James Lee's,

Improvement in Breech-loading Fire-arms.

No. 122,470. Patented Jan. 2, 1872.

Fig. 1.

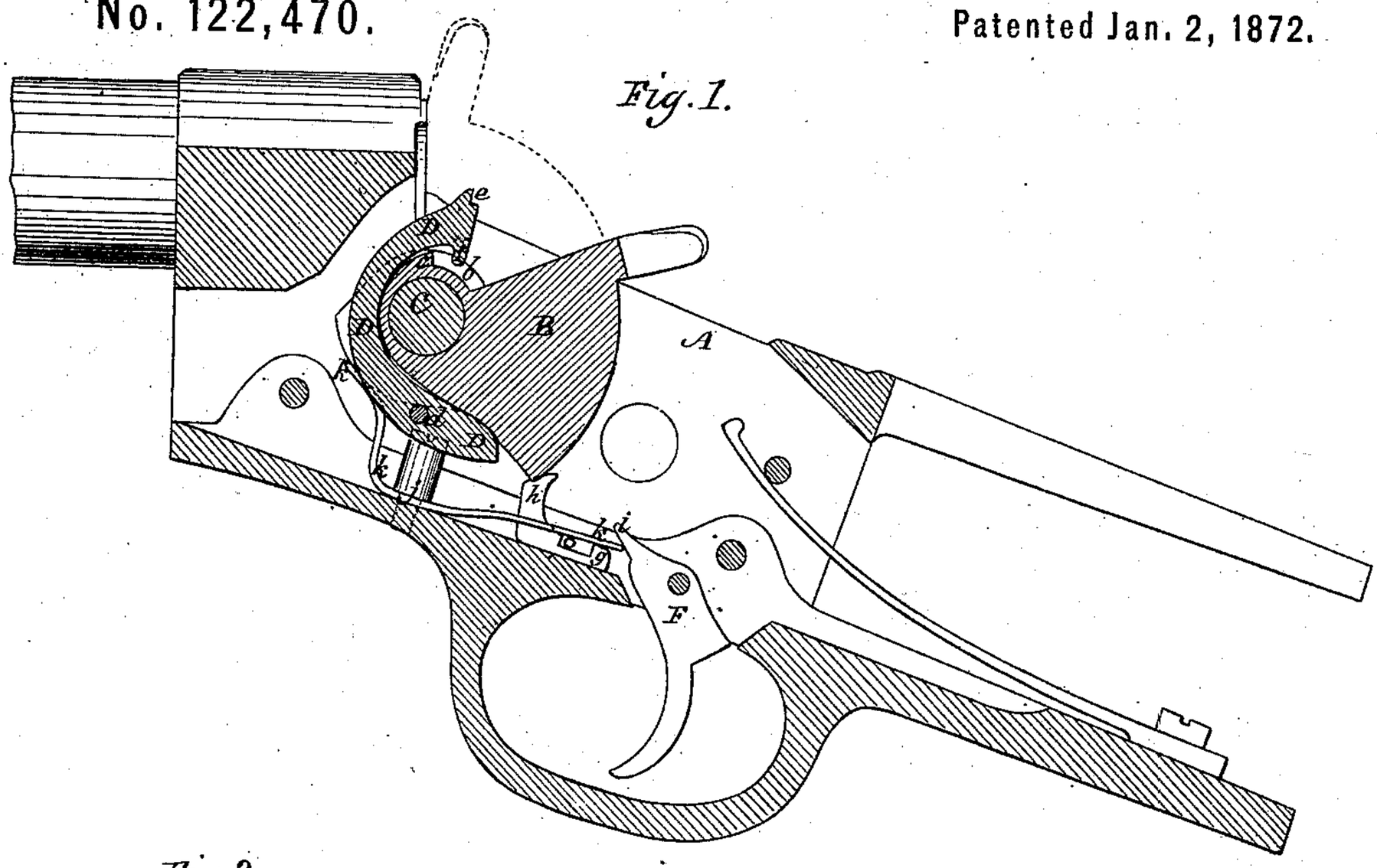


Fig. 2.

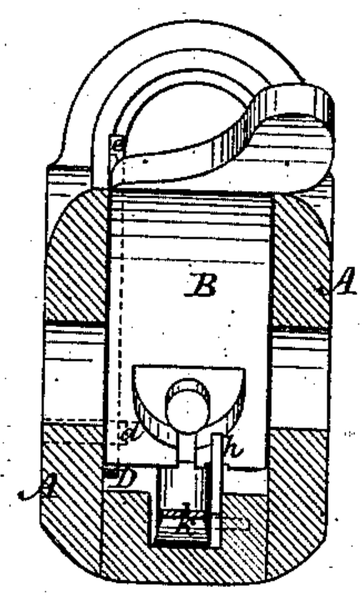


Fig. 3.

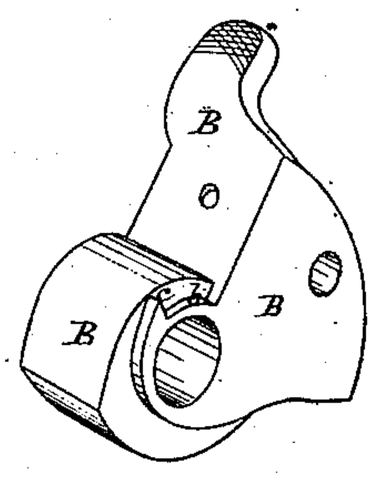


Fig. 4.

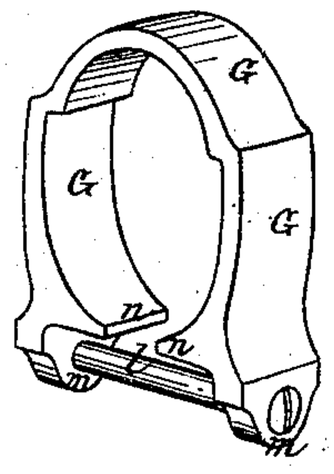
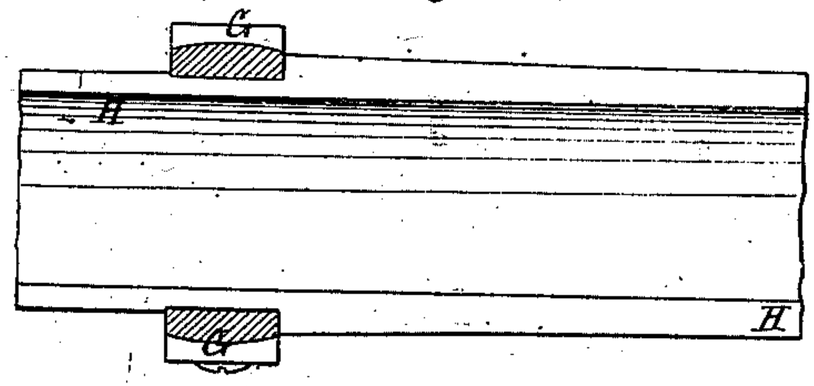


Fig. 5.



Witnesses:
R. E. Wilson
Edmund Masson

James Lee,
By atty. A. B. Stoughton.

UNITED STATES PATENT OFFICE.

JAMES LEE, OF MILWAUKEE, WISCONSIN, ASSIGNOR TO E. REMINGTON & SONS, OF ILION, NEW YORK.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 122,470, dated January 2, 1872.

To all whom it may concern:

Be it known that I, JAMES LEE, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Breech-Loading Fire-Arms; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 represents a longitudinal section through so much of a breech-loading fire-arm as will illustrate my invention. Fig. 2 represents a vertical cross-section through the same. Fig. 3 represents the breech-block in perspective and detached from the arm. Fig. 4 represents in perspective a band for holding the barrel of the arm to the stock, which is without a swivel, but affords a fastening for the strap by which the arm is swung to the shoulder. Fig. 5 represents a portion of the stock of the arm, with the band in section theron.

Similar letters of reference where they occur in the separate figures denote like parts of the fire-arm in the drawing.

My invention relates, first, to a cartridge-extractor, which is started by a shoulder on the hub of the breech-block taking against a shoulder near the top of said extractor, and then suddenly accelerated in its movement by the under side of the breech-block striking the tail of the extractor, which gives the head and longer part thereof a sudden and quick motion to throw out the empty case. The invention further relates to a trigger-lock, which is moved in the under point of the trigger by the breech-block when swung-back, and which is readily pushed back again by the trigger when the breech-block is swung up and forward to close the bore of the arm, or in the act of firing the arm.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawing.

A represents the frame of the arm, to which the breech-block B is hung by the pivot-pin C. On the hub or central portion of the breech-block is formed a recess, *b*, terminating at a shoulder, *c*. On the inside of the frame and between the breech-block and frame is hung on a pivot-pin, *d*, the cartridge-extractor D, the head or upper end of which has a shoulder at *e* to take against the flange of the cartridge, and start it back out of the bore of the arm; and also a projection, *f*, which can move in the recess *b*, but is caught by the shoulder *c*, and moved with the breech-block, during the first of its movement, and until the breech-block in being swung back strikes the tail-end of said extractor, which, by the difference in length of the leverage of the extractor each side of its center of motion, gives the head or upper end a quick and sudden and extended movement, by which the shell is thrown clear out of the arm. When the tail of the extractor is thus struck the projection *f* on its upper portion moves freely through the recess *b*, there being nothing to impede its motion.

I have said that the extractor was placed between the breech-block and the frame. It is so in one sense of that term, but in reality the breech-block is cut away, so that the extractor works in that cut-away portion, and so that its projection *f* may be caught by the shoulder *c* of the breech-block.

On the guard-strap E, on the inside thereof, is arranged a sliding lock, *g*, which has an upright arm, *h*, upon it that is struck by the breech-block, when said breech-block is swung back, and by said breech-block the end *g* of said lock is moved under the point *i* of the trigger F, and prevents the trigger when the breech-block is in this position from tripping the hammer and allowing it to fly. When, however, the breech-block is swung up to close the bore of the arm, then the lock *g* is free to be moved out of the way when the point of the trigger comes against it, and is no impediment to the tripping of the hammer and letting it fly. But when the chamber is open and the breech-block is down this cannot be done, as the trigger cannot then move far enough to release its point from the hammer-notch, and thus an accidental touch of the trigger can do no harm to the user. To the guard-strap is also fastened, as at *j*, a spring, *k*, the forward end of which bears against the breech-block to hold it up in its closed position, and the rear end of which serves as the trigger spring, thus making one spring serve the two purposes of a breech-block and of a trigger spring. G is a band for holding the stock to the barrel.

This band though having no swivel affords an attachment for the strap, by which the arm is swung and carried, viz: Its clamp-screw *l*, which extends clear through and tightens the ends *m m* of the band, as also the whole band to the barrel and stock H.

Split bands I am aware have been used, but never, so far as I can learn, are they without the usual swivel for the strap attachment, if they have any attachment at all. The band-seat on the stock portion is sunk somewhat below the portion of the stock over which it is slipped, said band springing enough to allow it to pass over such larger portion. When it comes to its seat it springs into it, and then by tightening up the clamping-screw the parts are brought up close and tight. There is sufficient space under encircling projections *n n* of the band, and between them and the clamping-screw *l* to slip in and secure the strap by which the arm is slung.

Having thus fully described my invention, what I claim, is—

The combination of the breech-block and cartridge-extractor, constructed substantially as shown and described, whereby said extractor is started by the locking of the projection *f* and shoulder *e*, and its motion accelerated and completed by the breech-block striking the tail of the extractor, as described and represented.

I also claim in combination with the breech-block and trigger, the trigger-lock *g*, which is moved under the trigger-point by the breech-block when swung back, and moved away again after the breech-block is swung up to close the chamber by the trigger itself, substantially as and for the purpose described.

JAMES LEE.

Witnesses:
GEO. B. GOODWIN,
L. W. REDINGTON.

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