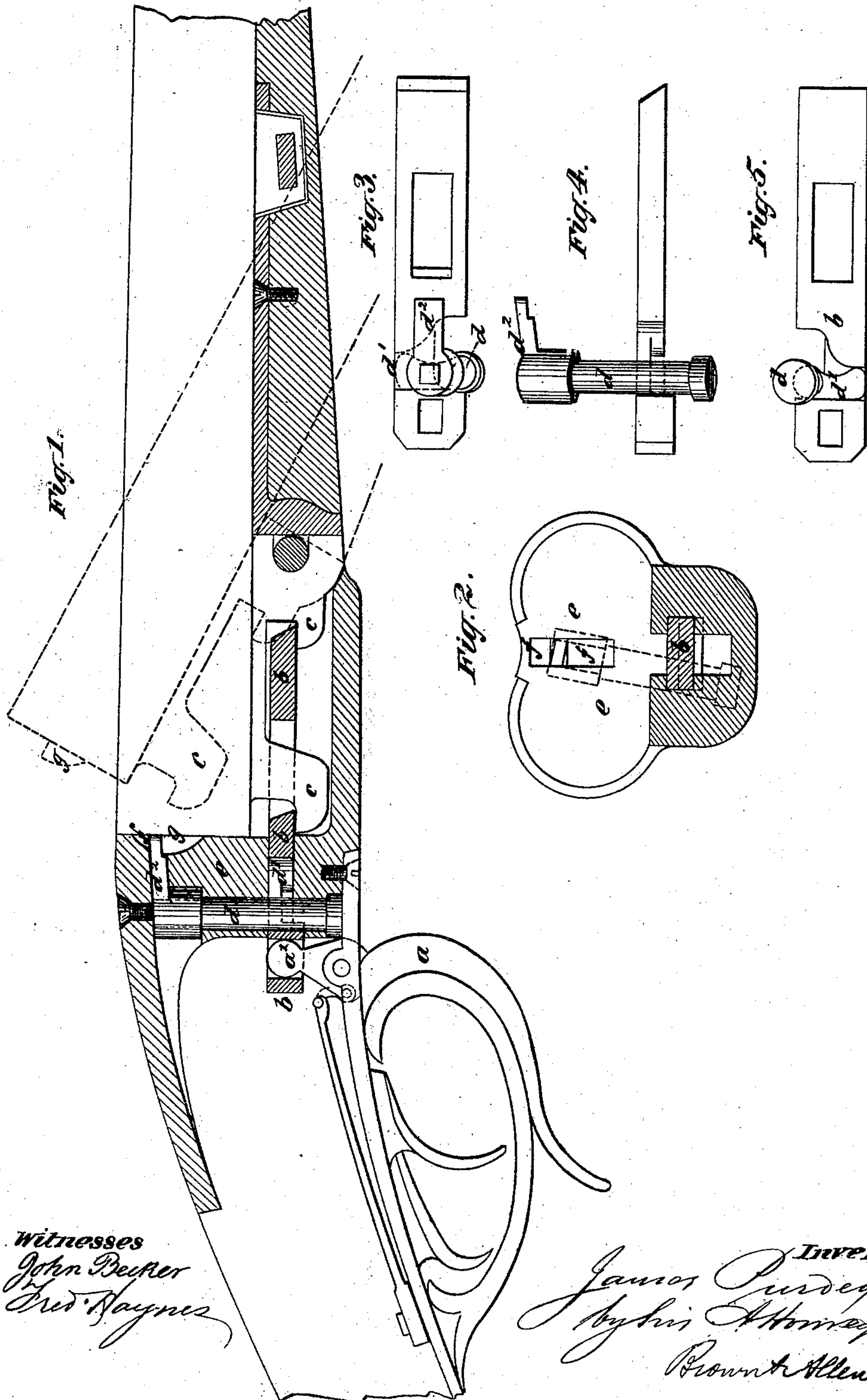


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Breech-Loading Fire-Arm.

No. 220,657.

Patented Oct. 14, 1879.



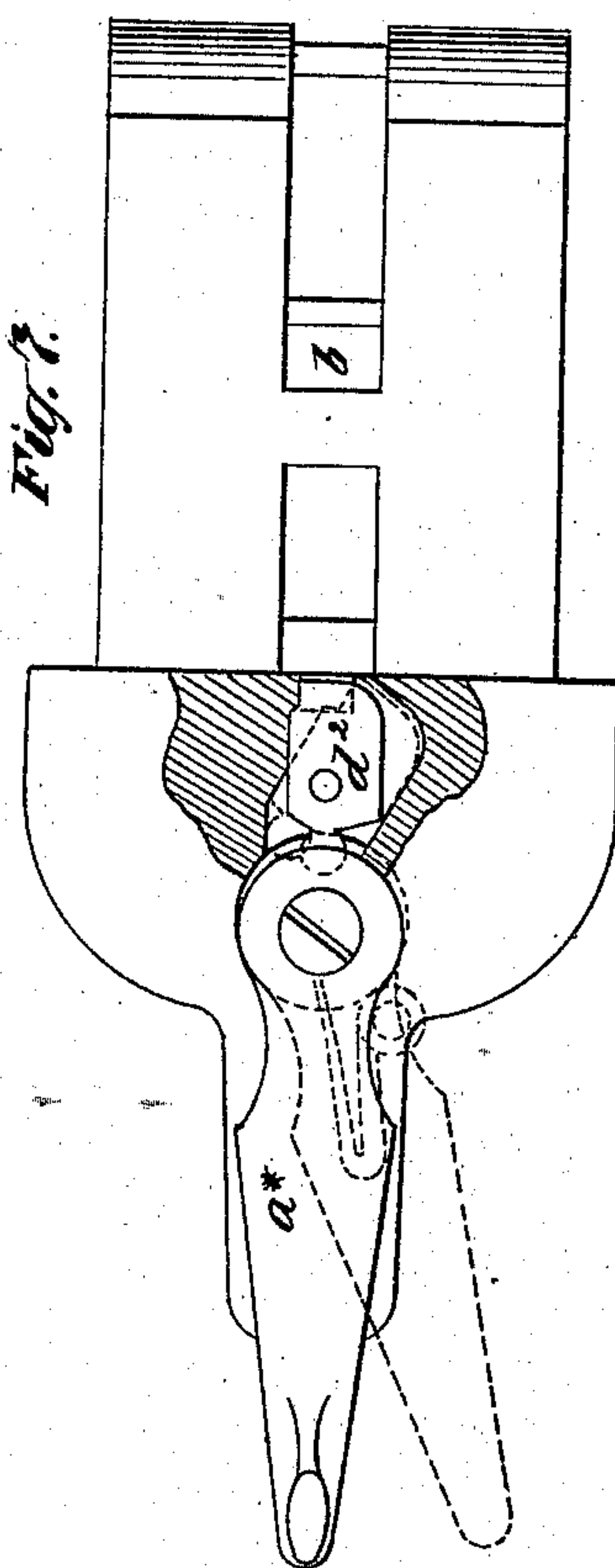
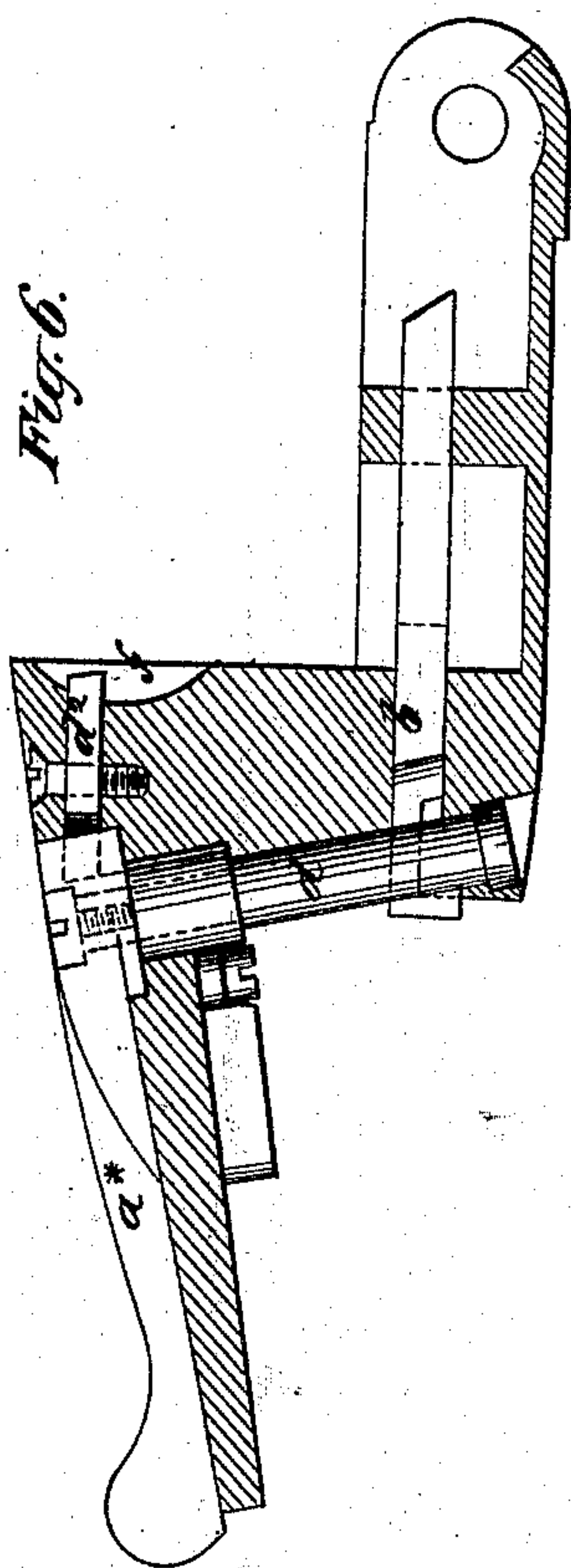
Witnesses
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Fred. Haynes

Inventor
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UNITED STATES PATENT OFFICE.

JAMES PURDEY, OF LONDON, ENGLAND.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 220,657, dated October 14, 1879; application filed September 24, 1878; patented in England, January 30, 1878.

To all whom it may concern:

Be it known that I, JAMES PURDEY, of Oxford Street, London, in the county of Middlesex, England, gunmaker, have invented certain Improvements in Breech-Loading Fire-Arms, of which the following is a specification.

The object of this invention is to give additional security to the locking of the breech in break-down guns by providing a double locking mechanism which is operated by a lever, adapted to vibrate on its axis for operating a spindle carrying a swinging arm or latch, which moves laterally to engage with the upper catch and is accommodated to the limited space of the upper portion of the breech-piece or break-off.

In the accompanying drawings, Figure 1 is a longitudinal vertical section of the breech part of a break-down breech-loading gun, showing the breech-action, in which the fastening-bolt *b* is worked by a lever, *a*, under the trigger-guard, and is called the "under snap" or the "bottom lever" action. Fig. 2 is a transverse section of the same looking at the face of the fixed breech block or action of the arm.

The bolt *b* takes hold of two hooked blocks, *c c*, forged on the under side of the barrels, and therefore holds them down in place, as is well known in reference to this class of gun. In combination with this sliding locking-bolt *b* there is a vertical spindle, *d*, Fig. 1, and shown by dots in Fig. 2. This spindle is necessarily placed at a slight inclination, in order to give room for the sliding bolt, and is provided with a horizontal arm, *d*¹, which takes into a notch cut in the sliding bolt, as will be best seen by reference to the detached views, Figs. 3, 4, and 5, of these parts, Fig. 3 being a plan view of the top side of the bolt *b* and vertical spindle *d*. Fig. 4 is a side elevation of the same, and Fig. 5 is a view of the under side of the bolt and spindle, showing the horizontal arm *d*¹ of the spindle *d* in the notch cut in the bolt *b* for the purpose.

At the upper end of the pin or spindle *d* is another arm or bolt, *d*², which projects through an opening cut in the face of the fixed breech *e* of the arm. In connection with this opening there is a concave notch, *f*, Figs. 1 and 2, cut in the face of the breech to receive a curved block, *g*, forged on the end of the barrels.

The curved notch or recess *f*, it will be observed, is formed entirely within the front face of the breech-piece, thus avoiding the breaking of the surface of the breech-piece by the ordinary top notch which is commonly formed in the breech-piece of a gun of this class for the reception of a tongue projecting from the barrels.

The operation of the various parts is as follows: Upon depressing the lever *a*, the short arm *a*¹, Fig. 1, of this lever will draw back the bolt *b* and release the notched blocks *c* on the under side of the barrels. At the same time the bolt *b*, by its backward motion, will act on the arm *d*¹ of the vertical spindle *d*, Fig. 5, and will cause the same to turn on its axis, and thereby remove the upper bolt, *d*², of the spindle *d* from above the block *g* on the rear end of the barrels. The latter will then be free to rise up into the position shown by dots in Fig. 1 ready for reloading. When this operation has been performed the barrels may be brought up again into the horizontal position, and there securely locked by the lever *a* being brought back to its normal position.

It will be seen that by this arrangement and construction of parts an additional locking of the barrels is provided, and that that is done without cutting out the top part of the fixed breech piece or action.

Figs. 6 and 7 are sectional and plan views of a gun, showing a method of effecting the same object by means of a top lever action. In this instance the top lever, *a*^{*}, is secured on the squared upper end of the vertical spindle *d*, which, at its lower end, carries a lever-arm, *d*¹, which works in a notch or recess in the locking-bolt *b*, as in the former instance. At the upper end of the spindle *d* is that additional bolt or catch *d*²; but in this case the additional fastening or catch *d*² is not attached to the vertical spindle *d*, but is mounted on a separate pin or stud, and has a tail which takes into a notch cut in the end of the actuating top lever, *a*^{*}.

The forward end of the bolt *d*² works in an opening made in the face of the action, as in the other case. When the top lever, *a*^{*}, is pushed on one side, as shown by dots in Fig. 7, the catch-piece is also pushed on one side, and thereby releases the block *g* at the rear end of

the barrels, and thereby allows the latter to be lifted from their seat, as indicated by the dotted lines in Fig. 1. As the top lever, a^* , is mounted on the upper end of the vertical spindle d , the latter is made to turn on its vertical axis whenever the lever a^* is moved, and by so doing will force back the locking-bolt b and release the hooked lumps on the under side of the barrel, as in the former instance.

Having now set forth the nature of my invention and explained the manner of carrying the same into effect, I wish it to be understood that I claim—

The combination, with the barrels having a

hook or hooks, c , and lump g , of the lever a , arranged to vibrate in the direction of the length of the gun, the longitudinally-sliding bolt b , operated by said lever, and the spindle d , having arm d^1 , engaging loosely with said bolt and carrying the swinging arm d^2 , adapted to engage said lump g , substantially as described.

London, the 28th day of June, 1878.

JAMES PURDEY.

Witnesses:

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