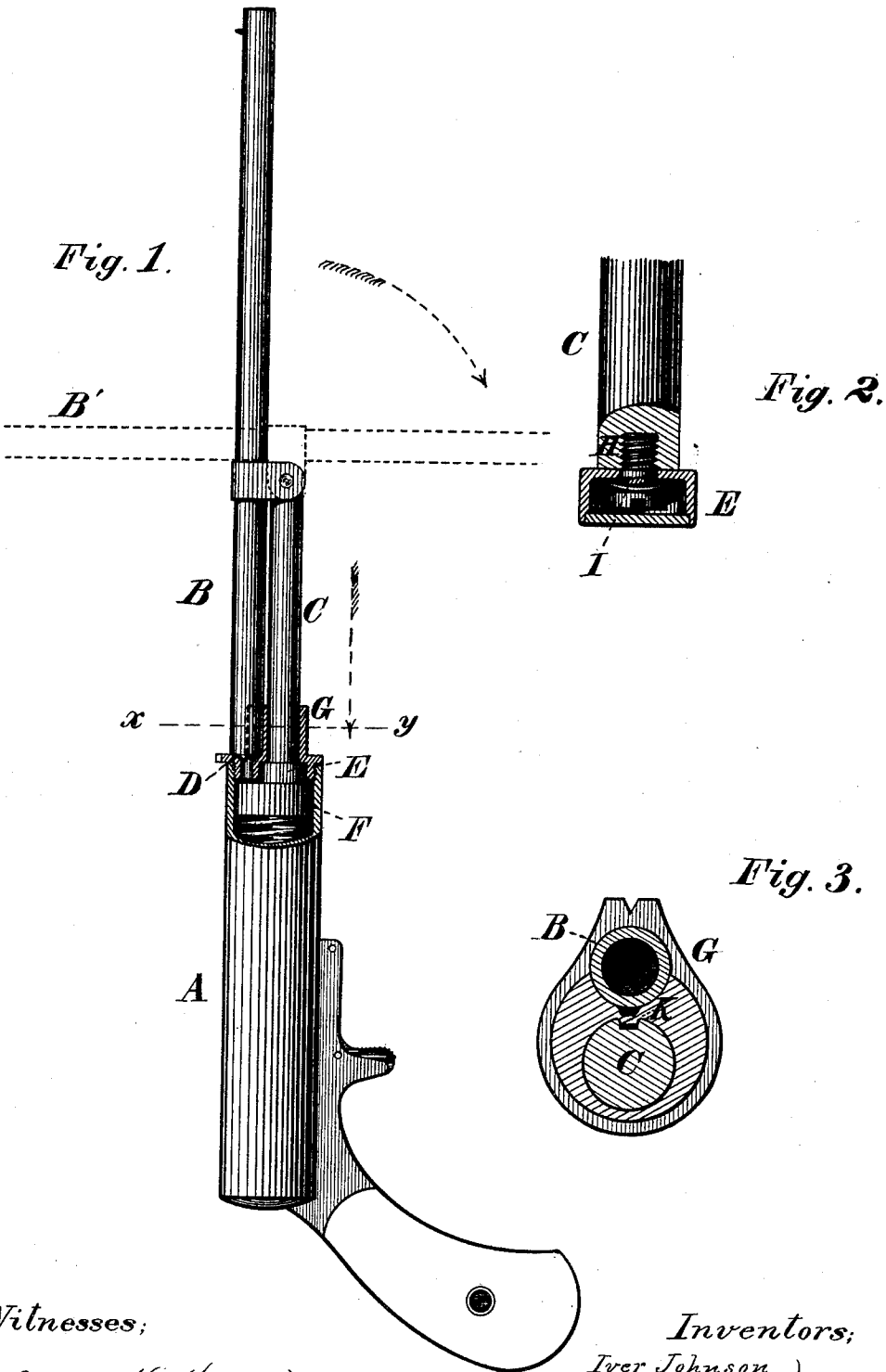


I. JOHNSON & M. BYE.
 SPRING AIR-PISTOL.

No. 176,003.

Patented April 11, 1876.



Witnesses;

Edward H. Hill. }
 Santiago Verdi }

Inventors;

Iver Johnson, }
 Martin Bye. }

BY THEIR ATT'Y. J. H. Arnold

UNITED STATES PATENT OFFICE.

IVER JOHNSON AND MARTIN BYE, OF WORCESTER, MASSACHUSETTS.

IMPROVEMENT IN SPRING AIR-PISTOLS.

Specification forming part of Letters Patent No. **176,003**, dated April 11, 1876; application filed March 15, 1876.

To all whom it may concern:

Be it known that we, IVER JOHNSON and MARTIN BYE, both of the city and county of Worcester and State of Massachusetts, have invented certain Improvements in Air Pistols and Guns, of which the following is a specification:

Our invention relates more particularly to that class of air pistols and guns from which the projectile is thrown by the discharge of the air from the chamber containing a spring-impelled piston, whereby the force of the spring is transferred through the medium of the air to the projectile. It is designed to simplify the construction, and combine economy with practical facility of operation and efficiency of action. It consists in the construction and adaptation of the several parts to each, and to their offices, substantially as hereinafter described, and shown in the accompanying drawings, which represent an air pistol, substantially embodying our invention.

In said drawings, Figure 1 is a side view with a portion of one side of the air-chamber removed, showing the cap in section and inside construction. Figs. 2 and 3 are on a larger scale, the latter having a section of Fig. 1 at the line *xy*, and the former showing the spring-head of the rod C in section, and the construction of its parts—the same letters indicating the same parts wherever they occur in all.

A is the air-chamber in which the piston F is pressed by a powerful spring toward the forward end, in which the cap G is screwed. This cap has a slightly recessed seat, D, for the end of the barrel B, and a hole for the rod C, which compresses the spring, and a recess on its inner surface for the head of C, and an opening from A to the barrel B. A part of G is made to project to form a guide for C, and a rest for the lower side of the end of B when in place. The rod C is made with a groove its whole length on the side next to B, and a portion of G between them is punched or pressed down to form a spline fitting into said groove and preventing the rod C from turning. The spring-head of C is shown plainly in Fig. 2, the cap E being held to C by the screw H, which has a spring, I, between its head and the cap E, whose action holds E strongly to C, but allows a little motion when sufficient force is used, so that when the barrel B which is pivoted to the other end of C is bent down

in the direction indicated by the curved arrow, the rod C yields enough to allow the end of B to slip out of its seat D, and the barrel can take the position shown by the broken lines, and making a convenient means of compressing the powerful spring by forcing down the rod C, which forces the piston into position to be held by the trigger in the usual way. The rod C is then drawn out and the projectile being placed in the end of B it is returned to place, the spring of C allowing it to enter, and holding it securely to its seat D. The side of the head E next the piston we fill with metal suitable to take the blow or concussion without damage. The spring action of C may be obtained in other ways by the use of well-known devices as a substitute for the spring-head E, as the opening in the outer end of G might be oval, and a spring applied, giving the desired action to C with a solid head at E, or the spring might be applied to the joint at the other end of C and get the necessary motion. The rod C being held from turning by its groove and spline, as shown in Fig. 3, where K is the spline, the barrel B is always ready to be quickly returned to its place, and make an air-tight joint in its seat.

We do not claim the precise form and arrangement of all the parts, but what we claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a spring-piston and air pistol or gun, having the barrel B, and chamber A, of the cap G, having a seat, D, fitting the end of the barrel, and forming a guide for the rod C, the rod C pivoted to the barrel and provided with a spring-head, E, for forcing the barrel B against the seat D, all constructed and arranged to operate substantially as and for the purposes set forth.

2. The combination, in a spring piston and air pistol or gun, of the spring-compressing slotted rod C, with the guiding-cap G, having a spline or projection fitting the slot in the rod C, substantially as and for the purposes described.

Witness our hands this 13th day of March, A. D. 1876.

IVER JOHNSON.
MARTIN BYE.

Witnesses:

JAMES GREENE,
SANTIAGO VERDI.