

James M Mason's

117906

Breech-Loading Fire Arms

PATENTED AUG 8 1871

Fig 1

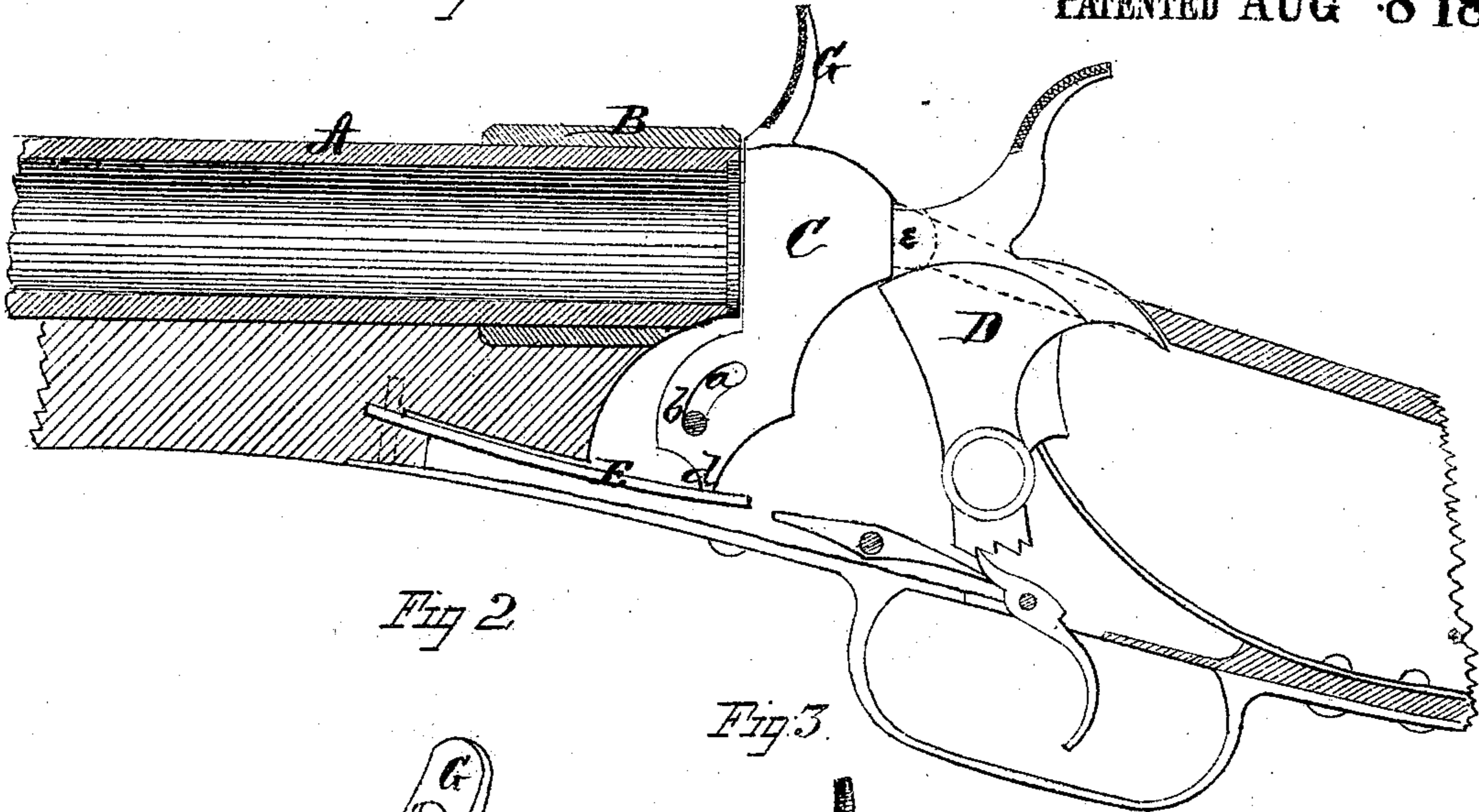


Fig 2

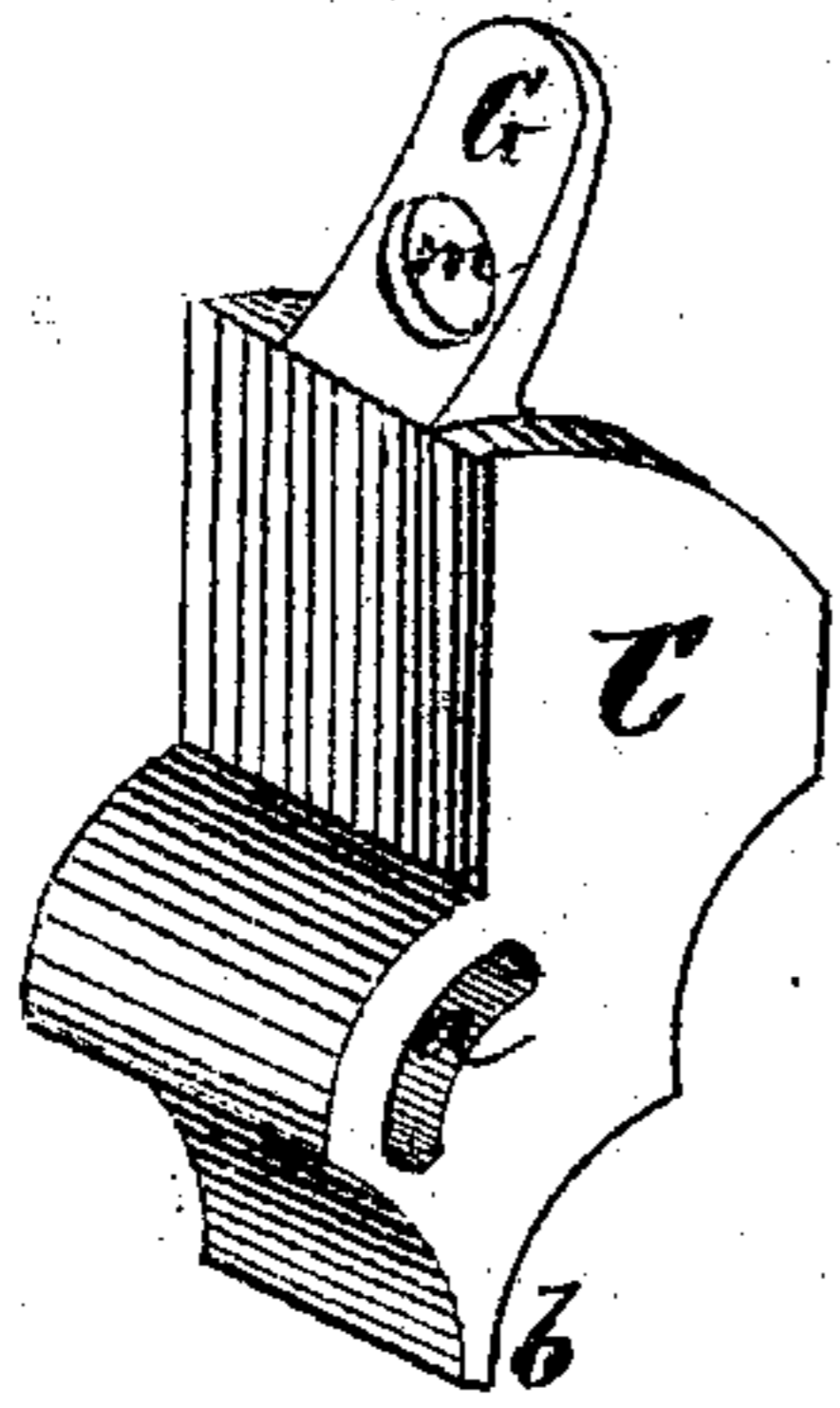


Fig 3

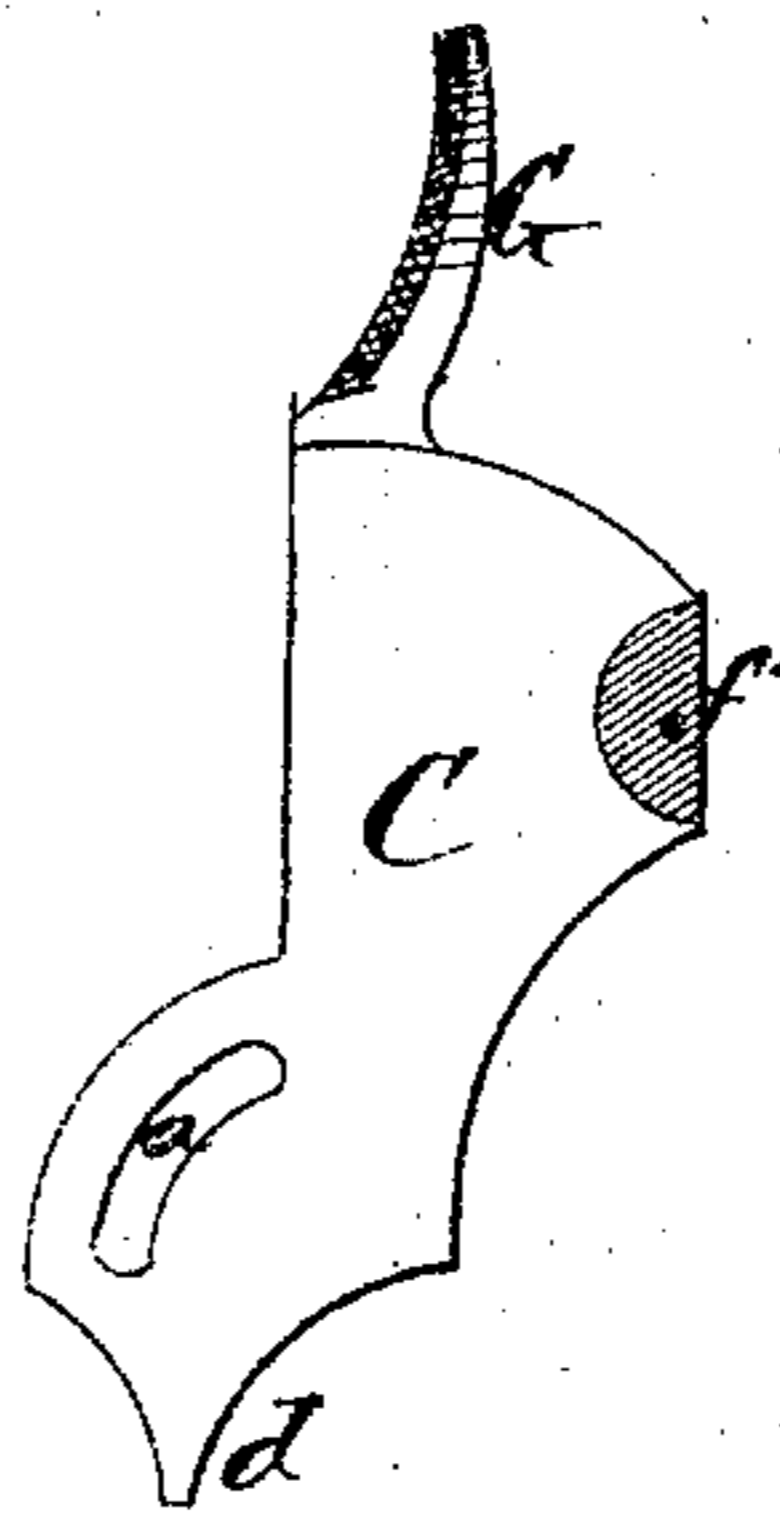


Fig 4

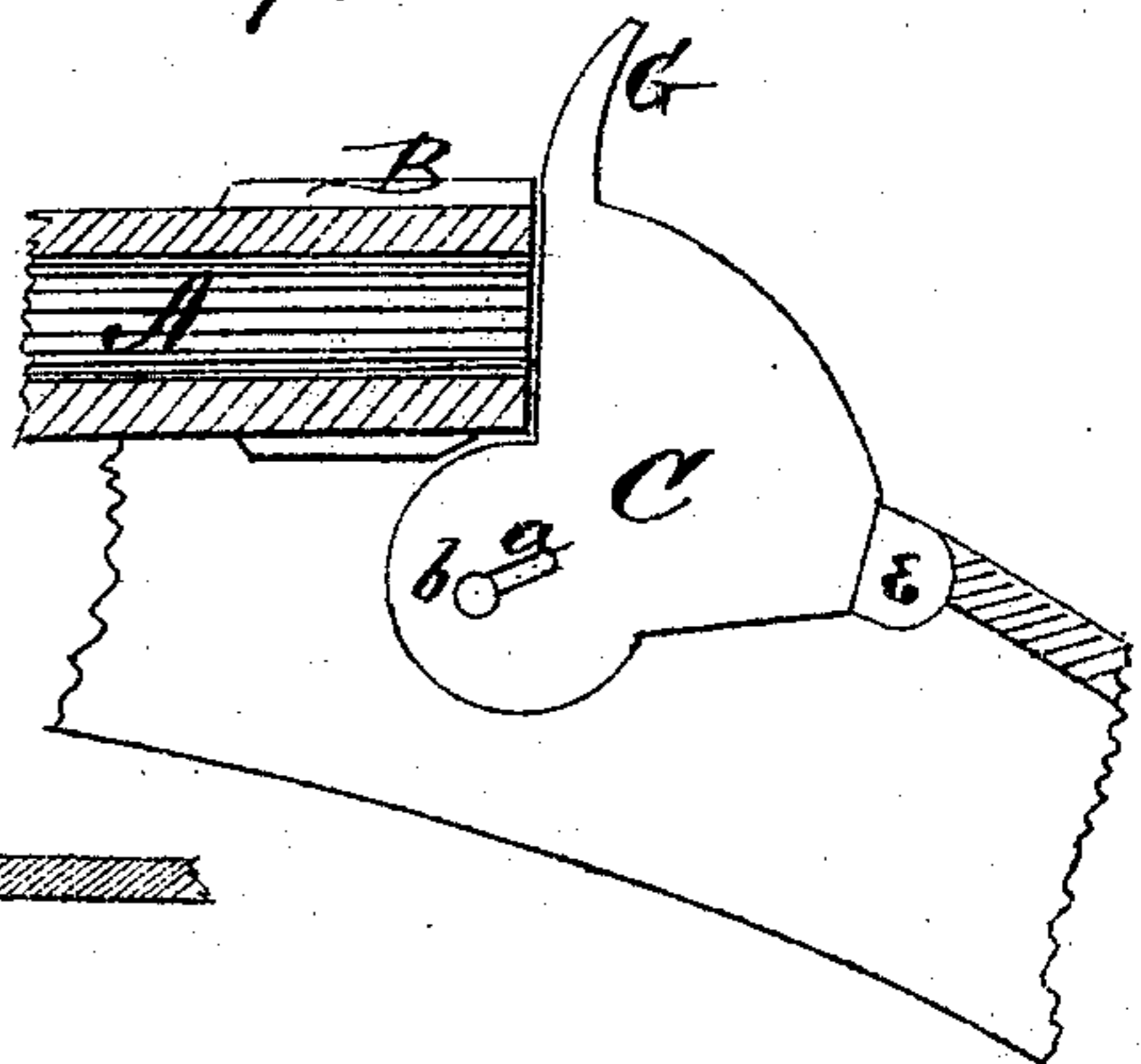
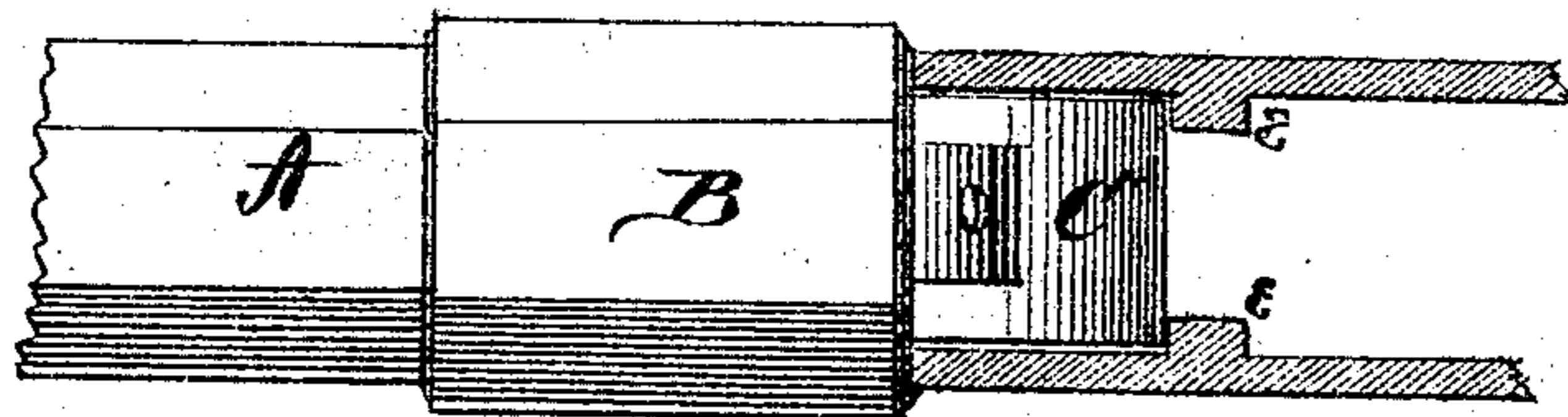


Fig 5



Witnesses.

*C. L. Evert*  
*Jas. O. Hutchinson*

Inventor.

*James M. Mason*  
*per Andrew Mason*

# James M Mason's Breech Loading-Fire Arms

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fig: 5

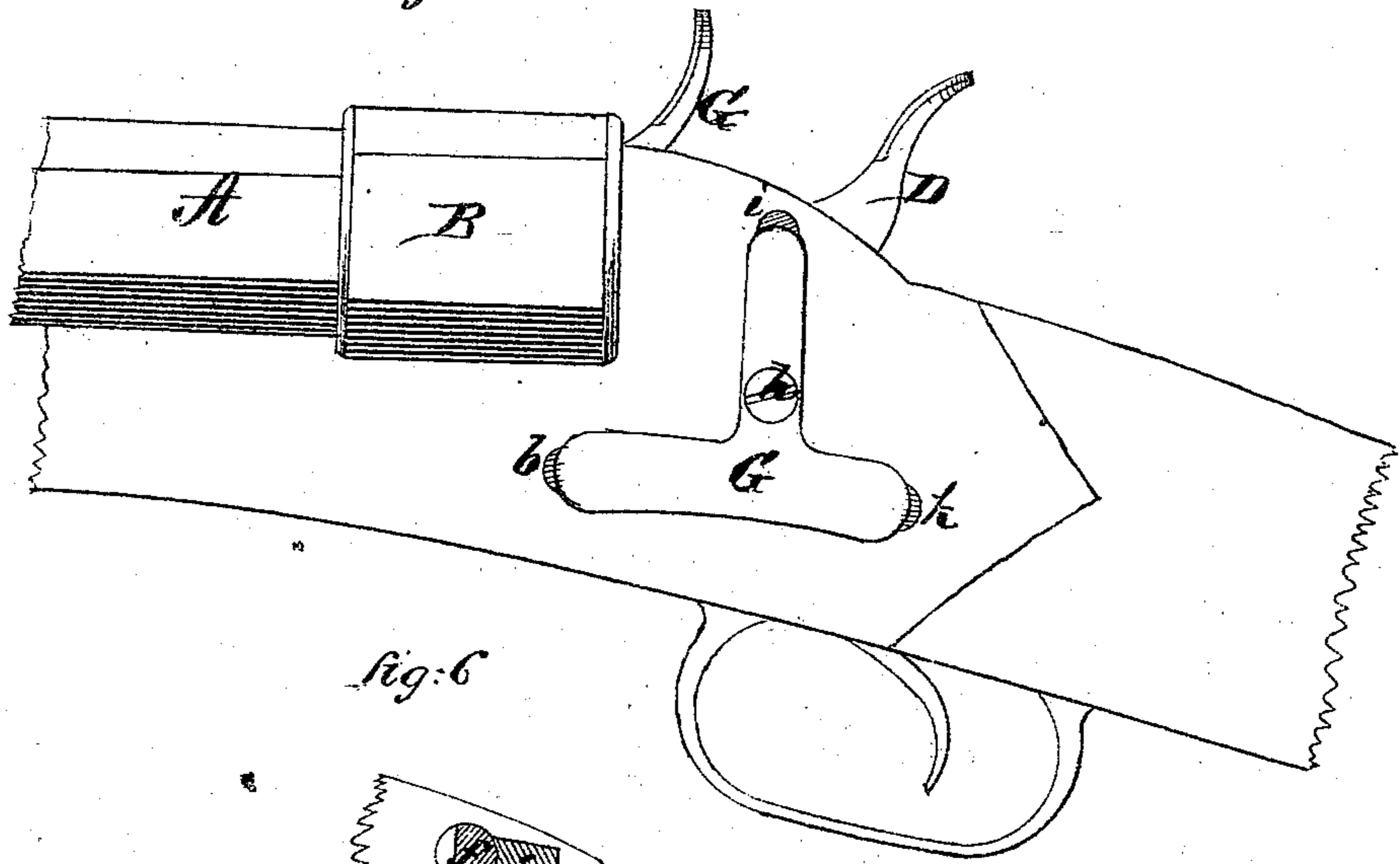


fig: 6

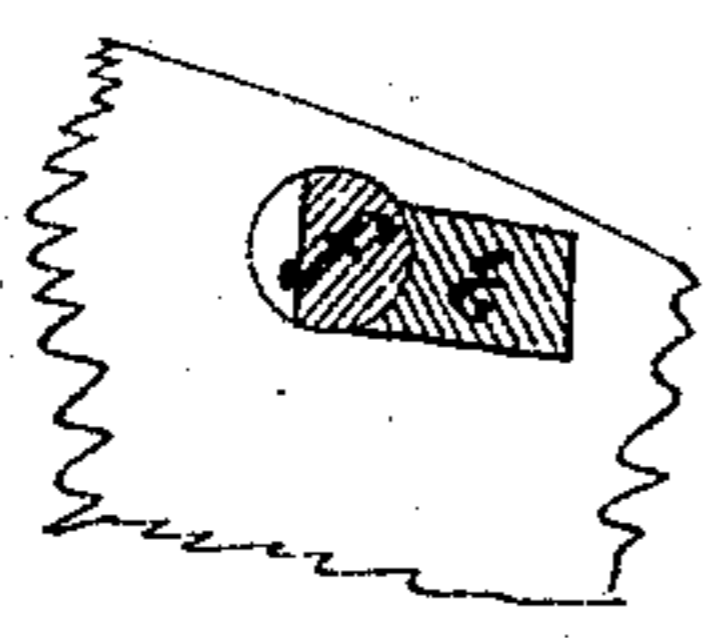


fig: 7

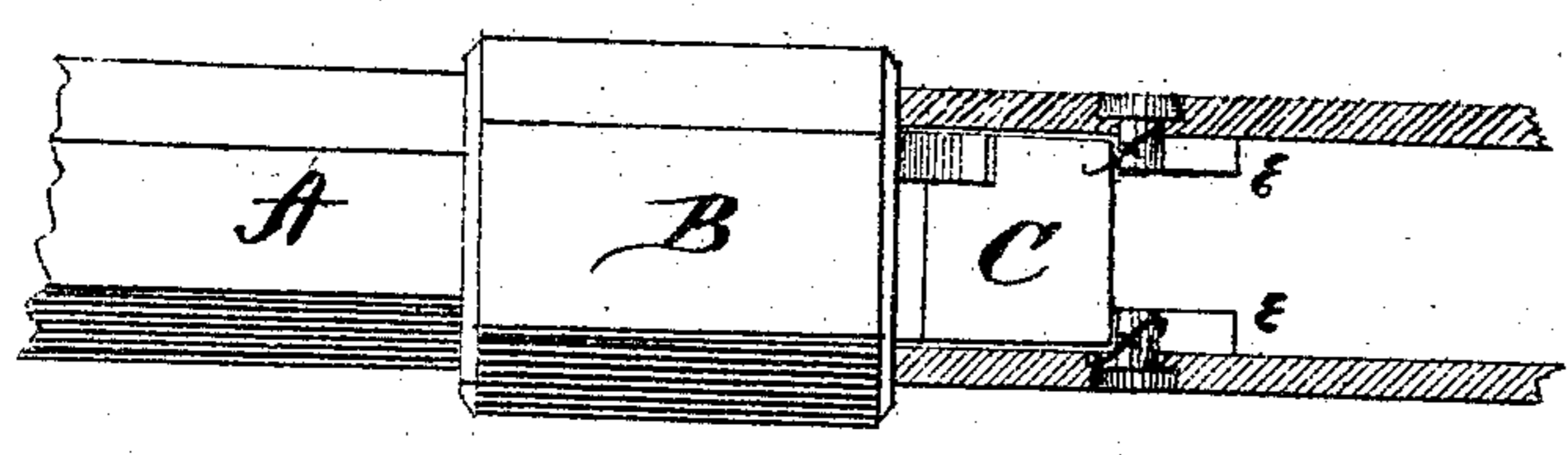
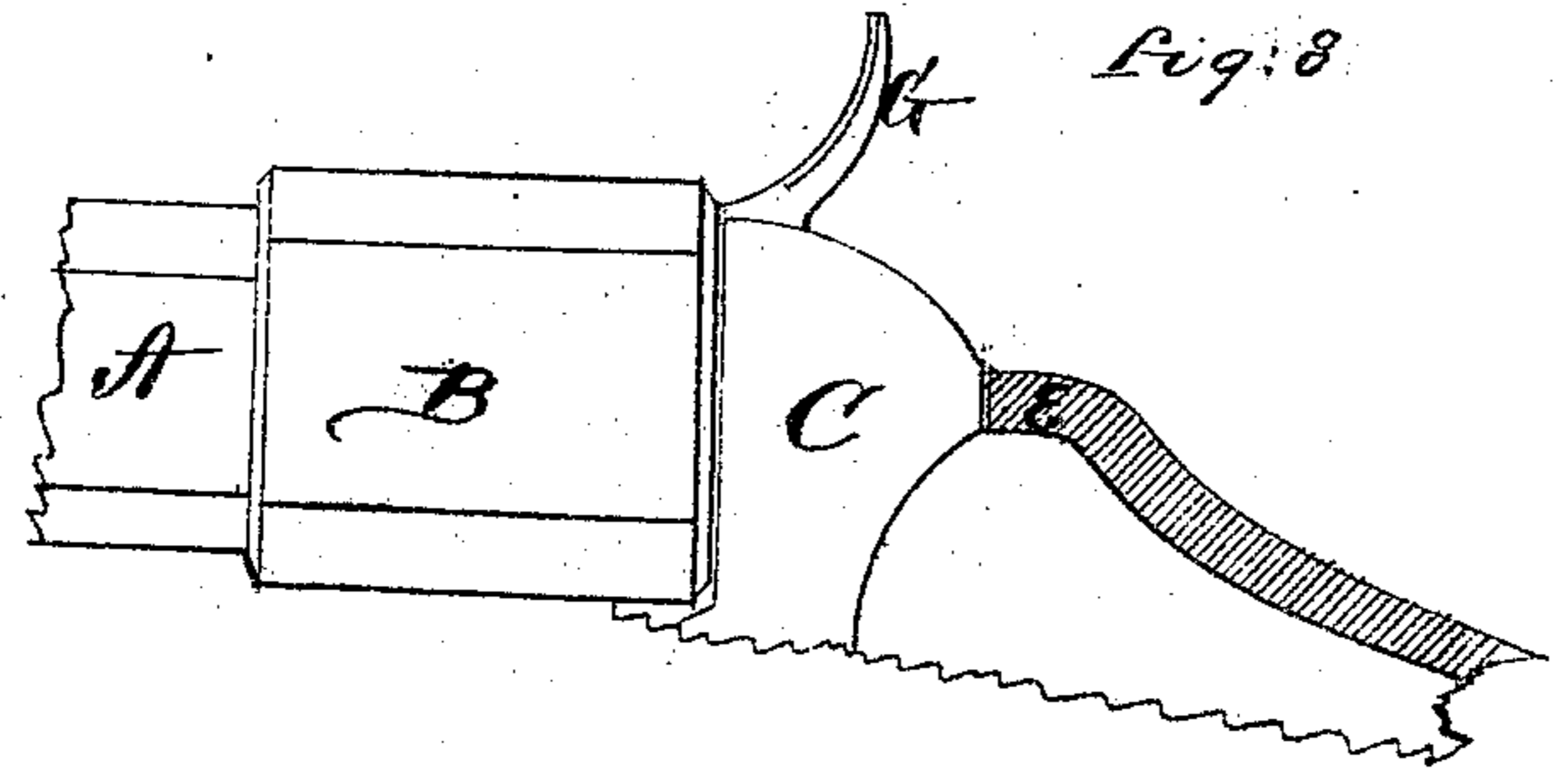


fig: 8



Witnesses.

*C. L. Evert*  
*Jas. O. Hutchinson*

Inventor.

*James M. Mason*  
*per*  
*Charles Mason*  
*attys.*

James M. Mason,  
Breech-Loading Fire-Arm.

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Fig. 10.

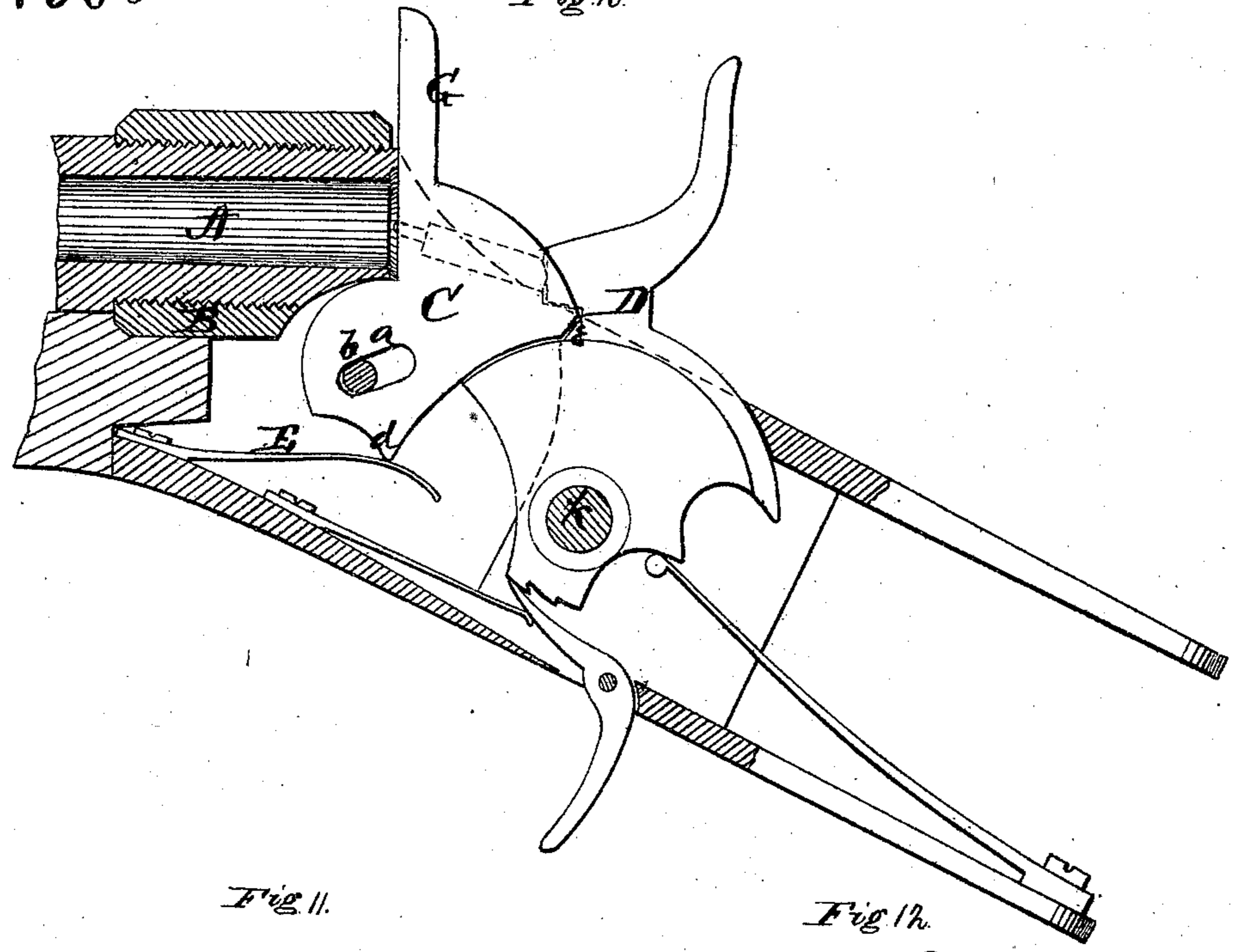


Fig. 11.

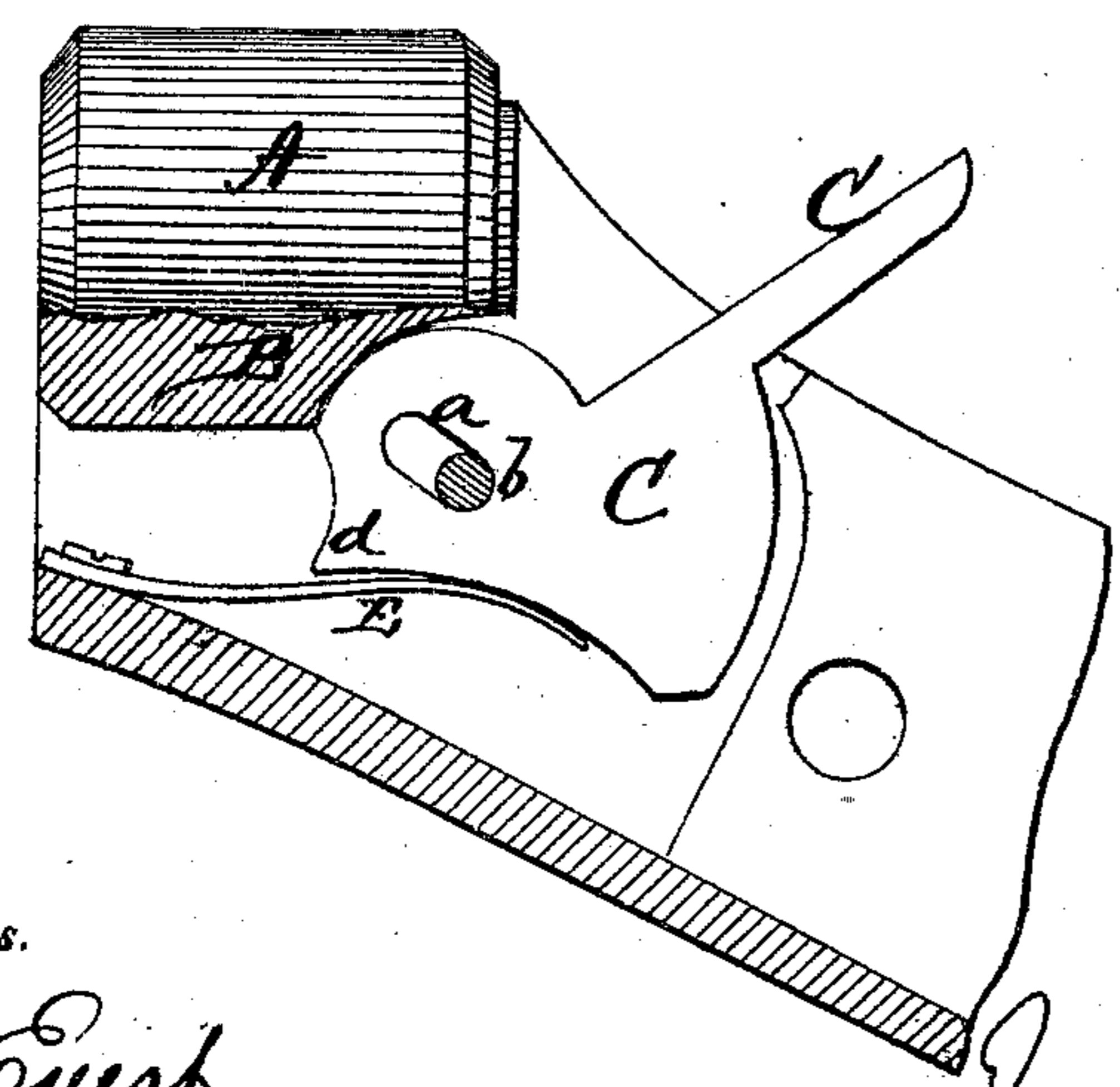
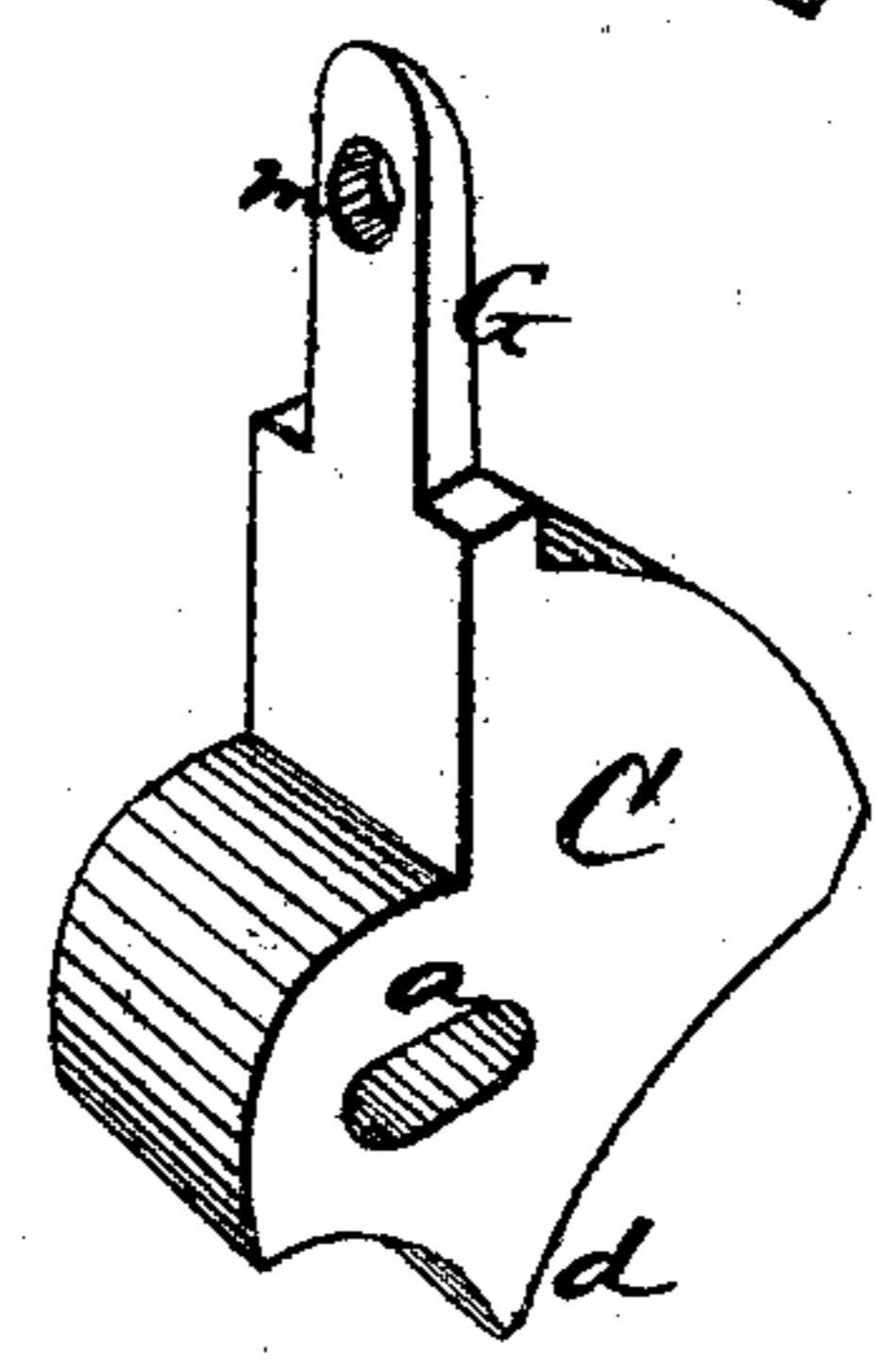


Fig. 12.



Witnesses.

C. L. Curb  
Jas. O. Hutchinson

Inventor.

James M. Mason  
per Alexander Mason  
Atty.

# UNITED STATES PATENT OFFICE.

JAMES M. MASON, OF WASHINGTON, DISTRICT OF COLUMBIA.

## IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 117,906, dated August 8, 1871.

*To all whom it may concern:*

Be it known that I, JAMES M. MASON, of Washington, in the District of Columbia, have invented certain new and useful Improvements in Breech-Loading Fire-Arms; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

In breech-loading fire-arms, of substantially the same appearance and general construction as the one herein shown and described, difficulties and accidents have occurred from the shock of the breech-block when suddenly closed, thereby igniting the cartridge before the hammer is let go and the breech-block locked, in which case the breech-block is blown open by the force of the explosion and the operator not unfrequently seriously injured, maimed, or killed. This objection is of such a serious nature as to make soldiers and others in the habit of using the same afraid of the arm, and thereby their efficiency as soldiers seriously impaired.

To obviate the difficulties above cited is the object of my present invention; and the same consists in: First, the combination, with a solid breech-block having a thumb-piece by which it is swung backward and downward to uncover the rear end of the barrel of a breech-loading fire-arm and a hammer and brace behind the same, of a solid fixed recoil-bearing, whereby, when the breech-block is swung up into place to close the breech, the same shall be securely locked and held in place. Second, in the combination, with a breech-block swinging backward and downward, of a rocking-block, substantially as hereinafter described, whereby the vertical movement of the breech-block is reduced to the minimum. Third, in a curved slot or pivot-bearing in a solid breech-block having a backward and downward motion to uncover the rear end of a barrel of a breech-loading fire-arm, in combination with the pivot passing through said slot, when said pivot and slot are so arranged with relation to each other that when the breech-block is closed there will be a small space between the pivot and lower end of the slot, whereby the shock will have a tendency to move the block bodily toward the rear instead of turning it upon its pivot. Fourth, in a solid breech-block having a thumb-piece by which it is swung backward and downward, and a ham-

mer and brace behind the same, and provided with an elongated slot or pivot-bearing, whereby a reciprocating vertical as well as backward and downward movement may be imparted thereto in opening and closing the same. Fifth, in the combination of a breech-block, provided with a slot or elongated pivot-hole and a projecting or angular bearing, with a spring, whereby the block is forced and held upward in position when closed and forced and held backward when opened. Sixth, in a thumb-piece extending upward from about the center of a swinging breech-block to operate the same when said thumb-piece is provided with a hole or opening to aim through. Seventh, in the combination of a solid breech-block having a backward and downward movement to uncover the rear end of the barrel of a breech-loading fire-arm, a fixed recoil-bearing, and a hammer and locking-brace arranged centrally behind the breech-block.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a longitudinal vertical section of so much of a fire-arm as will show my invention. Fig. 2 is a perspective view, and Fig. 3 is a side view of the breech-block. Fig. 4 is a plan view of the arm, showing the fixed recoil-bearing. Fig. 5 is a side view of the arm. Fig. 6 is a section of the fixed recoil-bearing with rocking-block. Fig. 7 is a plan view of the arm, showing the fixed recoil-bearing and rocking-block. Fig. 8 is a longitudinal section, showing the fixed recoil-bearing. Fig. 9 is a similar view, showing a different arrangement of the recoil-bearing and elongated slot in the breech-block. Figs. 10, 11, and 12 show more fully the modification of the recoil-bearing and slot represented in Fig. 9.

A represents the barrel; B, the frame; C, the breech-block; and D, the hammer and locking-brace, arranged centrally behind the breech-block. The breech-block C is provided near its lower end with a slot, *a*, which I usually prefer to make curved, as shown in Figs. 1, 2, and 3. Through this slot passes a bolt, *b*, upon which the breech-block is allowed to move. By means of the slot *a*, which thus forms the pivot-bearing for the breech-block, a slight vertical as well as backward and downward movement is imparted

to the breech-block in opening and closing the same, said vertical movement being reciprocating—that is, both up and down. At the lower end of the breech-block is a projecting or angular bearing, *d*, for the spring E to work against, whereby the block is forced and held upward in position when closed, and also forced and held backward when opened. In the stock-frame of the gun, on each side of the hammer D, is a solid fixed recoil-bearing, *e*, between which bearings and the rear end of the barrel A the breech-block is forced by the spring E when it has been swung upward and forward to close the breech, the said bearings thus securely locking the breech-block and holding it in place without additional or auxiliary means, except when the hammer is down, which then bears against the rear of the breech-block. A rocking-block, *f*, may be arranged at the front end of the fixed recoil-bearing *e*, as shown in Figs. 6 and 7, whereby the friction of the breech-block is lessened and its vertical movement reduced to the minimum, thus allowing the slot *a* to be made of the shortest possible length. This rocking-block may be arranged on the rear side of the breech-block C, as shown in Fig. 3. On the outside of the stock is secured a plate or strap, G, by means of a single screw, *h*; said plate being in the shape of an inverted T, and its ends covering the bolt *b*, which pivots the breech-block, the bolt *i* which secures the recoil-bearing and rocking-block, and the bolt *k* which pivots the hammer.

The recoil-bearing *e* may be placed on a line with the bore of the barrel; but the best place, and the one I deem of most importance, is below a line extending from the lower edge or bottom of the barrel, which will allow of the depression of the stock, as shown. This position of the recoil-bearing is shown in Figs. 9, 10, and 11. It will be readily seen that no amount of pressure from the barrel on the breech-block can move it, because the slot *a* and the pivot *b* are so arranged with relation to each other that when the breech-block is closed there is a small space left between the pivot and lower end of the slot. If the pivot were close at the end of the slot the tendency of the shock would be to turn the breech-block on its pivot, but a space being left, as mentioned, the tendency will be to move it bodily toward the rear, and hence directly against the recoil-bearing. The recoil-bearing being inclined on the chord of an arc, having the lower rear edge of the barrel for a center, and the face of the breech-block correspondingly inclined, the said block will be, as it were, wedged in place; but by a very light pressure on the thumb-piece G it is moved downward and backward to open the breech. A spring-bearing on the lower end of the breech-block may or may not be used, as desired. With this arrangement of the recoil-bearing and the breech-block the thumb-piece G may be on the side or on the top. If on the top, a hole, *m*, is drilled through the same for taking aim.

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

1. The combination, with a solid breech-block having a thumb-piece by which it is swung backward and downward to uncover the rear end of a breech-loading fire-arm, and with a hammer and brace behind the same, of a solid fixed recoil-bearing, whereby, when the breech-block is swung up into place to close the breech, the same shall be securely locked and held in place, substantially as herein set forth.

2. The combination, with a breech-block swinging backward and downward, of a rocking-block, substantially as described, whereby the vertical movement of the breech-block is reduced to the minimum, as set forth.

3. A curved slot or pivot-bearing in a solid breech-block having a backward and downward motion to uncover the rear end of the barrel of a breech-loading fire-arm, in combination with the pivot passing through said slot, when said pivot and slot are so arranged with relation to each other that when the breech-block is closed there will be a small space between the pivot and lower end of the slot, whereby the shock will have a tendency to move the block bodily toward the rear instead of turning it upon its pivot, substantially as herein set forth.

4. A solid breech-block, having a thumb-piece by which it is swung backward and downward, and a hammer and brace behind the same, and provided with an elongated slot or pivot-bearing, whereby a reciprocating vertical, as well as backward and downward, movement may be imparted thereto in opening and closing the same, substantially as herein set forth.

5. The combination of a breech-block provided with a slot or elongated pivot-hole and a projecting or angular bearing with a spring, whereby the block is forced and held upward in position when closed, and forced and held backward when opened, as set forth.

6. A thumb-piece, extending from the top of a swinging breech-block to operate the same, and provided with a hole or opening to aim through, substantially as herein set forth.

7. The combination of a solid breech-block having a backward and downward movement to uncover the rear end of the barrel of a breech-loading fire-arm, a fixed recoil-bearing, and a hammer and locking-brace, arranged centrally behind the breech-block, substantially as herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 18th day of April, 1871.

J. M. MASON.

Witnesses:

C. L. EVERT,  
A. N. MARR.