

C. FOEHL.
Breech-Loading Fire-Arm.

No. 222,991.

Patented Dec. 30, 1879.

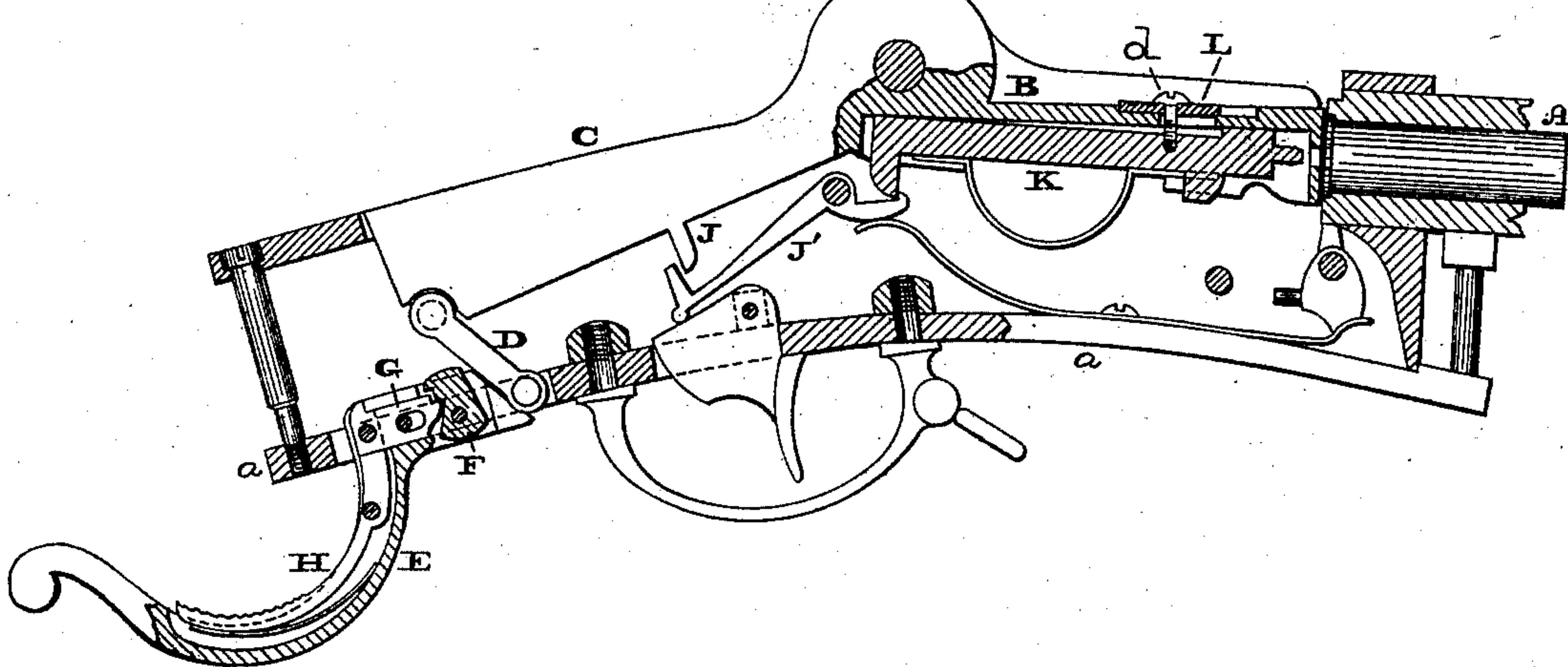


Fig. 2.

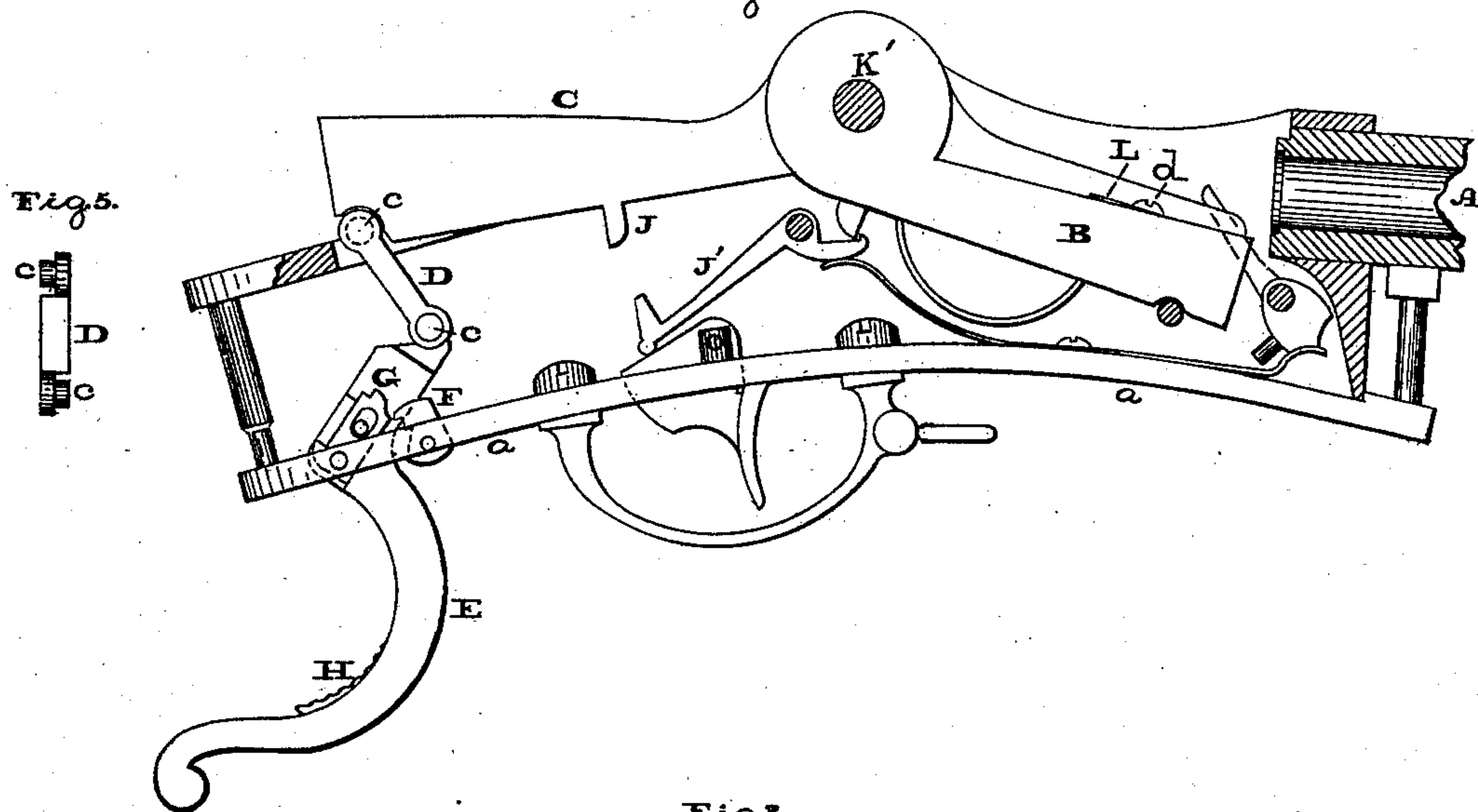


Fig. 5.

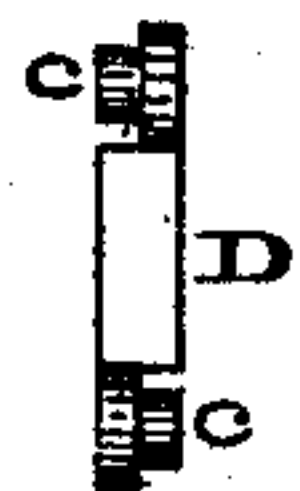


Fig. 3.

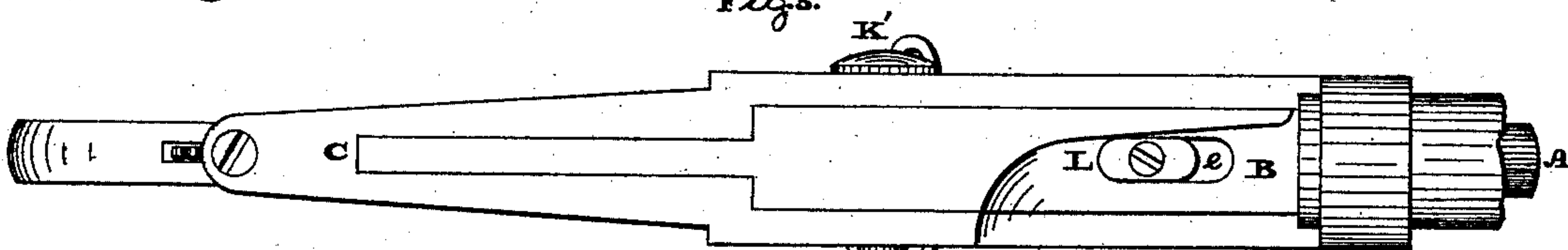


Fig. 6.

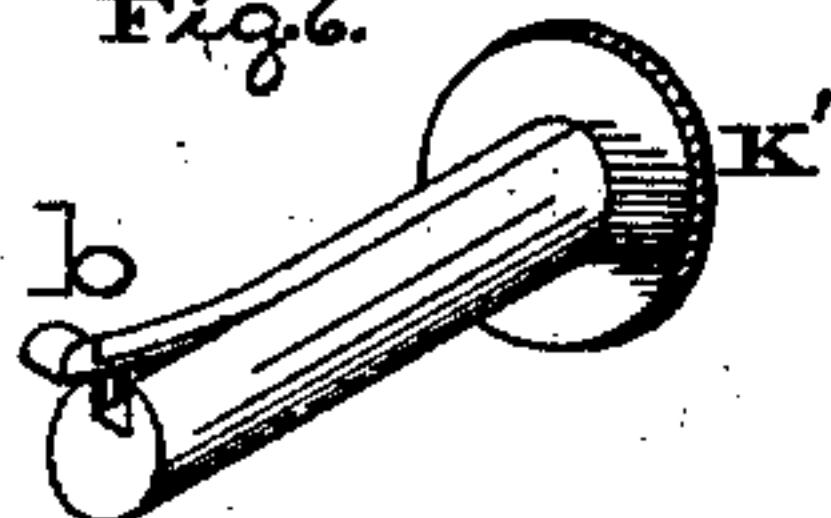


Fig. 4.

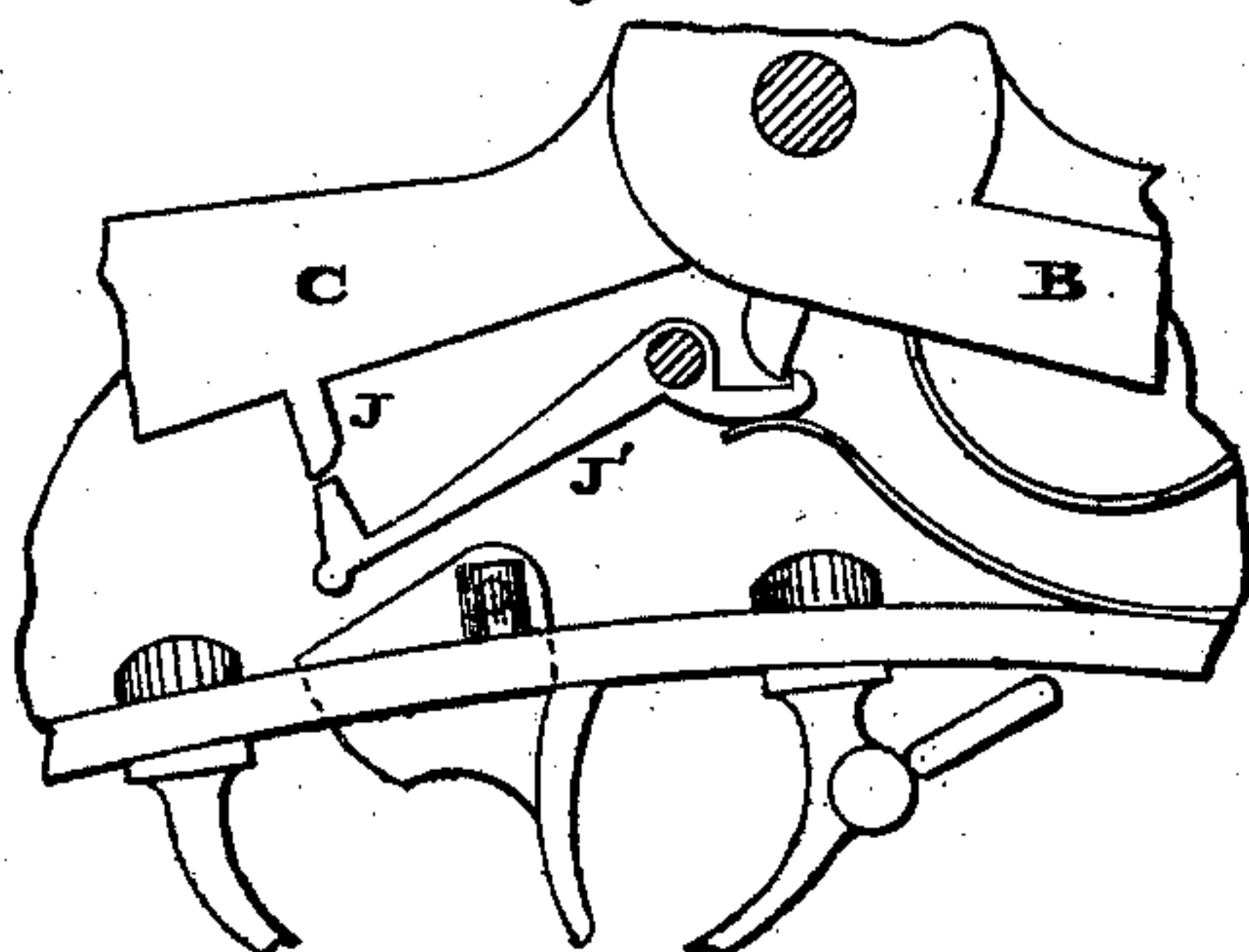
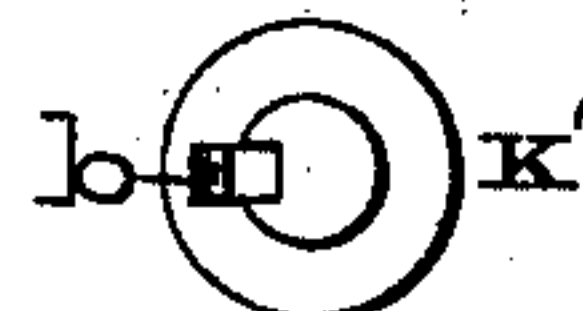


Fig. 7.



Witnesses:

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UNITED STATES PATENT OFFICE.

CHARLES FOEHL, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF OF HIS RIGHT TO ISAAC J. CLARK, OF SAME PLACE.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. **222,991**, dated December 30, 1879; application filed May 14, 1879.

To all whom it may concern:

Be it known that I, CHARLES FOEHL, of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Breech-Loading Fire-Arms, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a longitudinal section of the portion of a fire-arm embodying my invention. Fig. 2 is a side elevation of said portion, certain parts being sectional. Fig. 3 is a top view thereof. Fig. 4 is a side elevation of a portion of Fig. 2. Fig. 5 is a view of a detached portion. Fig. 6 is a perspective view of the axial pin of the breech-block. Fig. 7 is an end view thereof.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists of an indicator attached to the firing-pin, adapted for announcing the condition of the fire-arm, whether it is cocked, partly cocked, or discharged. For this purpose I employ a plate which plays in a way longer than the plate, and is inclosed and guarded thereby.

It also consists of locking mechanism for the breech-block, as hereinafter set forth and claimed.

It also consists of the breech-block having a tang formed with a lug or projection, for preventing discharge of the weapon when partly cocked.

It also consists of the breech-block having an extended tang, and the locking-lever, connected by a detachable link, whereby stripping of the weapon may be readily accomplished.

Referring to the drawings, A represents the barrel, and B a downwardly-swinging breech-block, to which is connected, or with which is formed, a tang, C, extending rearward from the axis of the block and moving in the tang-piece.

D represents a link, one end of which is pivoted to the rear end of the tang C, and the other to the front end or upper limb of a lever, E, which is pivoted to the trigger-plate *a*, behind the guard, and denominated the "locking-lever." To the trigger-plate *a*, adjacent to the axis of the lever E, is secured a rack or

toothed piece, F, with which is adapted to engage a pawl, G, jointed to the upper portion of the lever E, and operated by a thumb-lever, H, which is pivoted to said lever E.

Projecting from the under side of the tang C is a lug, J, which is so disposed in relation to the detent J' of the firing-pin K that when the weapon is half-cocked the rear end of said detent is brought in line with the lug J, and the detent is thereby controlled, (see Fig. 4,) whereby the trigger is rendered incapable of releasing the firing-pin, and accidental discharge of the weapon at half-cock is prevented, said lug J, however, in no wise preventing the proper discharge of the weapon at full-cock, as is evident on referring to Fig. 1.

After the weapon has been discharged the thumb-lever H is operated in order to withdraw the pawl G from the rack F, and thus release the guard-lever E, which is next thrown forward. This raises the link D and tang C, and consequently lowers the breech-block B, as in Fig. 2. The empty cartridge-shell is extracted, a fresh cartridge applied, and the lever E again swung rearward to either half or fully cock the weapon. In these motions the link D and tang C are lowered, and the breech-block is raised. For half-cock the pawl G is caused to drop into and engage with the first or upper tooth of the rack F. For full-cock the lever E is moved back to full extent, so that the pawl G engages with the second or lowermost tooth of the rack F, the pawl remaining against the respective tooth by the action of the spring of the thumb-lever.

It will be seen that when the weapon is fully cocked the breech-block is firmly and immovably held by means of the locking-lever E and immediate parts, whereby the weapon may be discharged with safety.

The axial pin K' is formed with a spring-catch, *b*, which engages with the wall of the opening, through which the pin is passed, thus holding it in position. By pressing in the catch it enters a groove in the pin and permits the ready withdrawal of the pin. The link D has a pin, *c*, at each end, the pins projecting in opposite directions. The rear of the tang C and front end of the lever E have

each an opening for the insertion of the pin of the respective end of the link D, whereby the latter may be readily displaced.

By removing the pin K' and lifting the breech-block the link D may be disengaged from the tang and locking-lever, and thus the weapon or breech-block may be readily stripped.

L represents a plate, which is connected to the firing-pin K by a screw, d, and fitted in a way, e, on the upper face of the breech-block, so as to be exposed. The screw d passes through a slot in the breech-block, so that the plate is permitted to slide with or follow the motions of the firing-pin, wherefore, when the weapon is discharged, the plate is at the forward end of the way e. When it is fully cocked the plate is at the rear end of the way, and when it is half-cocked the plate is intermediate of the ends of the way. By this indicator the condition of the fire-arm may be readily known simply by glancing at the plate L.

It will be noticed that the way extends longitudinally and is longer than the plate, so that the ends of the plate point or indicate in the way the position of the firing-pin, the plate having no connection whatsoever with the locking mechanism of the breech-block, and the way also serving to guide and inclose the in-

dicating-plate and protect the hand from being struck by the plate in its movements.

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

1. The firing-pin, in combination with an indicator, consisting of a plate or piece which is connected and moves with said pin, and the breech-block, having a way which is of greater length than the plate and receives and incloses the same, substantially as and for the purpose set forth.

2. The locking-lever E, with the thumb-lever H and pawl G, the rack F, and link D, in combination with the breech-block, substantially as and for the purpose set forth.

3. The tang C, formed with the lug or projection J, in combination with the detent J' and the firing-pin, substantially as and for the purpose set forth.

4. The swinging breech-block, with a rear extension or tang, C, the detachable axial pin K', detachable link D, and lever E, substantially as and for the purpose set forth.

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