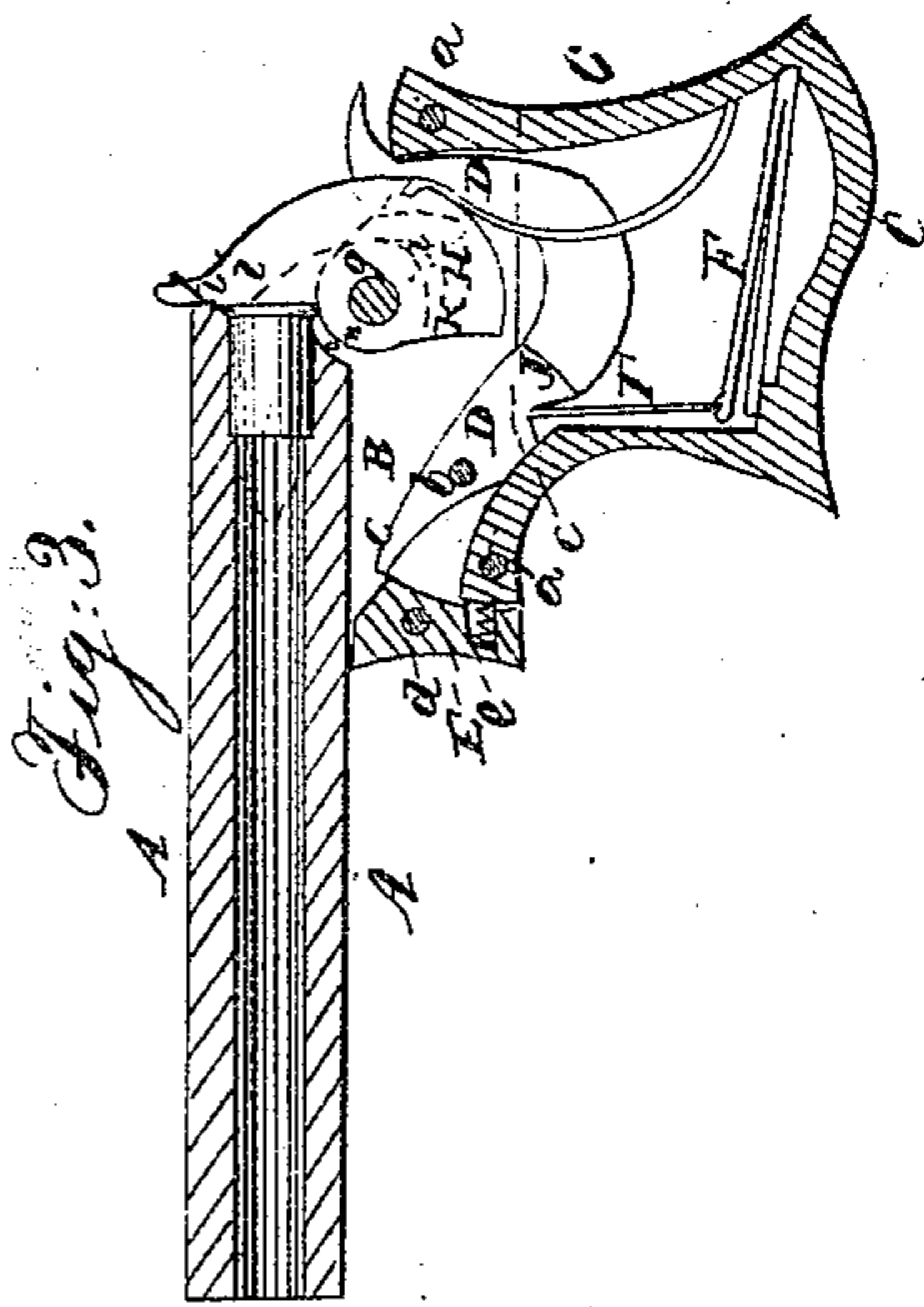
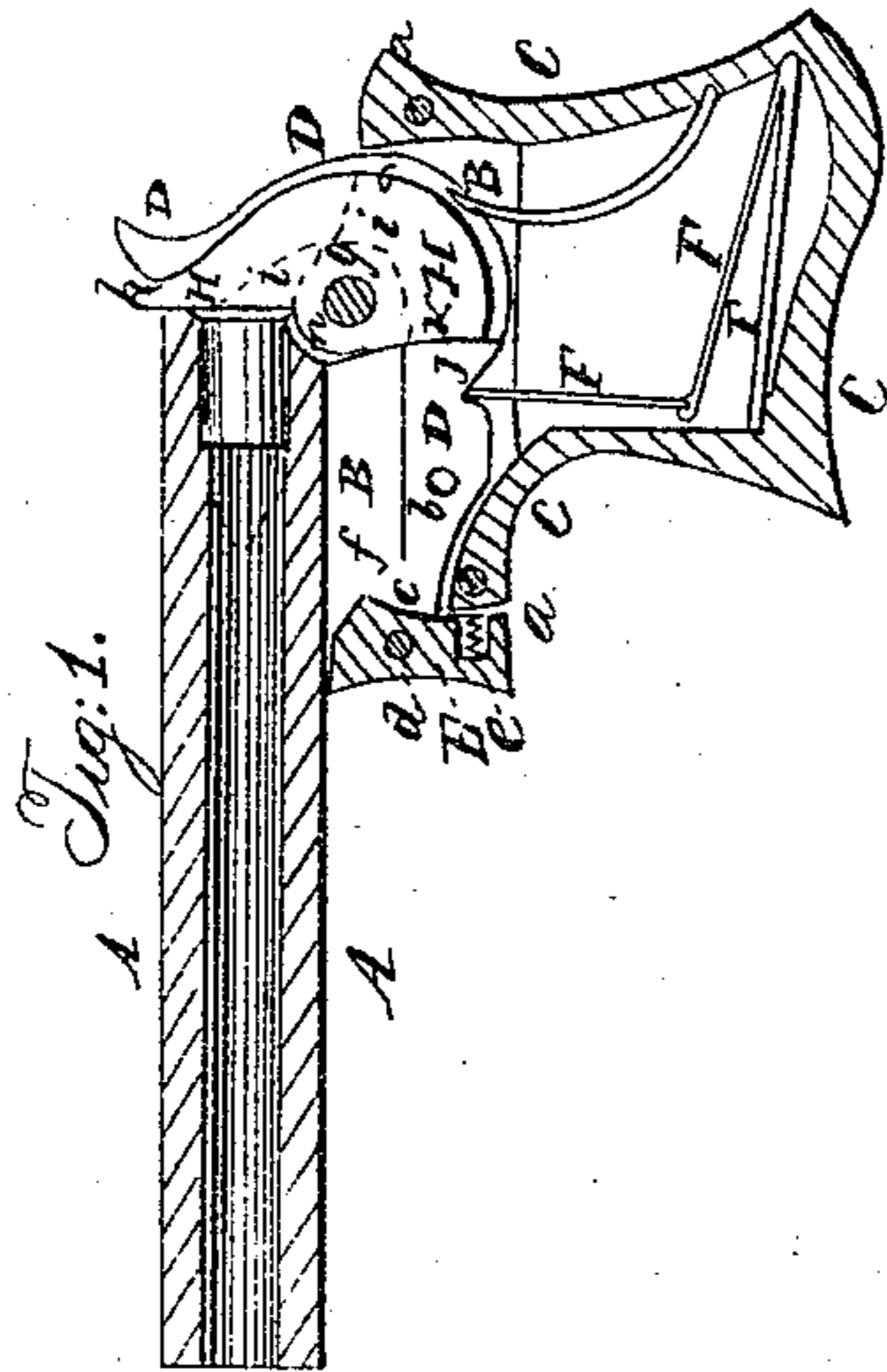
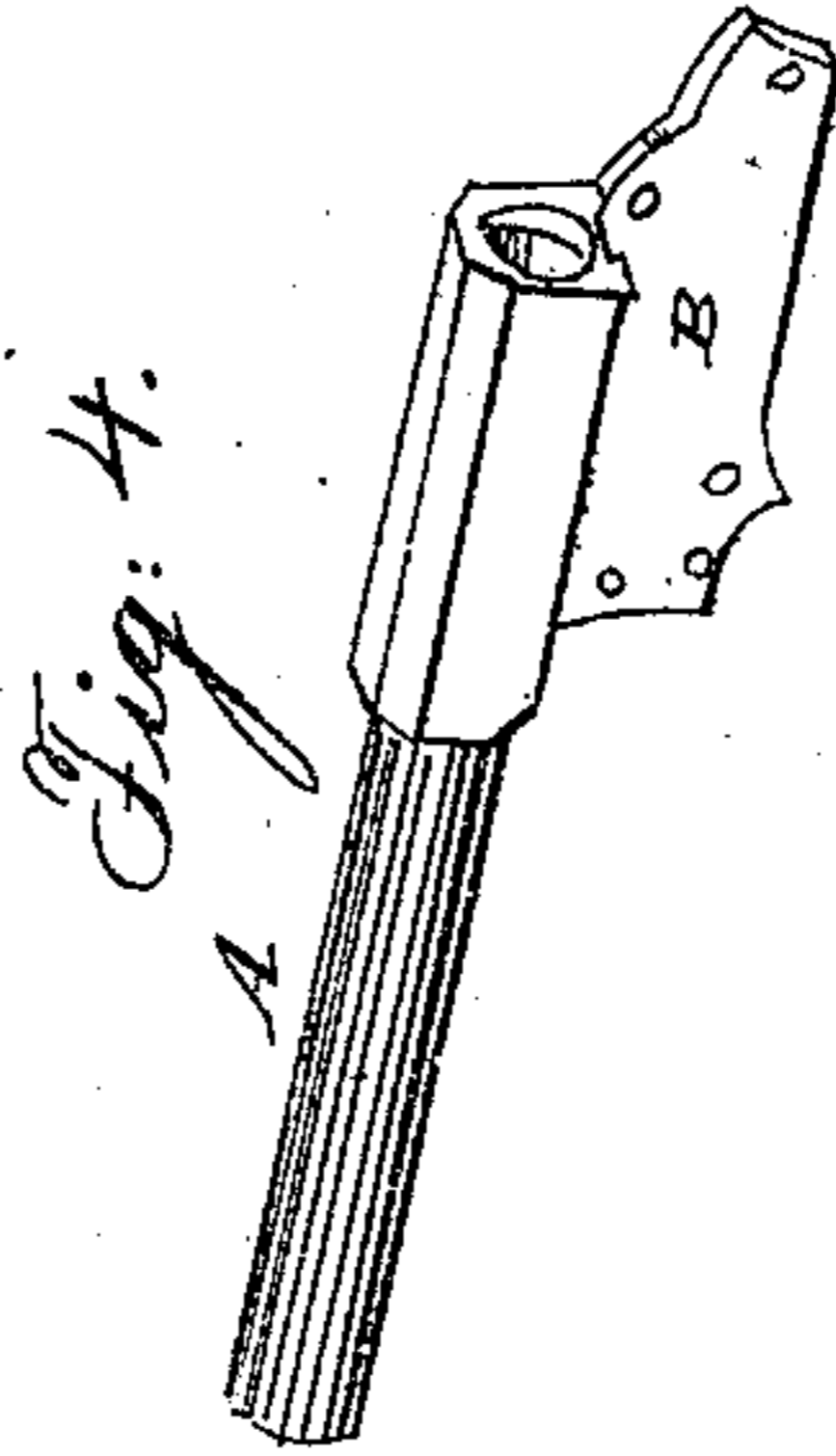
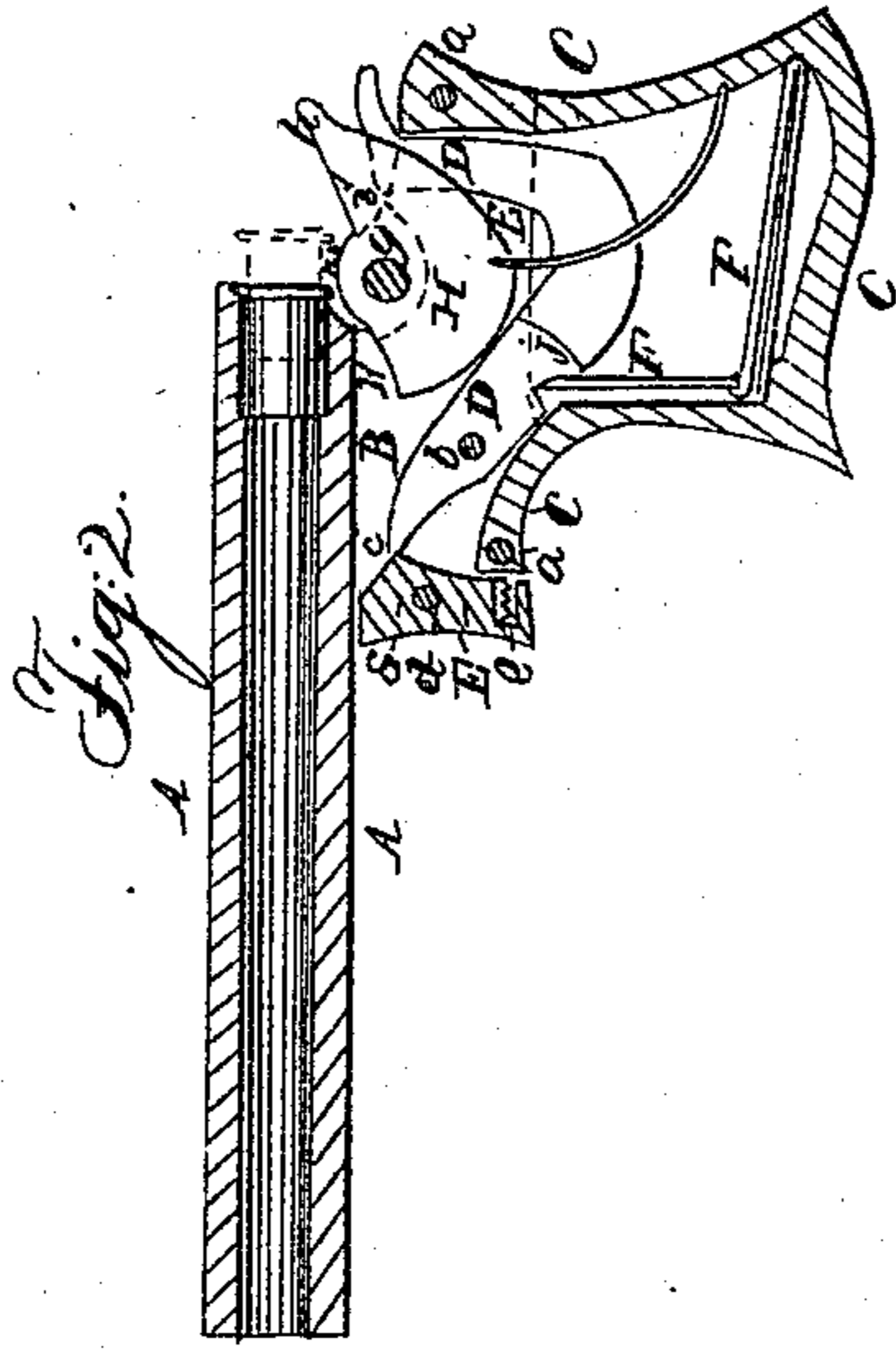


J. RIDER.

Breech-Loading Fire-Arm.

No. 40.887.

Patented Dec. 8, 1863.



Witnesses.

P. M. Wilson  
G. Conis Jr

Joseph Rider  
By Wm. A. B. Saughton

# UNITED STATES PATENT OFFICE.

JOSEPH RIDER, OF NEWARK, OHIO, ASSIGNOR TO HIMSELF AND E. REMINGTON & SONS, OF ILION, N. Y.

## IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 40,887, dated December 8, 1863.

*To all whom it may concern:*

Be it known that I, JOSEPH RIDER, of Newark, in the county of Licking and State of Ohio, have invented certain new and useful Improvements in Breech-Loading Fire-Arms; 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, making a part of this specification, in which—

Figure 1 represents a longitudinal section through a pistol constructed after my plan, showing the breech-plate and hammer in position against the end of the bore of the barrel. Fig. 2 represents a similar section, showing the breech-plate as drawn back and the hammer as on the "cock." Fig. 3 represents a similar section, showing the breech-plate as up against the end of the barrel and the hammer on the cock. Fig. 4 represents a perspective view of the barrel and lock and handle-plate as made in one piece.

Similar letters of reference, where they occur in the several figures, denote like parts of the arm in all cases.

Many devices have been essayed for locking the breech-plate of a breech-loading fire-arm to prevent it from yielding to the force of the discharge, and even the hammer has been used as a locking mechanism; but none of these plans embrace the security and compactness of my plan; nor am I aware that any fire-arm embracing the many advantages that mine does has ever been made so simple, efficient, and cheap as mine.

My invention consists in an improvement in which are known as "breech-loading fire-arms," which improvement I will describe, and specially point out in the claim, which I propose to make.

The barrel A is bored "through and through," so as to load the arm at the breech with a cartridge having a metallic case.

The barrel A, as well as the lock and handle plate B, I form in one piece, which not only facilitates the putting together of the fire-arm, but makes these two pieces firmer, while they serve as a guide for fitting the other pieces also.

The handle and lock-frame C are united to the plate B at *a a*, and these two pieces may

be said to constitute the permanent (immoveable) portions of the fire-arm.

The hammer D is of an S form, though irregular in shape, and is pivoted to the plate B at a point, *b*, which point is forward of the rear end of the barrel A, and the point or tail *c* of the hammer serves as a dog for the trigger E to catch upon and hold at a cock, as shown in Figs. 2 and 3.

F is a mainspring, by which the hammer is actuated when released by the trigger.

The trigger E is pivoted to the plate B at *d*, and a small spring, *e*, forces the lower end of the trigger forward and its upper end rearward, so that it will always be in position to catch the tail *c* of the hammer upon its point or projection *f*, and the compression of this spring lets off the hammer, which strikes the cartridge G and explodes its fulminate or priming and fires the charge in the cartridge.

The breech-plate H is pivoted at *g*, directly under the rear end of the barrel A, and its upper end, *h*, when against the rear end of the barrel, covers the bore thereof, except in one point, where the hammer strikes against a small portion of the heel of the cartridge to explode it. The breech-plate, too, is grooved, as shown by the dotted lines at *i*, so that the hammer D may work into said groove, and when both the breech-plate and hammer are against the end of the barrel, as shown in Fig. 1, occupy, as it were, the same space, thus giving a neat and compact finish to the arm. There is a shoulder, *j*, formed on each side of the trigger-hammer D, (one only being seen,) and against these shoulders the curved side or part *k* of the breech-plate H snugly fits when the hammer is in the position shown in Fig. 1, and these shoulders and surfaces, coming between the pivoted points of said hammer and breech-plate *b g*, firmly locks the breech-plate against the force of the exploding charge, the tendency of the breech-plate, in this position, to fly back being taken on the pin *b* in a direct line with said pin.

The hammer and breech-plate mutually lock each other under the different circumstances of their positions, as follows: When they are in the positions shown in Fig. 1, the breech-plate cannot be drawn until the hammer is first drawn down, and when they are in the po-

sitions shown in Fig. 2 the hammer cannot be let up until the breech-plate is first moved up, thus in the two positions changing their active and passive characters, locking, and in turn being locked, by its adjacent piece or part, with which it works.

On the breech-plate H there is a rigid pin, *n*, against which the flange of the cartridge-case comes, as shown in Fig. 2, when the arm is about to be loaded, allowing said cartridge to be only partially inserted in the bore of the arm, and when the breech-plate H is let up it moves away its pin *n*, and the part *h* of the breech-plate, coming against the cartridge, pushes it home. Thus the charging of the arm with the cartridge is commenced and partially done by hand, but completed by the closing up of the breech-piece, and when the breech-

piece is drawn back to open the chamber of the fire-arm, the pin *n* takes against the flange of the cartridge and draws it partially out, leaving the subsequent removal to be done by hand, and thus the case may be conveniently preserved to be reused.

Having thus fully described the construction and operation of my fire-arm, what I claim therein as new, and desire to secure by Letters Patent, is—

The so combining of the hammer and the independent breech-plate as that they may lock and interlock with each other, substantially as herein described and represented.

JOSEPH RIDER.

Witnesses:

W. W. THOMAS,  
S. B. VALENTINE.