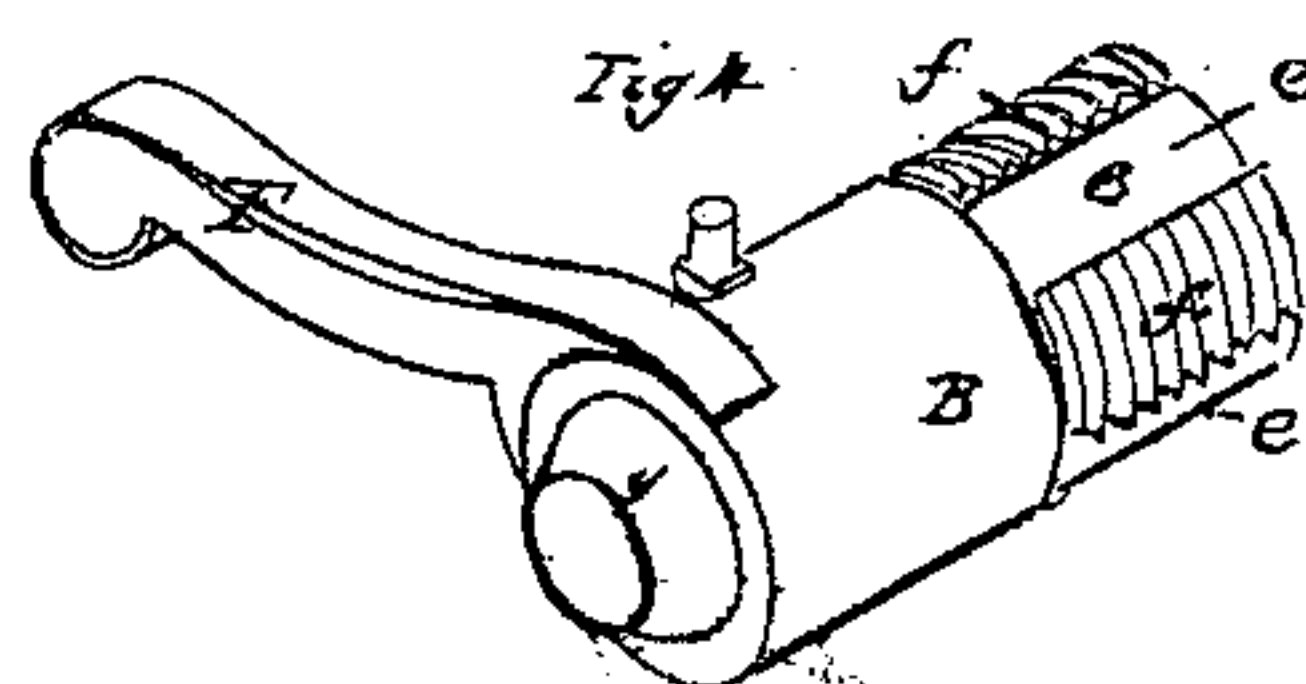
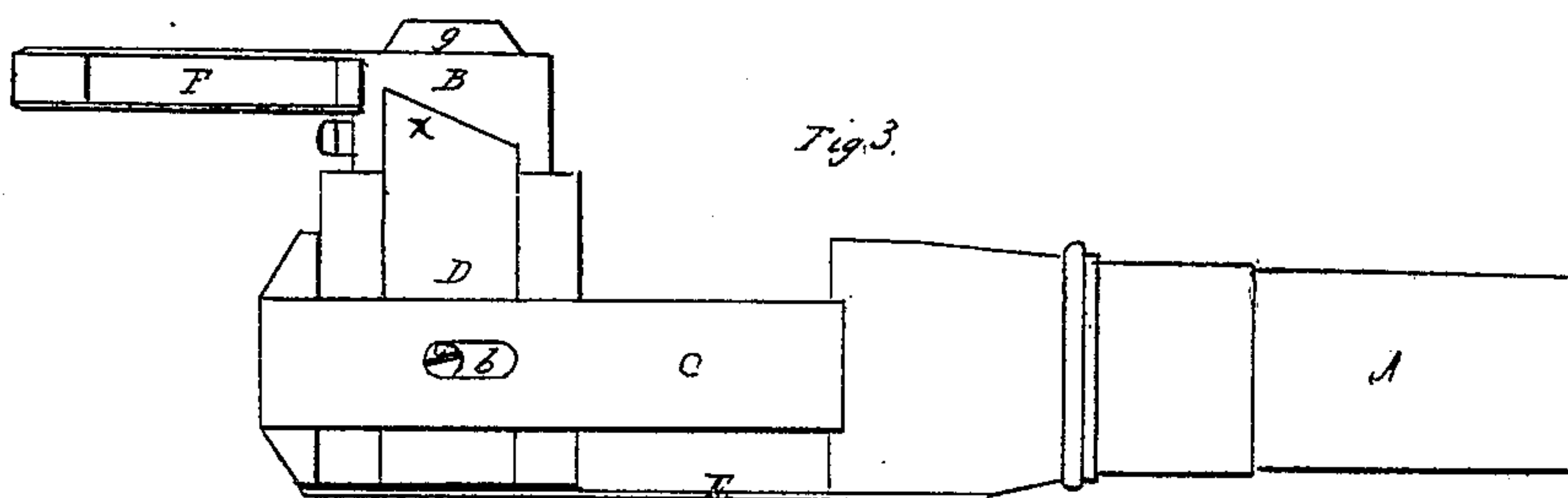
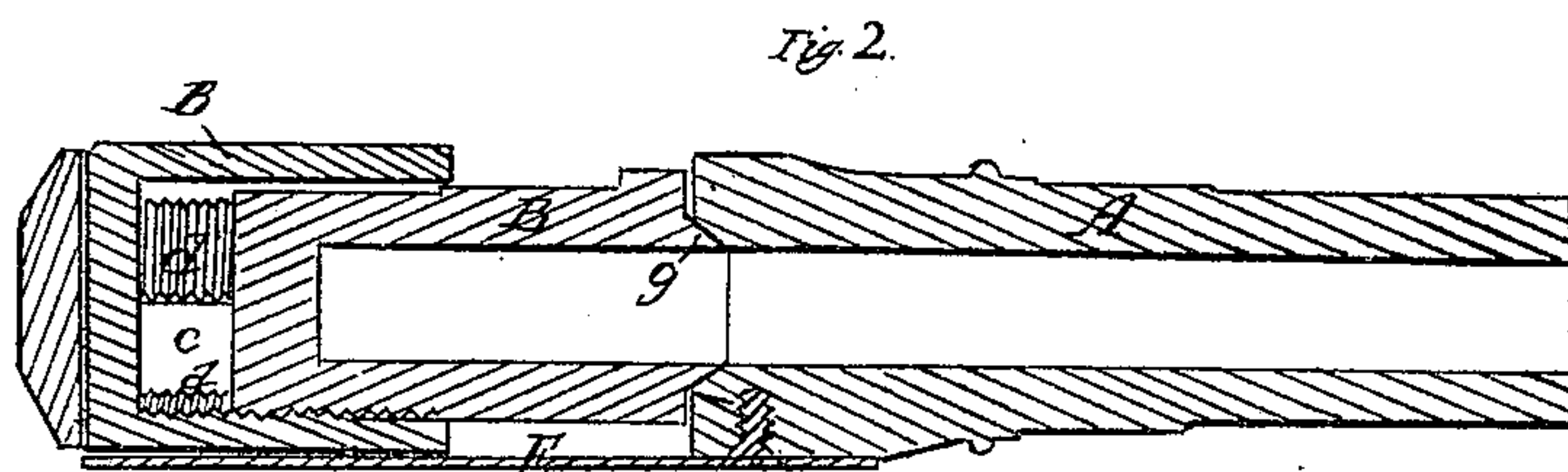
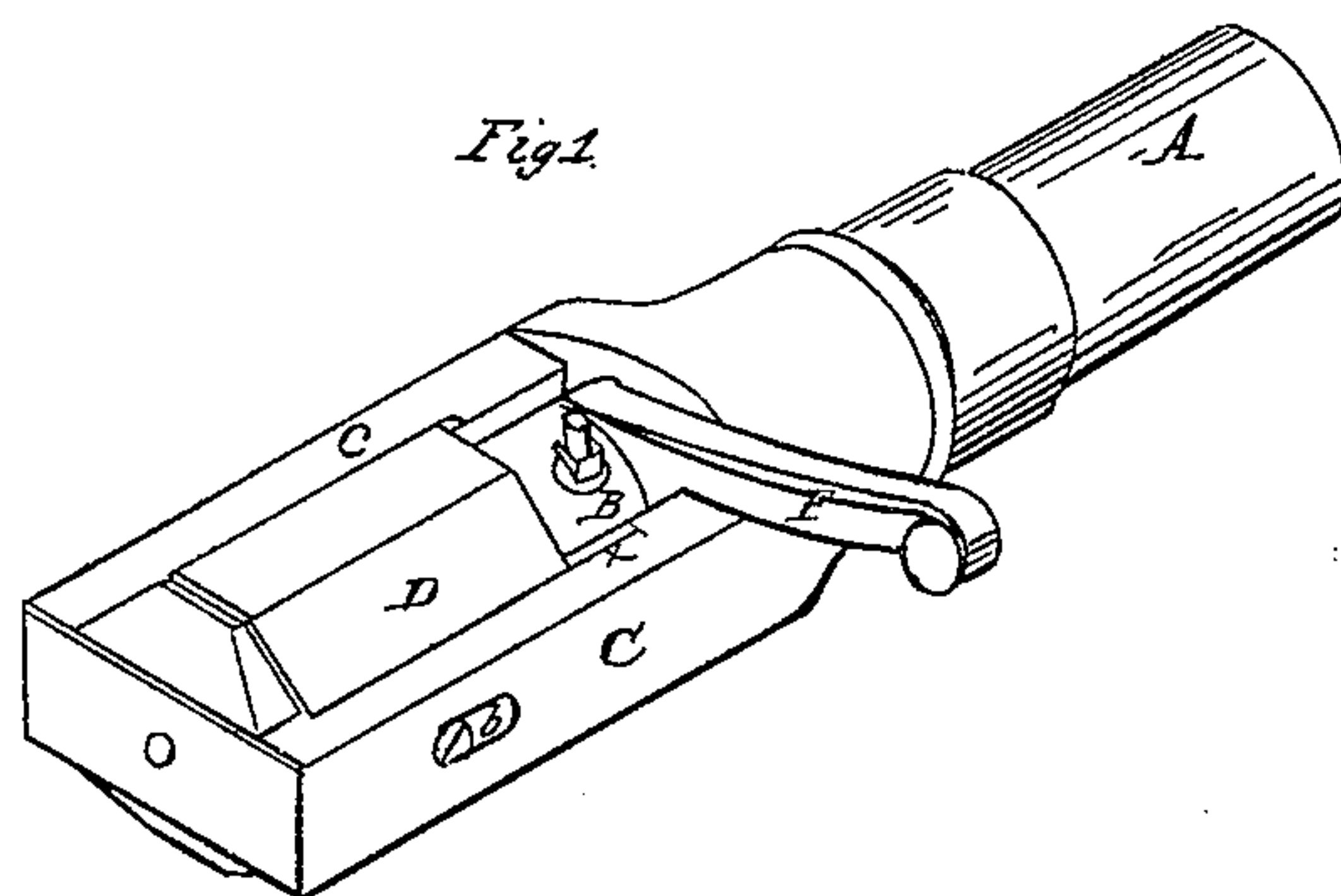


J. D. GREENE.
Breech-Loading Fire-Arm.

No. 10,391.

Patented Jan. 3, 1854.



UNITED STATES PATENT OFFICE.

J. DURELL GREENE, OF CAMBRIDGE, MASSACHUSETTS.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 10,391, dated January 3, 1854.

To all whom it may concern:

Be it known that I, J. DURELL GREENE, of Cambridge, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Breech-Loading Fire-Arms; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is an isometric representation of a gun with my improvement attached; Fig. 2, a longitudinal section through the same; Fig. 3, a side view, showing the movable breech withdrawn from the barrel and revolved into position for loading; Fig. 4, a view of the movable breech.

My invention is of that class of fire-arms in which the movable breech is secured to the barrel by screws, certain portions of which are cut away from both male and female, to allow them to pass each other, when, by a portion of a turn, they are locked together. Heretofore in guns of this description the male screw has been cut upon that portion of the breech which entered the barrel, the rear portion of which was cut with a corresponding female. This arrangement is, however, objectionable, on account of the difficulty of making the joint tight, in consequence of which powder is blown into the screw, which is soon fouled and corroded, when the breech can no longer be brought into place, and the difficulty is increased.

To overcome this inconvenience is the object of my present invention, which consists in cutting the male screws upon the rear of the movable breech, which is made to enter a revolving box or chamber, in the interior of which is the female screw, with which that upon the breech engages, the forward part of the breech being fitted with a conical bearing which enters slightly into the barrel, against which it is forced by the turning of the screw, and a perfectly tight joint is produced.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A is the barrel of the gun; B, the movable breech. C C are side straps, permanently secured in any appropriate manner to the barrel.

D is a box or chamber revolving upon trun-

nions or pivots *a*, which have their bearings in slots *b* in the side straps, C. Upon the interior of the box is cut the female screw. This screw is divided longitudinally into six portions, (more or less,) every alternate portion of the threads being cut away, as at *c*, Fig. 2. The screw-threads upon the other alternate portions are left as seen at *d*, Fig. 2. Upon the rear portion of the movable breech is cut the male screw corresponding to the female in the chamber D. Like the other, this screw is cut away longitudinally, as seen at *e*, Fig. 4, in such a manner that when turned into one position it may be slipped freely into the chamber D, when, by turning the breech, the screws *f* engage with the screw portions *d* of the female, and the two are locked together. Upon the forward end of the breech is the conical projection *g*, which is turned to fit very accurately into a corresponding depression in the rear end of the barrel.

E is a spring, by means of which the revolving chamber D is held in position for loading, as represented in Fig. 3. The revolving chamber D is furnished with ears *x*, which rest in notches or rabbets in the side straps, C, and hold the chamber stationary while the breech is drawn forward.

F is a lever upon the breech B, by means of which it is operated.

Operation: The breech, with its chamber D, being revolved into the position shown in Fig. 3, the gun may be loaded. The breech is then revolved back again and drawn forward into contact with the barrel, Fig. 2, the screw-threads *f* sliding in the spaces *c*. If, now, the breech be revolved, the screw portions will engage with each other, and the breech will be thrown slightly forward, insuring a tight joint between it and the barrel, and locking it firmly with the chamber D.

It is evident that the screw is by the above construction and arrangement of parts entirely removed from the action of the powder, and it is found in practice that there is no practical difficulty in the way of making the joint between the breech and barrel perfectly tight.

I am aware that fire-arms have been constructed in which the breech was forced up to its barrel by means of a screw cut upon its surface and working in a female screw in the

rear of the barrel; but as the breech was required to make several turns in order to advance it sufficiently to force it against the barrel, it was not practicable to adapt a lever to it for the purpose of operating it, which was effected by the thumb and finger and required considerable time to accomplish it. The force that could therefore be brought to bear upon the breech was not sufficient to insure a tight joint at its junction with the barrel, and the contrivance has failed to accomplish the desired end.

I am also aware that Benjamin Chambers has obtained a patent for a movable breech secured to its barrel by means of a divided screw upon its advance end working into a

corresponding screw in the rear end of the barrel. I therefore claim neither of these devices, and only seek a patent for an improvement on the invention of the said Chambers.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of the movable breech with the revolving chamber D when the two are connected together by means of the divided screws in the manner set forth, the whole being constructed and operating substantially as described.

J. DURELL GREENE.

Witnesses:

SAM. COOPER,
JOHN S. CLOW.