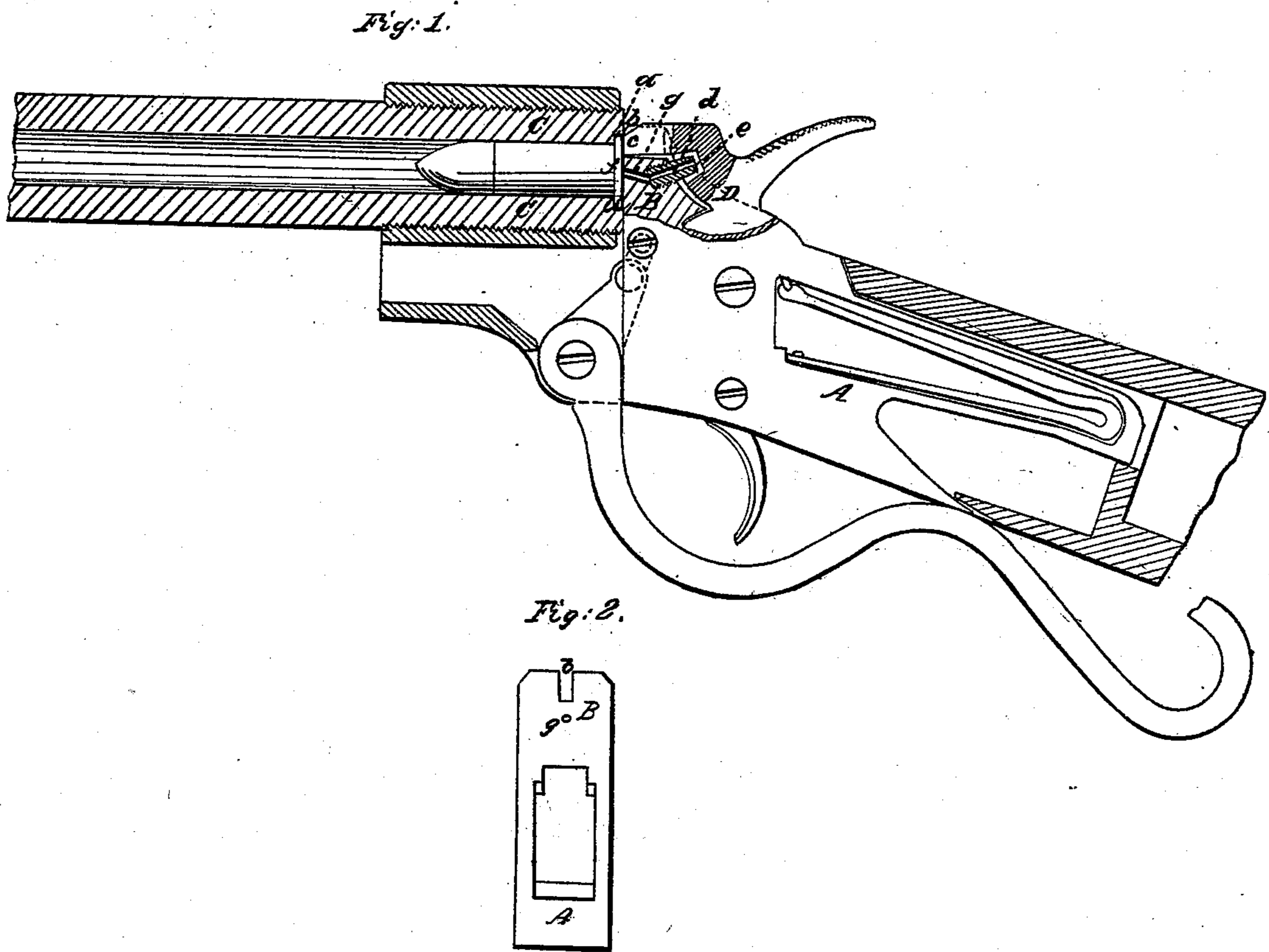


MERWIN & BRAY.
Breech-Loading Fire-Arm.

No. 41,166.

Patented Jan. 5, 1864.



Witnesses:
Reuben Rice
Chas. E. Barnitt

Inventors
Osmond Merwin
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UNITED STATES PATENT OFFICE.

JOSEPH MERWIN AND EDWARD P. BRAY, OF NEW YORK, N. Y.

IMPROVEMENT IN FIRE-ARMS.

Specification forming part of Letters Patent No. 41,166, dated January 5, 1864; antedated December 19, 1863.

To all whom it may concern:

Be it known that we, JOSEPH MERWIN and EDWARD P. BRAY, both of the city, county, and State of New York, have invented a new and useful Improvement in Fire-Arms; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, which illustrate the application of our invention to C. F. Ballard's fire-arm patented November 5, 1861.

Figure 1 is a side view representing the frame and a portion of the barrel in section and the breech-block and hammer partly entire and partly in section. Fig. 2 is a front view of the breech-block.

Similar letters of reference indicate corresponding part in both figures.

This invention relates to breech-loading and revolving fire-arms constructed to load with fixed ammunition, in which the fulminating priming is contained in a hollow flange surrounding and projecting radially from the rear end of the metallic shell; and its object is to provide for the loading of such fire-arms with loose powder and ball when the supply of fixed ammunition has been expended and more cannot be obtained, and the firing by means of an ordinary percussion-cap; and to this end it consists in the employment, in combination with a nipple or nipples and vent or vents suitably applied to and provided in such a fire-arm, of a hammer so constructed and applied that its nose will strike the flange or flanges of the shell or shells of the fixed ammunition, when that is used, without any portion of it striking the nipple or nipples; but when the fixed ammunition is not used, and percussion-caps are placed upon nipple or nipples, the hammer will strike the caps and explode the fulminate contained therein.

To enable others skilled in the art to make and use our invention, we will proceed, first, to describe its construction and operation with reference to the particular arm represented, and then to explain briefly its application to other arms.

A B is the movable breech-block, the upper part, B, constituting the actual breech. C is the chamber, and D is the hammer. The rear of the chamber is countersunk, as shown at *a a*, Fig. 1, for the reception of the flange *f*

of the shell E of the fixed ammunition. *b* is the narrow slot in the upper part of the breech, through which the thin nose *c* of the hammer strikes the flange. *d* is the nipple screwed into the part of the breech which comes opposite to the center of the chamber, and *g* is the vent leading from said nipple through the breech. The portion of the front of the hammer below the nose which comes opposite to the nipple is recessed, as shown at *e* in Fig. 1, or otherwise so constructed that when the arm is loaded with fixed ammunition the nose *c* will strike the flange *f*, as shown in Fig. 1, and the part *e* will be stopped a little way from the nipple, as shown in the same figure, and not bruise or mar it; but when the piece has been loaded at the muzzle with loose powder and the nipple capped, the nose will enter the countersink *a* of the chamber, and the part *e* of the hammer will strike and explode the cap.

The nipple may be applied in the same manner, in combination with the same construction and arrangement of hammer, to almost all, if not all, kinds of breech-loading fire-arms constructed for the same kind of fixed ammunition, and may be applied to revolving fire-arms by the use of a rotating recoil-shield, such shield having slots like *b*, corresponding with the number of chambers for the entrance of the nose of the hammer, and being provided with a corresponding number of nipples, of which one is arranged relatively to each of said slots and to each chamber in the same manner as the nipple *d* is arranged relatively to the slot *b* and chamber of the breech-loading arm.

What we claim as our invention, and desire to secure by Letters Patent, is—

The arrangement of the vent *g* and nipple *d* in the breech-piece B, in combination with the hammer D, the recess *e*, nose *c*, chamber C, and shell E, as herein shown and described, so that, without removal or alteration of the breech-piece, either fixed or loose ammunition may be employed, as set forth.

JOSEPH MERWIN.
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Witnesses:

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