

J. & G. H. NEEDHAM.  
Breech-Loading Fire-Arm.

No. 64,999.

Patented May 21, 1867.

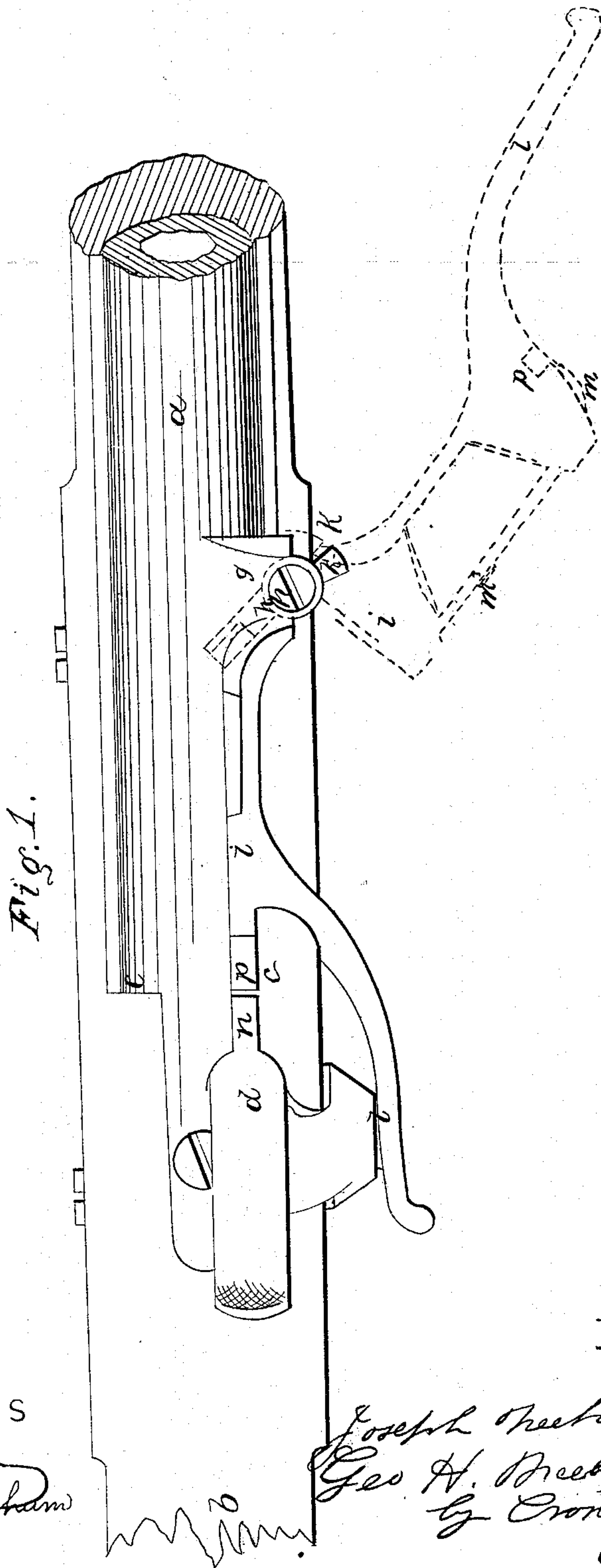


Fig. 1.

Inventor

Witnesses

J. B. Kidder.  
M. W. Frothingham

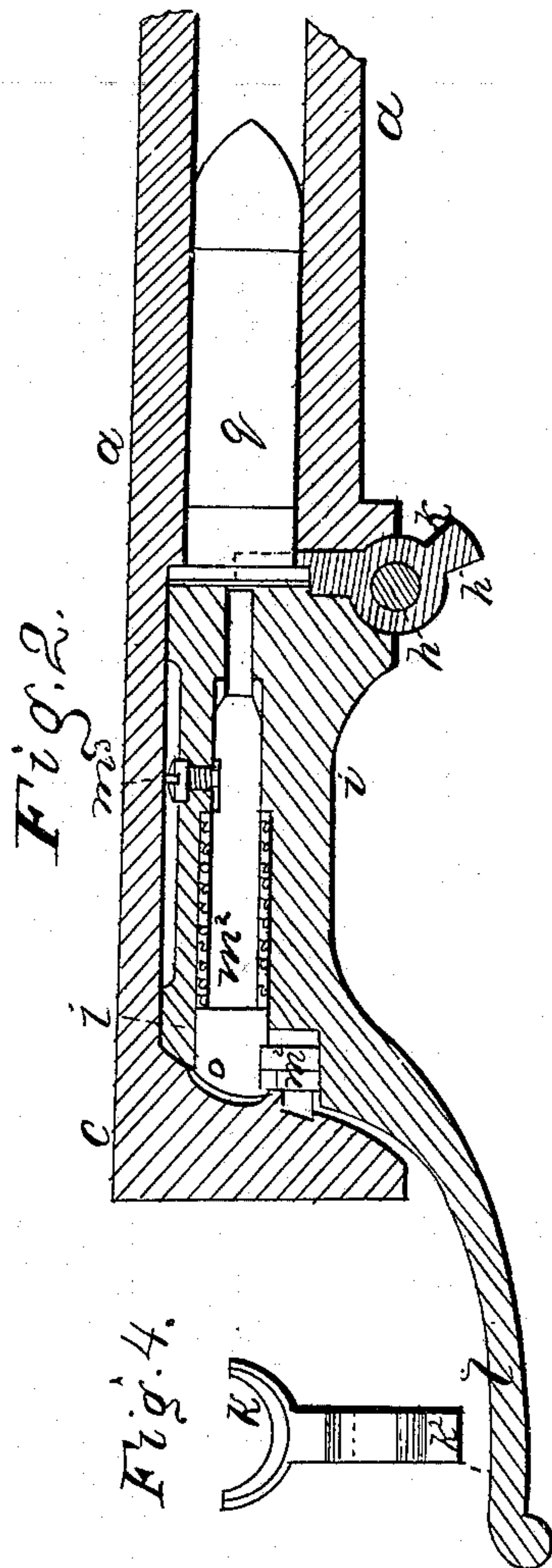
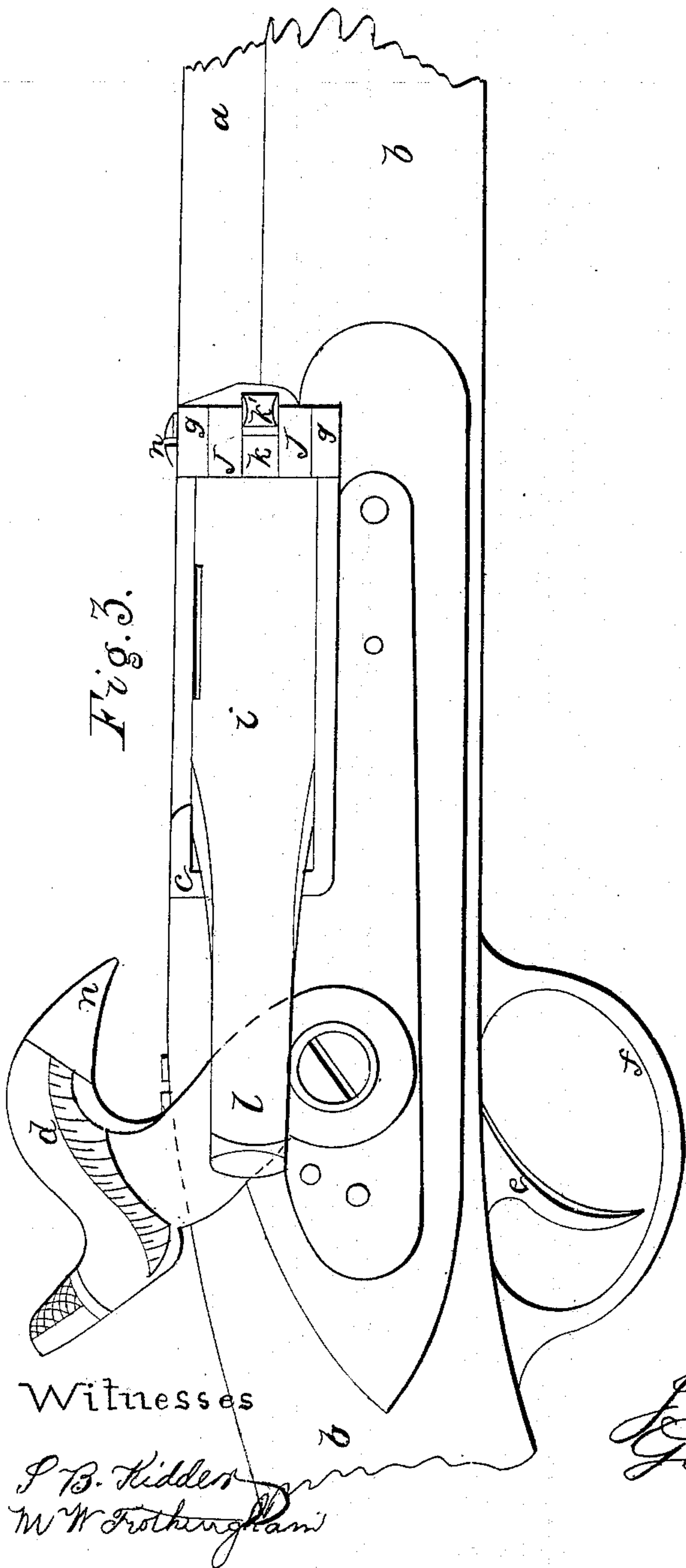
Joseph Needham  
Geo. H. Needham  
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Attys.

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2 Sheets—Sheet 2.

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Inventor

Joseph Needham  
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# United States Patent Office.

JOSEPH AND GEORGE HENRY NEEDHAM, OF LONDON, ENGLAND,  
ASSIGNORS TO JAMES GRAHAM GREY, OF SAME PLACE.

*Letters Patent No. 64,999, dated May 21, 1867.*

## IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that we, JOSEPH NEEDHAM and GEORGE HENRY NEEDHAM, gunmakers, of No. 26 Piccadilly, London, Middlesex county, England, have invented certain "Improvements in Breech-Loading Fire-Arms;" and we do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of our invention sufficient to enable those skilled in the art to practise it.

Our improvements relate to that class of fire-arms in which the charge or cartridge is introduced at the rear, and in which, after firing, the exploded shell is extracted by the action of opening the arm for the introduction of a fresh cartridge, the additional mechanism for effecting these operations being hung to a single joint formed towards the rear of the arm.

In order that our invention be more clearly understood, we have represented it in the four figures of the accompanying drawing, where—

Figure 1 is a plan of the arm, in which the main parts of the barrel and stock are suppressed, the constituent parts of our invention being shown in their two distinctive positions, viz, first, when the arm is closed ready for firing, and secondly, when it is open for the purpose of introducing a fresh cartridge.

Figure 2 is also a plan of the arm, the main parts being in section.

Figure 3, a lateral elevation, the arm being closed and cocked ready for firing; and

Figure 4 a detached view of the extractor.

*a* is the barrel; *b* the stock; *c* the fixed breech; *d* the cock or hammer; *e* the trigger; *f* the trigger-guard, and *g g* the two jaws of a joint forming part of the barrel *a*, and through which our mechanism is connected by means of the pin *h*, the said mechanism being composed of two parts, the breech-piece *i* and the extractor *k*. This breech-piece *i*, which is articulated to the joint *g g* by the jaws *j j*, is composed of a central body entering the arm when closed, and a tail or projecting arm, *l*, for opening and closing the same. Internally it is fitted with a sliding-piston, *m*, which is propelled forward for the ignition of the cartridge *q* by the projection *n* of the cock *d* striking the projection *m*<sup>1</sup> adapted to such piston, and which, on raising the cock, is brought back to its normal position by the spiral spring *m*<sup>2</sup>. A screw, *m*<sup>3</sup>, entering the slot *m*<sup>4</sup> cut in the piston, serves to limit the sliding motion of the said piston. Moreover, when the arm is closed, the cock being raised, the projecting end of the piston *m* in the cavity *o* locks the breech-piece, whilst when the cock has descended and repelled the piston out of the said cavity, the locking of the breech-piece is effected by the projection *n* of the cock entering the groove *p*. Thus before as well as after fire the breech-piece *i* is securely locked in the arm. The extractor *k*, shown separately at fig. 4, rotates partially on the bolt or pin *h*, and assumes two positions: the first when the arm is closed, as in fig. 2, and the second when the arm is open, as shown in dotted lines, fig. 1; the extractor having then drawn out the exploded shell, and it is brought into this position by the action of the breech-piece *i* against the tail *k'* during the latter part of its motion.

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

The arrangement of the breech-piece *i* with its component parts, constructed and operating substantially in the manner described.

JOSEPH NEEDHAM,  
GEORGE HENRY NEEDHAM.

Witnesses:

JOHN HARRISON, *Notary Public, No. 17 Gracechurch Street, London.*

THOS. BROWN, *of same Place, his Clerk.*