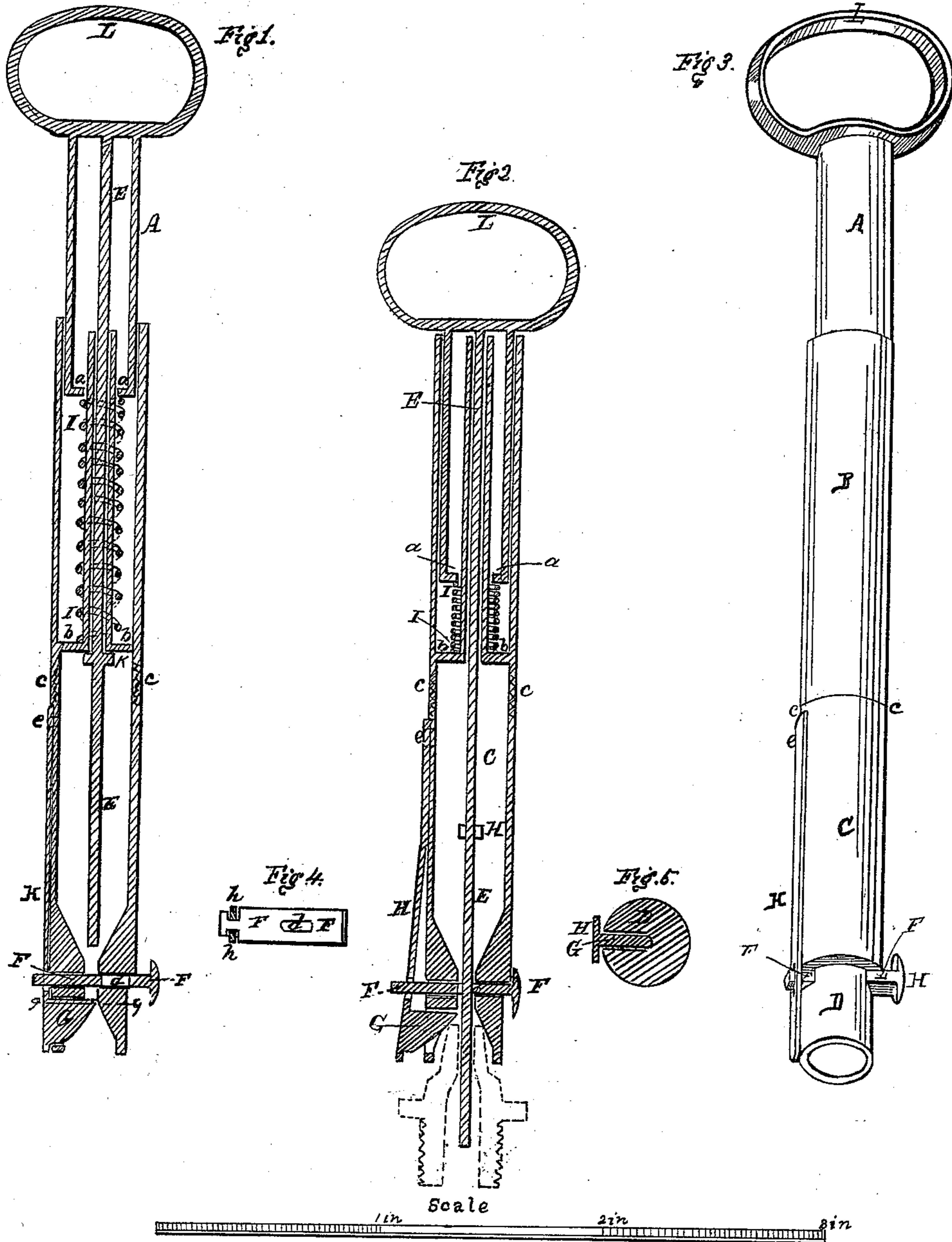


L. H. BRADFORD.  
Primer for Fire-arms.

No. 42,741.

Patented May 17, 1864.



Witnesses.

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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN NIPPLE-PRIMERS FOR FIRE-ARMS.

Specification forming part of Letters Patent No. 42,711, dated May 17, 1864; antedated December 29, 1863.

*To all whom it may concern:*

Be it known that I, LODOWICK H. BRADFORD, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in a Primer for Priming Percussion Tubes or Nipples on Fire-Arms; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings.

My invention has for its object the clearing of percussion-tubes on fire-arms when foul from dampness or other cause, and the conveying of fresh powder into the chamber and tube in sufficient quantity to insure an explosion of the piece with as little waste of time as possible. I entitle it the "percussion-tube primer."

I will give a general description of the drawings.

Figure 1 represents a vertical section through the center of the primer, and shows the position of the several parts when not in use. Fig. 2 represents the same when opened by a percussion-tube (indicated by the dotted lines) and the priming-wire driven home by the piston. Fig. 3 is a perspective view of the primer. Fig. 4 shows the manner of attaching the cut-off to the spring. Fig. 5 is a transverse section of tube-cap, pusher, and spring at *g*, Fig. 1.

To make myself intelligible, I will name the principal parts, and proceed to describe the construction of the primer in detail.

In Fig. 3, A is the piston; B, spring-barrel; C, powder-reservoir; D, tube-cap; F, cut-off; H, pusher-spring.

In Figs. 1 and 2, E E represent the priming-wire; I I, spiral spring; K, collar; G, pusher; L, finger-band.

To the head or top of the piston A the priming-wire and finger-band are connected. At the bottom of the piston is a diaphragm, *a a*, Fig. 1, which has a hole in it, through which passes the inner tube of the spring-barrel. The diaphragm rests on the spiral spring I I. The priming-wire passes within the inner tube of the spring-barrel and through the powder-reservoir. The piston plays within the outer tube of the spring-barrel.

The spring-barrel B consists of an outer and inner tube, connected by a diaphragm, *b b*.

The inner tube is to keep the spiral spring in place; the outer tube for the piston to play in. The diaphragm *b b* serves the purposes of the foundation for the spiral spring to rest upon, a stop on the piston, by means of the collar K on the priming-wire, and a separation between the powder-reservoir and spring-barrel. In the outer tube below the diaphragm is a female screw, *c c*, to connect it with the powder-reservoir.

The spiral spring I I, resting on the diaphragm *b b*, is for the purpose of sending the piston back after pressing it down with the thumb or finger, thus making it easy to operate the primer with one hand while the piece of fire-arm is held by the other hand.

The powder-reservoir C, as its name implies, is for the purpose of holding the powder for priming. At the top a male screw is cut, for connecting it with the spring-barrel at *c c*. At the bottom the inside is made conical, for the purposes of guiding the priming-wire to the hole intended for it to pass through, and allowing all the powder to come before the priming-wire and into the hole leading to the tube-cap when the piston is lifted to its full height.

The tube-cap D is connected with the bottom of the powder-reservoir, and is made conical on the inside for the purpose of guiding the top of a percussion-tube, so that by placing it over any tube the hole in it will be placed directly under the hole leading from the tube-cap to the powder-reservoir, thus making the primer applicable to tubes of different sizes. It may be made to fit a particular size of tube more exact, when desired, by forming the inside of the tube-cap to fit the exact form of the outside of the percussion-tube it is to be used upon.

The cut-off F F is formed as seen in Figs. 1, 2, 3, and 4. It serves the purposes of opening the primer by pressing on the button at one end of it, and a cut-off to prevent the powder from escaping from the powder-reservoir when the primer is not in use. It is connected with the pusher-spring H by means of shoulders bearing on either side of a slot in the spring, as seen at *h h*, Fig. 4, and plays in a horizontal slot between the powder-reservoir and tube-cap.

The pusher G, Figs. 1 and 2, is connected to spring H, and is for the purpose of opening



the primer when it is pressed over a percussion-tube. It is so formed that whatever the size of the top of the tube, when the primer is pressed home on it, the pusher will open the primer by means of its connection with the spring and cut-off. It moves in a vertical slot in the tube-cap, as shown in the transverse section, Fig. 5, being on the line *g g*, Fig. 1.

The pusher-spring H is attached to the powder-reservoir at *e*, and has for its purpose the sending of the pusher G and cut-off F home when the primer is taken from the tube after use.

The finger-band L is connected to the piston, and is for the purpose of operating the primer by encircling the end of the thumb or finger, thus enabling a person using it to move the piston up or down while holding the primer in one hand. It may be used in connection with a spiral spring, as herein described, or the spring may be dispensed with.

To operate with the primer, the tube-cap is pressed with sufficient force over the percussion-tube to move the pusher and cut-off back, so that the hole *d* in the cut-off is brought into line with the holes in the powder-reservoir and tube-cap. After clearing the tube with the priming-wire, by playing the piston with the thumb or finger, the chamber and tube will be charged with powder from the powder-reservoir. In this way a piece of fire-arm which hangs fire from a foul tube may be made to explode in a rapid and efficient manner.

The pusher G may be made to serve the double purpose of a cut-off and means of open-

ing the primer, dispensing with the cut-off, as described herein; but as by wear it may become useless, I have deemed it advisable to have the cut-off so that the primer may be opened by pressing the finger on it, as herein specified.

What I claim as my invention, and desire to secure by Letters Patent, is the improvements in the percussion-tube primer herein described, viz:

1. The piston with priming-wire and collar attached, with or without the finger-band resting on a spiral or other suitable spring, in combination with a spring-barrel, powder-reservoir, tube-cap, pusher, and cut-off, as herein described, or any device substantially the same, for the purpose specified.

2. The pusher G and spring H, either with or without the cut-off, in combination with the tube-cap, powder-reservoir, spring-barrel, piston, and priming-wire, as herein described, or any device substantially the same, for the purpose specified.

3. The finger-band connected to the piston, playing in the spring-barrel, with or without a spiral spring, in combination with the powder-reservoir, tube-cap, pusher, cut-off, and priming-wire, as herein described, or any device, substantially the same, for the purpose specified.

L. H. BRADFORD.

Witnesses:

EMERY SOUTHER,  
H. A. DAVIS.