A. PETTENGILL.
Spring Air-Gun.

No. 204,167. **Patented May 28, 1878.**

Fig. 1.

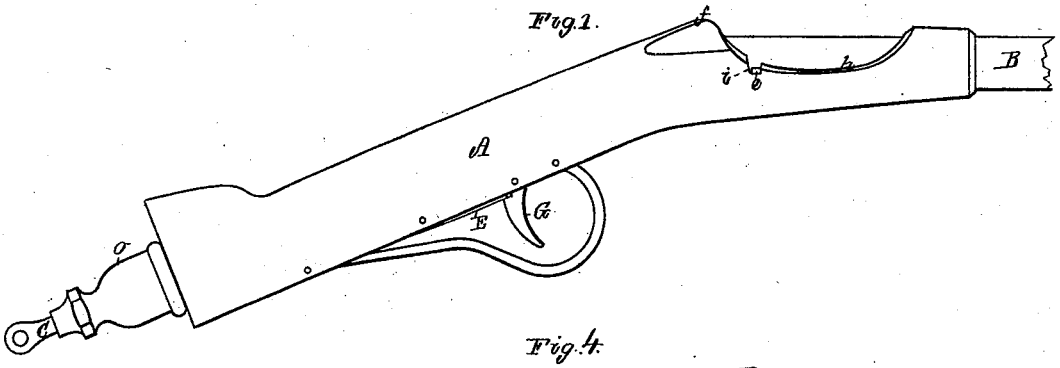

Fig. 4.

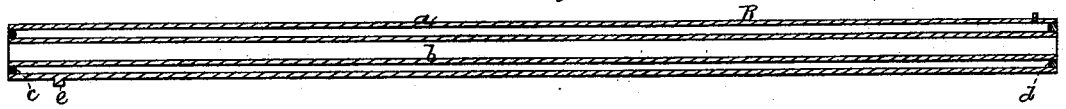

Fig. 2.

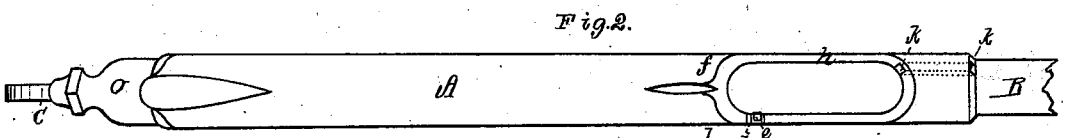

Fig. 3.

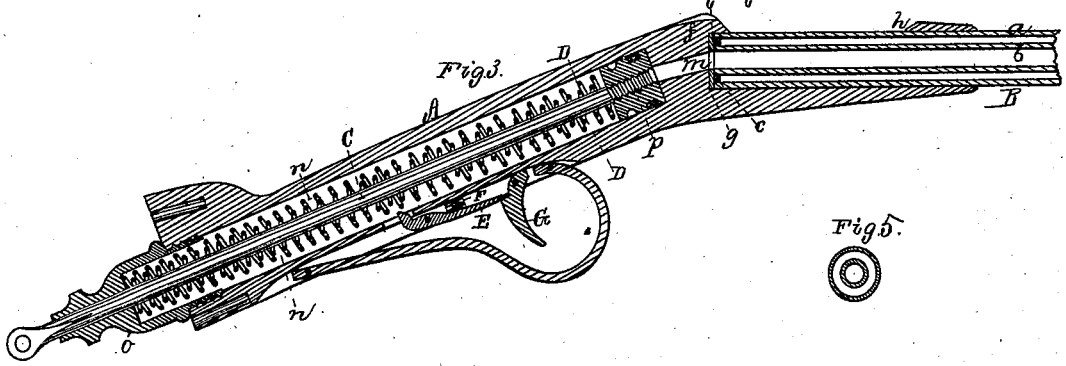

Fig. 5.

Witnesses.
S. N. Pipe
J. R. Snow

Inventor
Asa Pettengill.
by his attorney
R. H. Eddy

UNITED STATES PATENT OFFICE.

ASA PETTENGILL, OF KEENE, ASSIGNOR TO HIMSELF AND FRANK H. COLONY, OF HARRISVILLE, NEW HAMPSHIRE.

IMPROVEMENT IN SPRING AIR-GUNS.

Specification forming part of Letters Patent No. **204,167**, dated May 28, 1878; application filed November 24, 1877.

To all whom it may concern:

Be it known that I, ASA PETTENGILL, of Keene, in the county of Cheshire and State of New Hampshire, have invented a new and useful Improvement in Air-Guns; and do hereby declare the same to be described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a side view, Fig. 2 a top view, and Fig. 3 a longitudinal section, of the stock and the part of the barrel of an air-gun provided with my invention. Fig. 4 is a longitudinal section, and Fig. 5 a transverse section, of the barrel on a smaller scale.

My invention relates to a mode of constructing the barrel and applying it and connecting it with the stock.

The barrel shown at B is composed of two concentric tubes, *a b*, and two uniting-rings, *c d*, arranged as represented. Both tubes are of the same length, though one is larger in diameter than the other, the smaller being arranged within the larger, and both being united at their ends to the rings *c d*, placed between them concentrically at their edge. This construction of the barrel renders it very strong, stiff, and light.

At or near the rear end of the barrel there is a small stud, *e*, projecting from the outer curved surface of the barrel.

The stock A is provided, in front of its breech or abutment *f*, with a tubular socket, *g*, for reception of the rear part of the barrel, such socket being slotted or open at top, as shown at *h*, and provided with a notch, *i*, and a groove, *k*, arranged in it, as represented. The groove is to enable the stud to enter the socket with the barrel.

After the barrel may have been inserted in the socket, so that the rear end of the said barrel may be against a leather annulus, *l*, placed against the breech *f*, the barrel should be turned in its axis, so as to cause the stud *e* to enter the notch *i*, which should be so formed as to cause the barrel to be forced back to make, with the leather annulus, a close joint at the breech. There is through such breech or abutment and the leather annulus a hole, *m*, and in rear of the breech there is in the stock a long cylindrical air-chamber, *n*, which has in its rear end a screw plug or head, *o*, through which the rod C of a piston extends. Around such rod and between the piston-head *p* and the plug *o* one or more helical springs, D, are arranged.

Furthermore, there is arranged in the stock, in manner as shown, a catch or lever, E, provided with a spring, F, to force it upward.

A trigger, G, formed and arranged with the lever, and pivoted to the stock, serves to trip the catch or lever. On drawing back the piston, its head will pass and depress the catch, which instantly afterward will be forced upward by its spring, so as to estop the advance of the piston. On pulling the trigger, the catch will be moved so as to set the piston free and enable the retracted spring or springs to drive it forward up to the breech with great force and velocity.

In order that the piston may be retracted without obstruction from air in rear of its head, there may be for escape of such air a hole through the head or plug *o*.

To load the piece, the slug or dart is to be placed in the barrel at its rear end, and the barrel should next be inserted and secured in the socket of the stock, the piston having first been retracted.

On pulling the trigger, the air in front of the piston and in the air-chamber will be condensed, and will act against and drive the slug or dart through and out of the barrel with great force.

By making the socket *g* with the spring *h*, the breech or abutment, or its washer, can easily be reached for removal of any dirt or extraneous matter. Besides this, other advantages result from so making the socket.

I would remark that I do not claim a toy air-pistol having its barrel permanently fixed to and arranged with the stock in manner as shown in the United States Patent No. 126,954.

I claim in the above-described air-gun as follows:

1. The barrel provided with the locking-stud *e*, in combination with the stock provided

with the barrel-receiving socket *g*, grooved and notched, as set forth.

2. The barrel provided with the stud *e*, in combination with the stock A, provided with the socket *g*, having the groove *k* and notch *i*, as set forth, and with the perforated abutment *f*, and the air-chamber and its plug-piston, operative spring or springs, catch-lever, and its spring and trigger, all being arranged and applied substantially in manner and to operate as set forth.

ASA PETTENGILL.

Witnesses:
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