J. GRAY.

Magazine Gun.

No. 48,622. Patented July 4, 1865.

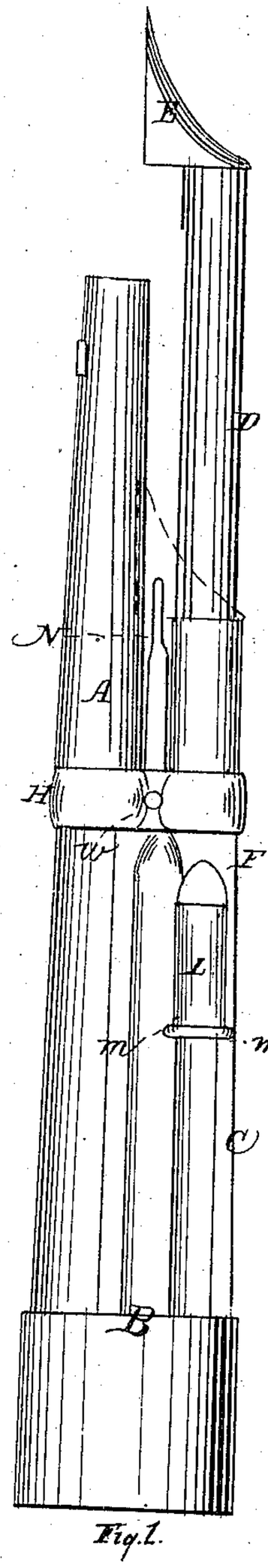

Fig. 1.

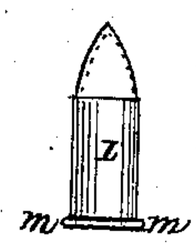

Fig. 3.

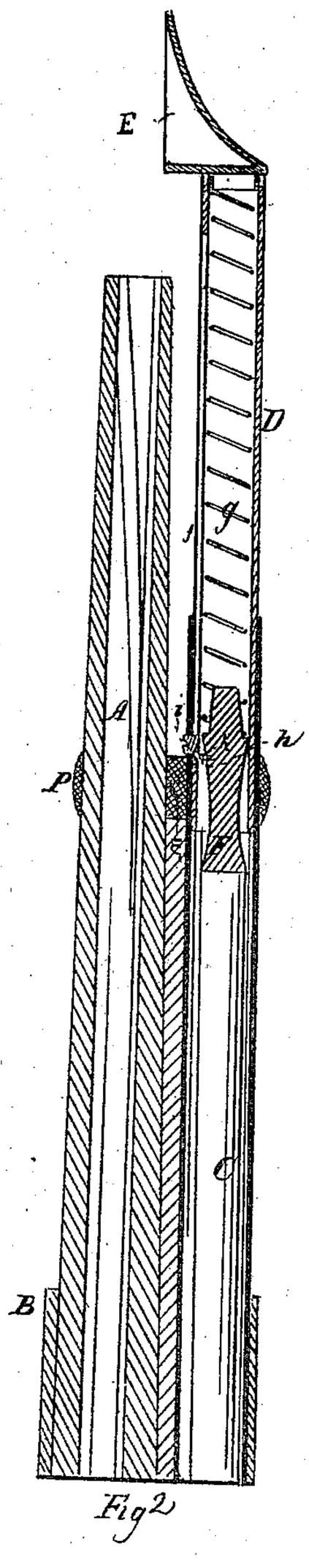

Fig 2

Witnesses: N. Amos, Wm. H. Clarke

Inventor, Joshua Gray

UNITED STATES PATENT OFFICE.

JOSHUA GRAY, OF MEDFORD, ASSIGNOR TO HIMSELF, E. H. ELDREDGE, OF BOSTON, AND W. G. LANGDON, OF MALDEN, MASSACHUSETTS, AND S. S. BUCKLIN, OF PROVIDENCE, RHODE ISLAND.

IMPROVEMENT IN MAGAZINE FIRE-ARMS.

Specification forming part of Letters Patent No. **48,622**, dated July 4, 1865.

To all whom it may concern:

Be it known that I, JOSHUA GRAY, of Medford, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Magazine Repeating-Rifles; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation of that part of a rifle to which my invention relates. Fig. 2 is a longitudinal central section of the same, and Fig. 3 is a side elevation of a metal-cased cartridge.

Like parts are indicated by the same letters in all the drawings, which are intended to be full-sized.

The nature of my invention consists in the employment of a side opening, L, for the introduction of cartridges in the outer tube, C, of the magazine, so that the inner tube (which contains the spring and follower) may never have to be removed, and can be prevented, by means of a stop-pin, *i*, from ever working out and being lost; and in so shaping said opening L in the magazine that it will be impossible to insert a cartridge wrong end foremost, whereby I prevent all possibility of ever clogging the rifle by improper loading in the excitement of action, in the cold, in the dark, or at any other time.

To enable others skilled in the art to make and use my improvements, I will now proceed to describe the construction and operation of the same.

A represents the barrel of the rifle; B, a portion of the stock; C, the magazine, and P the band which confines the magazine to the barrel, *ic* being a screw or pin which passes through said band and a portion of the barrel, whereby the magazine is prevented from turning or twisting round the barrel.

The magazine C consists of a thin tube of suitable metal, open at both extremities, and arranged in relation to the barrel as shown in the drawings. In the side of this tube C, as represented in Fig. 1, is an opening, L, the shape of which corresponds with a longitudinal central section of the metal-cased cartridge L, (shown in Fig. 3,) and just large enough to barely admit the said cartridge when it is presented in the proper position—*i. e.*, when the expanded percussion end *m' m* of the cartridge is so presented to the opening as to enter the corresponding recesses *m m*. If the cartridge, thus constructed, be presented in any other position to the opening L, it is obvious that the expanded percussion-flange *m'* cannot enter it, and thus it will be impossible to insert a cartridge under any circumstances wrong end first; and when it is remembered how many rifles, especially in the dark, cold, or excitement of action, are wrongly loaded, clogged, and thereby rendered worse than useless, the utility of my improvement cannot be too highly rated.

D is the inner tube, provided with the usual follower F and spiral spring *g*. The diameter of this tube is such as to allow it to just slide with freedom in the magazine C. The relative length of this inner tube is shown in Fig. 2. It is prevented from ever coming entirely out of the magazine C by means of a stop-pin, *i*, which is fast in the said magazine, and projects therefrom into a longitudinal slot, *j*, in said inner tube, as clearly shown in Fig. 2.

The follower F is prevented from ever being thrown out of the inner tube, D, by means of the pin *h*, which also plays with freedom in the longitudinal slot *j*.

The full lines in Figs. 1 and 2 represent the inner tube drawn out far enough to allow the cartridges to be inserted in the opening L, below the follower F.

E is the cap or cover of the outer end of the inner tube, D, shaped as clearly shown in Figs. 1 and 2. When the inner tube is forced into the magazine so that the cap E shall be in the position shown by the dotted lines in Fig. 1, it is held in place by means of the spring-latch N, which enters the same and catches onto a rib or flange.

When it is required to draw out the inner tube, D, the spring-latch N is pressed in by the thumb or finger, which leaves it free to slide into the position shown in Fig. 2.

Having thus described the nature of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. So shaping the opening L in the magazine that it will be impossible to insert a cartridge wrong end first, substantially as described.

2. The slot or stop *j* and a pin or stop, *i*, or their equivalents, to prevent the inner tube, D, from ever coming out of the magazine C, substantially as described.

JOSHUA GRAY.

Witnesses:
N. AMES,
GEO. R. CLARKE.