

(No Model.)

A. H. HEBBARD.

BREECH LOADING SMALL ARMS.

No. 247,056.

Patented Sept. 13, 1881.

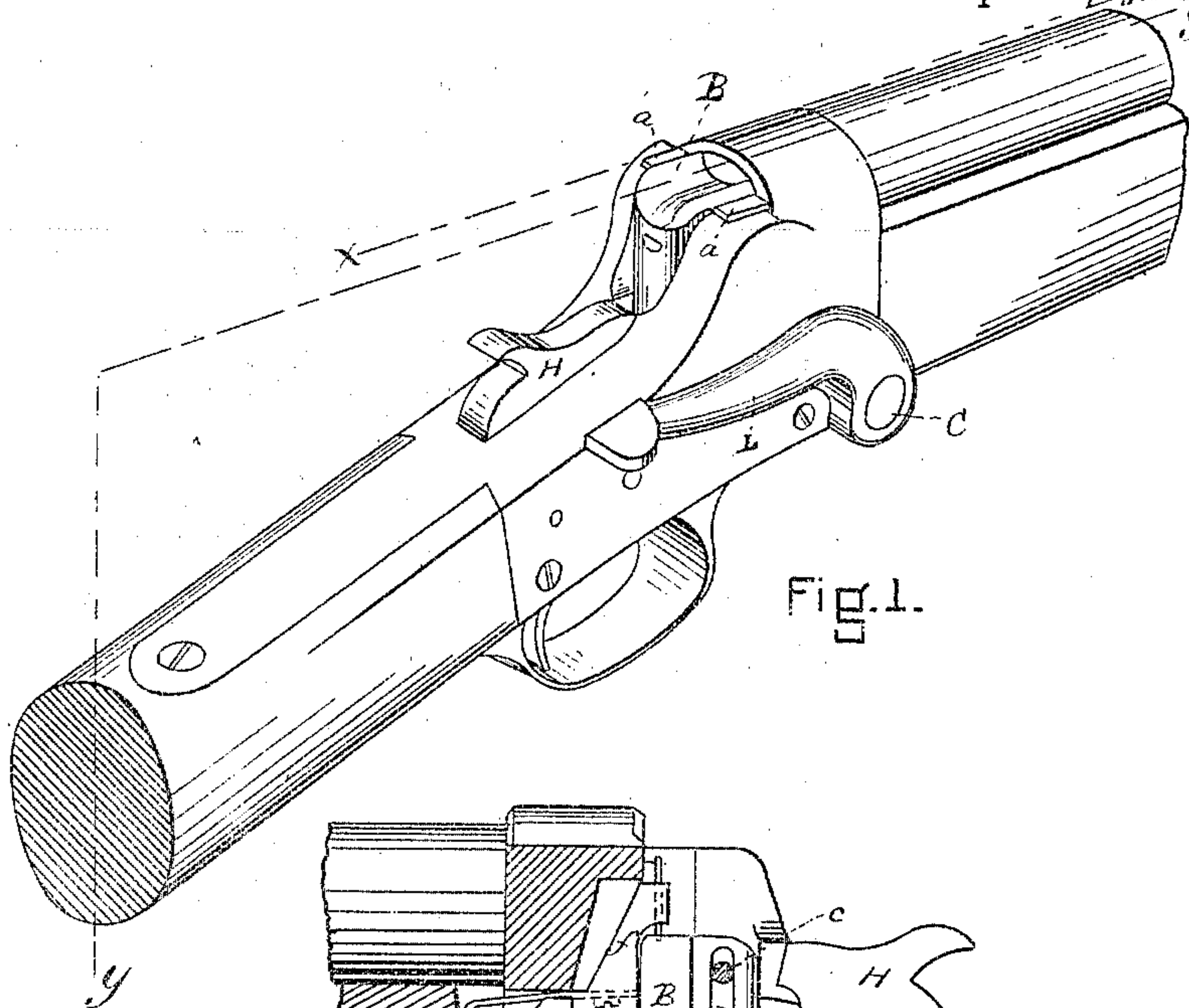


Fig. 1.

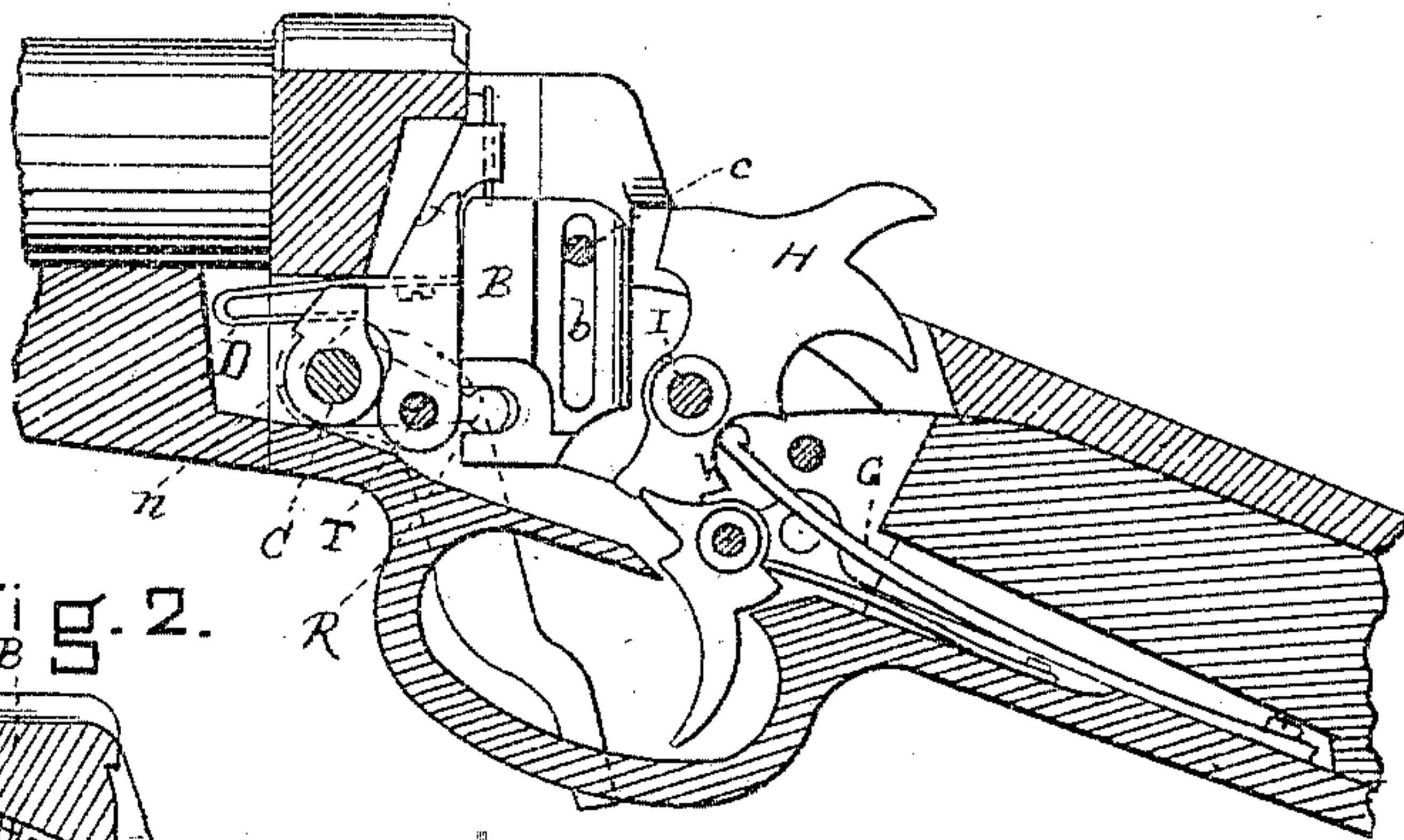


Fig. 2.

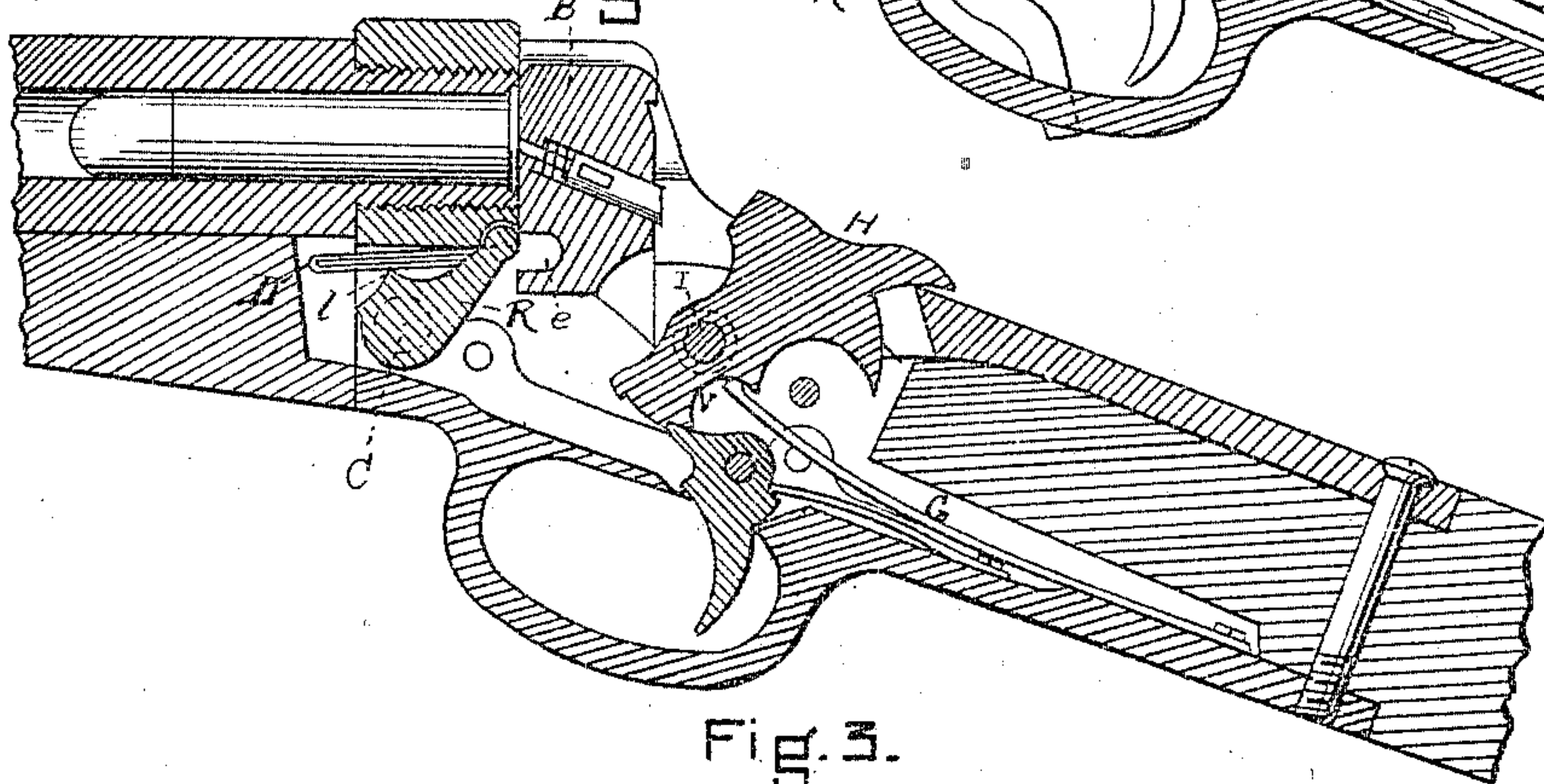


Fig. 3.

WITNESSES

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ALBERT H. HEBBARD, OF CAMBRIDGE, MASSACHUSETTS.

BREECH-LOADING SMALL-ARMS.

SPECIFICATION forming part of Letters Patent No. 247,056, dated September 13, 1881.

Application filed January 10, 1881. (No model.)

To all whom it may concern:

Be it known that I, ALBERT H. HEBBARD, of Cambridge, in the county of Middlesex and State of Massachusetts, have invented new and useful Improvements in Breech-Loading Guns, of which the following is a specification.

My invention relates to that class of breech-loading guns which have a breech-block moving at right angles to the bore; and the invention consists of a vertically-sliding breech-block operated by an arm attached to a rock-shaft, which, in turn, is moved by a thumb-lever at the side of the receiver or frame, the rock-shaft having an angular projection bearing against a spring in such a manner that the breech-block, after being moved a certain distance, is thrown automatically the rest of the distance, and is held either open or closed, as the case may be.

In the accompanying drawings, in which similar letters of reference indicate like parts, Figure 1 is a perspective view. Fig. 2 is a sectional view on line *x x*, Fig. 1. Fig. 3 is a longitudinal vertical section on line *y y*, Fig. 1.

To construct a gun on this plan I make the receiver A with a vertical mortise or opening in its general form like that of the well-known Sharps rifle, the barrel being screwed into the front end of the receiver, in the usual manner.

The breech-block B consists of a solid piece of metal of the form shown in Figs. 1 and 3, it being provided on its sides with rectangular projecting ribs *a*, which slide in vertical grooves of corresponding shape and size made on the inner faces of the cheeks or sides of the receiver, as shown in Fig. 1; (or, if desired, the ribs may be upon the receiver and the grooves on the breech-block, and the same effect be produced.) Near its lower end, and on its front face, this breech-block B has a recess or groove, *c*, cut in it, as shown in Figs. 2 and 3, in which engages the end of an arm, R, which is rigidly attached to a transverse rock-shaft, C, mounted in the receiver near its front lower corner, as shown, with one end extending through the receiver on the right-hand side, and to which projecting end is secured a thumb-lever, L, as shown in Fig. 1.

The body of the arm R, where it surrounds the shaft C, is made of the form shown in Fig. 3, or substantially so, by which there is left an

angular lip or projection, *l*, on its upper side, and which lip or projection bears against a spring, D, as shown in Fig. 3. On each side of this lip *l* the piece is flattened, so that when the arm R is moved by the lever L the lip first compresses the spring; but after it has passed the center the spring operates to throw it, and with it the breech-block B, after which the spring, pressing on the flat face at either side of the lip *l*, holds the parts stationary, thereby holding the breech-block either up or down, according as the spring bears on one or the other of the flat faces on the opposite sides of the lip *l*. A modification would be to provide a slot in the arm R, by which means it would engage a horizontal pin which could extend across the bottom of the breech-block.

An extractor, which, however, I do not claim as new, is shown, consisting of a lever, *f*, Fig. 2, pivoted at its lower end on a pin, T, and having its upper end fitted into a suitably-formed recess, so as to bring its lip in the proper position to engage under the flange of the shell when in the chamber of the arm. This extractor is operated by an arm or projection, *n*, which may be formed on the body of said arm, so as to move with it. In practice it will be made solid with the arm R, and as part of it, the whole being forged in a single piece, and then finished up in the usual manner.

In order to limit the movement of the breech-block B, a vertical groove, *b*, is cut in one side, as shown in Fig. 2, and a screw, *e*, is inserted through the side of the receiver in such a position that its inner end will enter the slot *b*, and thus serve as a stop to limit the movement of the block.

As shown in Fig. 3, the arm R and the breech-block B may be so proportioned and arranged that when the latter is elevated the end of the arm will just bear against the block sufficiently to prevent the latter from dropping down, and when the parts are in that position it is only necessary to turn back the screw *e* far enough to withdraw its inner end from the slot *b*, when the breech-block can be at once removed, there being a small notch in its rear face for the thumb-nail to engage in to lift it out, or by turning the arm over it will drop out.

The hammer H is located centrally in the frame, directly in rear of the breech-block, as

shown in the drawings; and in order that it may be sufficiently low to permit the cartridge to be inserted and extracted over the top of it, I so construct and arrange this hammer that although its head, when swung forward, will be so high as to be in the way of the cartridge or shell, when drawn back it will occupy a lower position, out of the way of the shell, and enable the gun to be cleaned from the rear.

As shown in Figs. 2 and 3, the hammer H is pivoted upon a pin or journal, K, in such a position that when the nose of the hammer strikes the firing-pin the face of the nose will stand in a vertical line parallel with the rear face of the breech-block B, at which time the top of the hammer will be in its most elevated position.

The mainspring G has its front or free end arranged to bear in the recess V, cut in the back of the hammer, for the purpose of transmitting power to the hammer in order to explode the shell.

The upper front edge of the breech-block is slightly beveled, so that in case the cartridge should not be fully in its seat the breech-block

as it is closed will force it in, and thus prevent the obstruction to the closing of the breech that would otherwise occur.

The lever L, for operating the breech mechanism as described, may be, if desired, located on the under side of the receiver by connecting it to the body of the arm R and extending it through a suitable opening made in the bottom of the receiver, instead of locating it at the side.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

The combination of the sliding breech-block B, provided with the recess *c* and slot *b*, with screw *e*, rock-shaft C, and arm R, provided with the shoulder or lip *l*, spring D, and side lever, L, all constructed and arranged to operate substantially as shown and described.

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Witnesses:

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