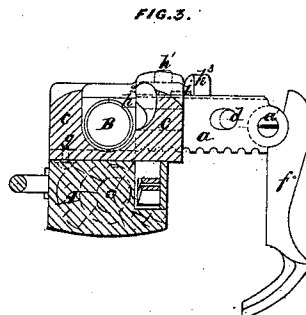
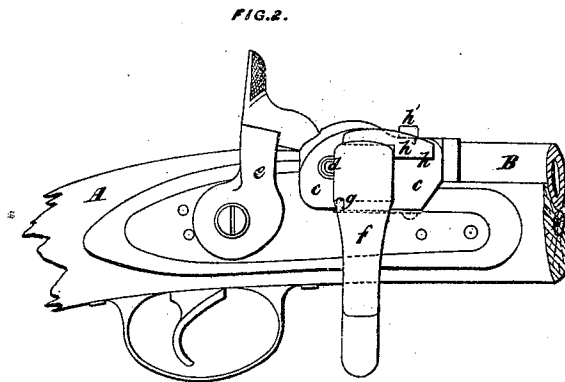
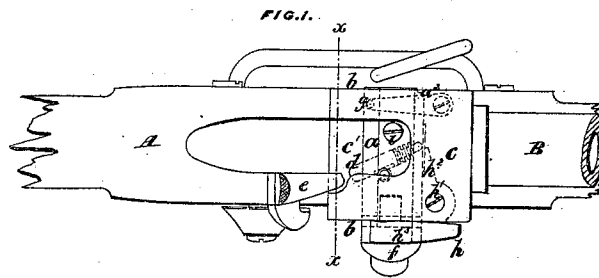


W. SCOTT & W. J. MATTHEWS.

Breech-Loading Fire-Arms.

No. 144,870.

Patented Nov. 25, 1873.



Witnesses.
Harrie C. Clark.
H. C. Matthews.

Inventors,
Walter Scott &
William J. Matthews by
Dyer, Beader & Co.
attys.

UNITED STATES PATENT OFFICE.

WALTER SCOTT, OF BIRMINGHAM, AND WILLIAM JAMES MATTHEWS, OF
ASTON, ENGLAND.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. **144,870**, dated November 25, 1873; application filed
May 14, 1873.

To all whom it may concern:

Be it known that we, WALTER SCOTT, of Birmingham, gun-manufacturer, and WILLIAM JAMES MATTHEWS, of Aston, near Birmingham aforesaid, tool-maker, both of England, have invented certain Improvements in Breech-Loading Fire-Arms, of which the following is a specification:

Our invention consists in the construction and combination of parts hereinafter described, for opening and closing the breech ends of breech-loading fire-arms, for discharging the said arms, and for extracting and ejecting the empty cases or shells of the cartridges from the same.

Figure 1 is a plan or top view of the breech of a rifle constructed according to our invention. Fig. 2 is a side elevation of the same. Fig. 3 is a transverse section on the line *x x*, Fig. 1.

Like letters indicate the same parts throughout the drawing.

A is the stock, and B is the barrel, of the said rifle. The opening and closing of the breech of the gun or fire-arm is effected by a transverse sliding block, *a*, working horizontally in guides or openings *b* in the shoe *c*, into which the end of the barrel is screwed or otherwise securely fixed. The breech-chamber *c'* is open at its top and rear, and the stock A, at the rear of the said chamber, has a semicircular groove, forming a prolongation of the opening in the chamber *c'*. When the closing-block *a* is withdrawn from the end of the barrel, there is a clear sight through the breech-chamber and the barrel. The said sliding closing-block *a* has a striking or firing pin, *d*, working in it, the said pin being pressed toward the butt-end of the gun by a spring within the block *a*. The rear of the said striking-pin projects from the rear of the closing-block *a*; and its fore end, when in its normal position, is nearly, but not quite, flush with the front face of the block. The said striking-pin is in such a position in the block that when the breech end of the gun is closed its fore end is presented to that part of the cartridge requiring to be struck, while its projecting rear end is presented to the cock or hammer *e*. The said hammer may either be

an external hammer, as shown, and situated on the right or left hand side of the stock, in which case the striking-pin *d* is situated obliquely in the block; or we may use an internal hammer, centrally situated, and striking through an opening in the bottom of the breech-chamber. In this case the blow of the striking-pin upon the cartridge is direct.

The sliding block *a* is operated to open and close the breech by means of an arm or lever, *f*, jointed to the outer end of the said block at *a'*. This arm or lever, in its normal position, hangs vertically against the side of the stock, as shown in Fig. 3. The other end of the block *a* has a recess in its under side, in which, when the said block is pushed home, a spring or snap stud, *g*, in the left-hand guide of the breech-chamber projects, and thereby secures the block in its closed position.

After discharging the gun, the block is withdrawn by applying the thumb or finger to the curved lower end of the lever *f*. The upper short end of the lever is thereby forced against the arm of the extractor hereinafter described, which lies outside of the breech-chamber. The block *a* is thus started with sufficient force to disengage it freely from the snap or spring stud *g*. After a slight angular movement to start the block *a*, the said lever is pulled outward to complete the withdrawal of the said block, which slides freely in its guides, and opens the breech.

The extractor or ejector consists of a crank-lever, *h*, pivoted on the screw *h¹*, and working horizontally near the top of the breech-chamber. The inner arm, *h²*, of this extracting-lever forms part of the annular recess in which the rim of the cartridge engages, and the outer arm, *h³*, of the said lever lies outside the shoe, in the proper position to be struck by a screw-stud, *i*, on the upper face of the block *a*. A groove formed in the side of the breech-shoe permits the said stud to pass out when the block is withdrawn. As the closing-block *a* approaches the end of its path on opening the breech, the said stud, coming against the arm *h³* of the extractor, engages therewith, and gives to it the required motion to extract and eject the empty cartridge-case from the barrel and breech-cham-

ber. The stud *i* is screwed down to permit the removal of the block *a*.

The front face of the sliding block *a* is beveled at *a*², so that it will force home the cartridge should the latter not have been properly inserted by the finger. The under side of the said block is made with bearing-pieces in its opposite edges, instead of bearing on its whole surface. By this arrangement the inconvenience from the accumulation of dirt is prevented. The said bearings are notched transversely, so as to keep clean the surface on which they work.

Our said invention is applicable both to new and converted arms, and to both small-arms and ordnance.

We claim—

1. The adjustable stud *i*, projecting from the face of the breech-block, and arranged to operate, in combination with the extractor *h*, to throw out the cartridge case or shell when the block *a* is drawn out to open the breech, as herein set forth.

2. In a breech-loading fire-arm, the block *a*, lever *f*, and extractor *h*, constructed as shown and described, and operating, in combination with the end of the barrel and the breech-shoe *c*, as herein set forth, and for the purposes specified.

WALTER SCOTT.

WILLIAM JAMES MATTHEWS.

Witnesses:

JOHN HARRIS,

HEN. BREWIN.