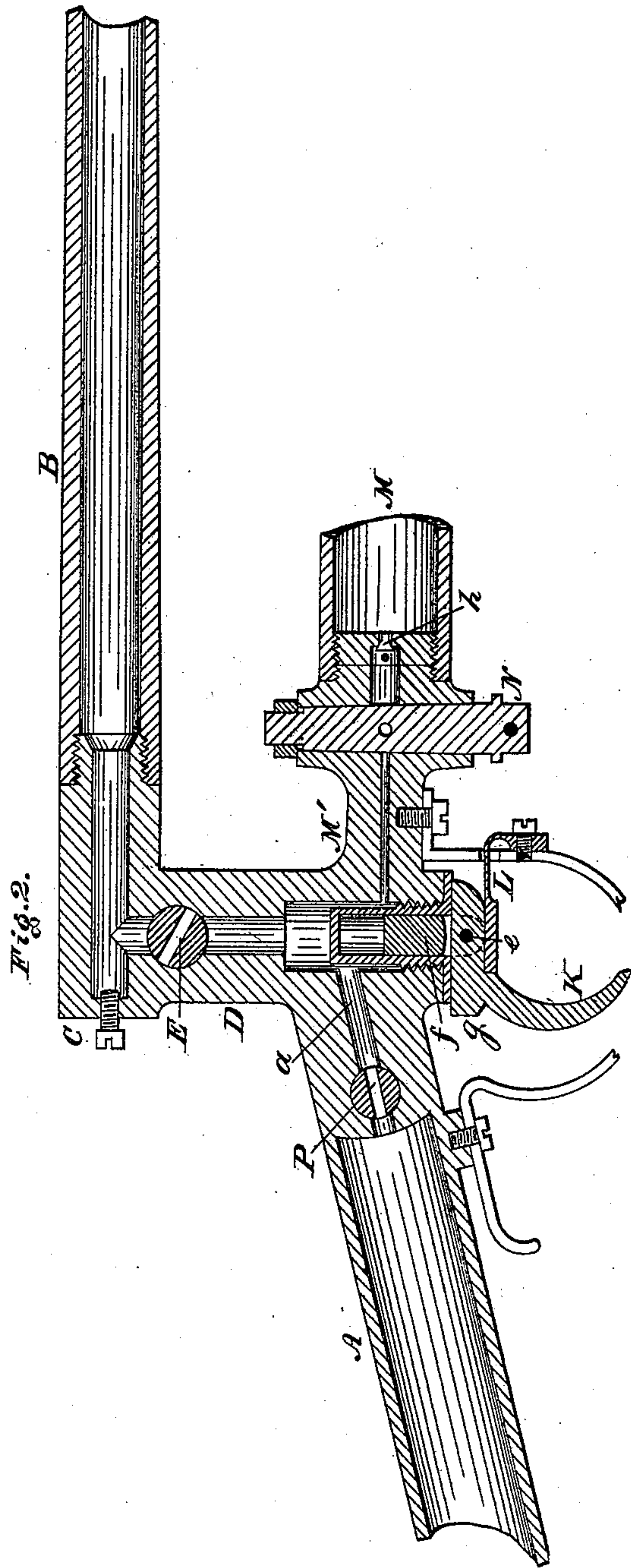
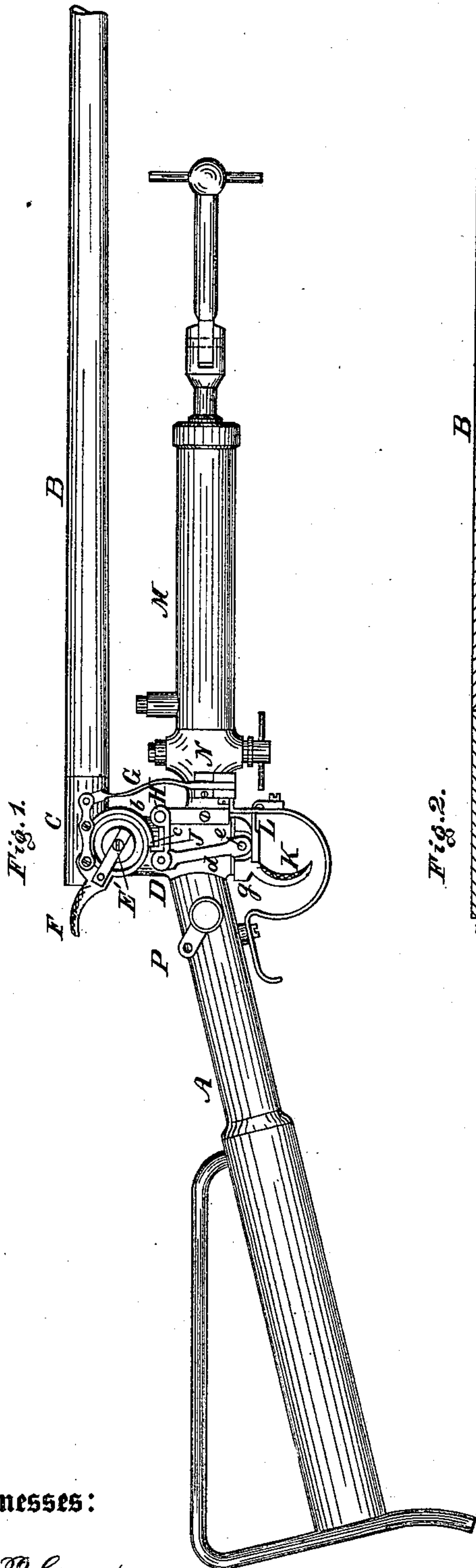


W. T. CHAMBERLAIN.  
Air Gun.

**No. 229,868.**

**Patented July 13, 1880.**



**Witnesses:**

A. P. Grant,

W. F. Kircher

**Inventor:**

Am. J. Chamberlain,

by John A. Diederich  
ATTORNEY.



# UNITED STATES PATENT OFFICE.

WILLIAM T. CHAMBERLAIN, OF NORWICH, CONN., ASSIGNOR OF TWO-THIRDS  
OF HIS RIGHT TO JOSEPH B. DE YOUNG AND CHARLES Z. DE YOUNG,  
OF PHILADELPHIA, PA., ONE-THIRD TO EACH.

## AIR-GUN.

SPECIFICATION forming part of Letters Patent No. 229,868, dated July 13, 1880.

Application filed December 23, 1879.

*To all whom it may concern:*

Be it known that I, WILLIAM T. CHAMBERLAIN, of Norwich, in the county of New London and State of Connecticut, have invented a new and useful Improvement in Air Guns and Pistols, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a side elevation of the arm embodying my invention. Fig. 2 is a central longitudinal section thereof.

Similar letters of reference indicate corresponding parts in the two figures.

My invention consists of the stock of the arm, hollow or partly hollow, receiving air under pressure and communicating with the barrel, in combination with an intermediate cock or rotary plug, which, when properly operated by the finger-piece attached to it without the striking or snapping noise incident to other air guns and pistols, opens the communication between the stock and barrel, whereby the air is directed against the projectile in the barrel and forcibly discharges the same.

The cock or plug is securely held, when closed, by mechanism controlled by the trigger, and by operating the latter said mechanism is released, and by the action of a spring the cock or plug is swiftly rotated and opened.

The invention also consists of an additional cock or plug, whereby the entire volume of air under pressure may be admitted to the projectile, or only a quantity of the same sufficient for the discharge of a single projectile.

It further consists of the air-pump having a foot-valve, in combination with a cock or plug for preventing leakage of air.

Referring to the drawings, A represents the stock of the arm; B, the barrel; C, the breech-block, and D a branch extending from the breech-block to the forward end of the stock, and communicating therewith by means of a duct, *a*.

E represents a cock or plug which is fitted in the walls of the branch D, and serves to open and close the communication between the breech-block or barrel and the stock. To the outer end of said plug E is secured an arm, E', which is attached to a band or annulus, *b*, which is supported on a boss or projection on the

wall of the branch D surrounding the plug E, and is formed with a shoulder or notch, *c*, which, however, may be formed directly on the plug. Formed with or secured to said annulus is a finger-piece, F, and connected to it at what may be termed its "upper" end is a spring, G, which is properly attached to the stock.

H represents a dog pivoted to the stock and formed with a pawl or tooth, J, which projects therefrom in proximity to the shoulder *c*, so as to engage therewith. To the dog is pivoted a link, *d*, whose lower end is attached to a pin, *e*, which is passed through a movable block, *f*, guided in the forward end of the stock above the guard, and which forms an axis for the trigger K, the heel *g* of which is adapted to bear against the stock, and the forward portion of which is in contact with a spring, L, secured to the guard or other proper portion of the stock, so that by pressing the trigger it turns on its heel, and thus lowers the link *d*. After releasing the trigger the spring restores it to its normal position and causes the elevation of the link *d*.

M represents an air-pump, which is firmly connected to a branch, M', of the stock projecting forward therefrom, so as to be beneath the barrel for most conveniently locating the pump; and N represents a cock or plug in said branch M' to assist the foot-valve *h* of the pump in preventing leakage or escape of air from the stock.

To the stock A, adjacent to the branch D, is fitted a cock or plug, P, the opening or bore whereof closes and opens the duct *a*, and consequently opens and closes the communication between the stock and branch D.

The operation is as follows: The plug E is closed by drawing back the finger-piece F as a hammer, so, as it were, to cock the weapon. In the motion of the annulus *b* the plug E is rotated and closed, and the shoulder *c* and tooth J are brought into engaging contact, thus preventing rotation and opening of the plug. The plugs N P are opened and the pump M is operated in order to fill the stock A with air under pressure, said stock thus serving as the air-reservoir, the valve *h* closing and preventing escape of air. The projectile is introduced into the barrel either at the



muzzle or breech, and the weapon is ready for firing. When the trigger is pulled or drawn and the link *d* thereby lowered, the dog J is likewise lowered. This releases the annulus *b* from the holding action of the tooth J, and the plug E, under the power of the spring G, quickly rotates without striking or snapping, and opens a communication between the breech-block or rear of the barrel and the air-reservoir A, and the air quickly reaches the projectile and forcibly impels it from the barrel. The finger-piece or hammer F is now drawn back or cocked, a fresh supply of air pumped into the stock, as before, and the firing may be repeated.

When it is not desired to have the entire volume of air of the stock exert its power on the projectile, the cock P is turned so as to close the duct *a* and admit a single charge of air into the branch D. After the discharge and cocking of the hammer, the cock P is again opened and another charge of air, always of the same pressure as that in the stock, fills the branch D. Then the cock is again closed and the other operations are repeated.

The plug P and hammer or finger-piece F may be connected to cause the automatic operation of the cock by the movement of the plug E.

Should the valve *h* permit the escape or leakage of air into the pump, the cock N is closed, the effect whereof is evident.

I am aware that air guns and pistols have been provided with sliding valves for the admission of air to the projectile and hammers

adapted to strike the projecting stems of said valves. This occasions striking and snapping noises, which are avoided by cocks or rotary valves, which also work with more smoothness than sliding valves, wherefore I have made an improvement in the art; and,

Having fully described the same, I claim as new, and desire to secure by Letters Patent, the following:

1. The hollow stock A and barrel B, with the air-pump M, in combination with the cock E, having an attached finger or thumb piece, F, and the spring G, substantially as and for the purpose set forth.

2. The cock E, having shoulders *c*, in combination with the dog J, link *d*, and trigger K, and the spring G, substantially as and for the purpose set forth.

3. The trigger K, in combination with the block *f* and spring L, and with the link *d* of the dog J and cock E, substantially as and for the purpose set forth.

4. The hollow stock A, barrel B, cock E, and branch D, in combination with the cock P, substantially as and for the purpose set forth.

5. The air-pump M, with the foot-valve *h*, in combination with the hollow stock A and the branch M', provided with a cock, N, substantially as and for the purpose set forth.

WILLIAM T. CHAMBERLAIN.

Witnesses:

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A. P. GRANT.