the arm. When the arm descends in the tube, or away from the piston, it will also pass away from the ball and leave it free to be advanced by the piston.

By sliding the trigger forward, the catch will be made to take upon the piston, and by pulling the trigger backward far enough, the catch will draw the ball and piston backward, and will be drawn out of engagement with the piston and ball, and leave the spring of the piston free to impel the piston forward, so as to eject the ball from the barrel.

It is not necessary for the trigger-arm to have two studs, as one will suffice when there is but one inclined plane to the tube B. I prefer, however, to make the said tube with two planes, and to provide the trigger-arm with two studs to act with such planes, as under such circumstances the trigger-lever will operate to better advantage.

I herein make no claim to the subject or subjects of the above-mentioned patent, of which I am one of the assignees. Instead of making the trigger and catch in two pieces jointed together, I make them in one piece, and in the form of and to act as a bent lever. I also combine, with the magazine, the barrel, and its mechanism for ejecting a ball, a mechanism for pushing the balls forward in the magazine.

I would remark that the passage *c*, leading from the magazine to the barrel, is continued upward from the barrel, and has a sliding cover, *f'*, applied to it, such cover being provided with a sight, *g*, which answers as a projection for effecting the movements of the cover.

I claim, in a toy spring-pistol or gun, the arrangement of the magazine within the stock, and so as to project over and in rear of the barrel, and of the passage for conveying the balls from the magazine into the barrel, the whole being as represented.

I also claim the arrangement of the passage *c*, inclining, with respect to the barrel and to the magazine, as and for the purpose specified.

I also claim the trigger-catch, as made with the ball-receiving and retracting recess, or its equivalent.

I also claim the combination of the mechanism for advancing the balls in the magazine, with such magazine, the barrel and the mechanism for effecting the expulsion of the balls from the latter, as specified.

I also claim the combination of the sliding-cover *f'* and the sight *g* with the passage *c*, opening out of the barrel, and disposed with respect to it and the magazine as specified.

I also claim the combination or mechanism for retracting and releasing the piston in order that it may be advanced by its spring, such mechanism consisting not only of the peculiar lever-trigger catch and trigger combined, and provided with a stud or studs, as described, but of the tube B, or its equivalent, made with longitudinal and transverse slots, and provided with one or two inclined planes and a spring, the whole being arranged substantially in manner and so as to operate as specified.

CHAS. S. LOCKE.

Witnesses:

R. H. EDDY,

F. P. HALE, Jr.