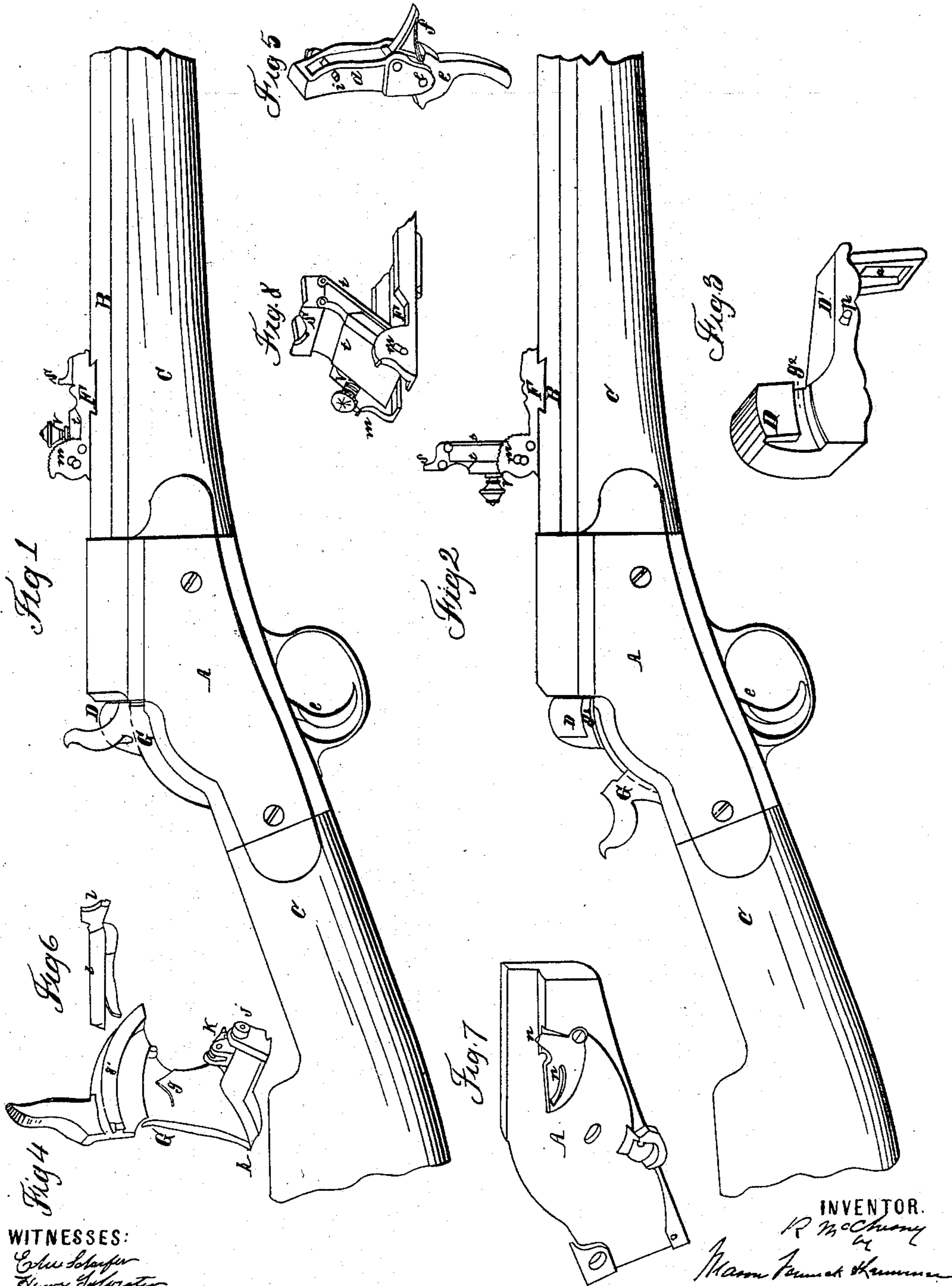


R. McCHESNEY
Breech-Loading Fire-Arm.

No. 65,103

Patented May 28, 1867.



WITNESSES:
Charles Schaeffer
Henry S. Loring

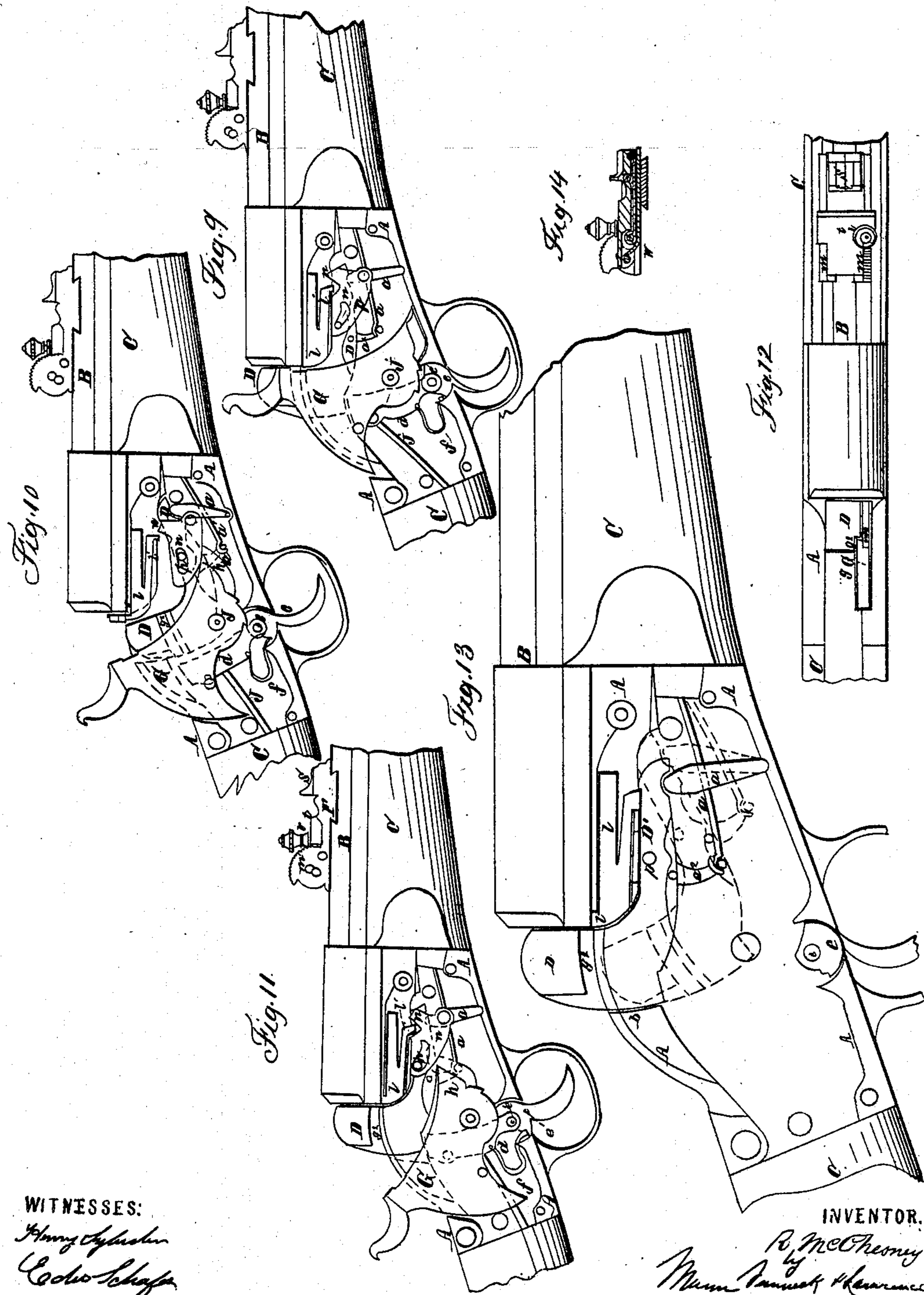
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WITNESSES:
Henry C. ...
Edo ...

INVENTOR:
R. McCheoney
by ...

United States Patent Office.

REUBEN McCHESNEY, OF UTICA, NEW YORK.

Letters Patent No. 65,103, dated May 28, 1867.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, REUBEN McCHESNEY, of Utica, in the county of Oneida, and State of New York, have invented a new and improved Breech-Loading Fire-Arm; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1, sheet 1, is a side view of the arm with the hammer closed.

Figure 2 is a similar view showing the hammer full cocked.

Figure 3 is a perspective view of the breech-piece and its vibrating fulcrum.

Figure 4 is a perspective view showing the peculiar construction of the hammer.

Figure 5 is a perspective view of the trigger and the vibrating latch which supports the rear end of the breech-piece when closed.

Figure 6 is a perspective view of the cartridge-shell extractor.

Figure 7 is a perspective view of the lock-plate showing the slotted plate pivoted to its inside face for thrusting out the extractor.

Figure 8 is a perspective view of my improved adjustable sight.

Figure 9, sheet 2, is a side view of the arm with the lock-plate removed.

Figure 10 is a similar view to fig. 9, with the hammer half cocked.

Figure 11 is a similar view to figs. 9 and 10, showing the hammer full cocked and the breech-piece locked in its place.

Figure 12 is a top view of fig. 9.

Figure 13 is an enlarged view of the breech-piece, its vibrating fulcrum and its spring applied in the lock-chamber, and indicated in two positions.

Figure 14 is a longitudinal section taken vertically through the adjustable sight.

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

This invention relates to certain novel improvements on a breech-loading fire-arm, in which a movable breech-piece is employed, which is supported forward of the breech of the barrel, and so constructed that when the hammer is drawn back to a half cock, this breech-piece will be depressed to allow of the insertion of a cartridge, and then returned to a position for closing the breech of the barrel in the act of full cocking the hammer. The main object of my invention is to support the forward end of a breech-piece in front of the breech of the barrel upon a vibrating fulcrum, in such manner that very little friction will be produced by the movement of the breech-piece upon said support; at the same time the breech-piece will be allowed to rise to a position in front of a breech-check, where it will be wholly sustained by the latter against an upward or downward tendency in firing the piece, as will be hereinafter described. Another object of my invention is to provide for ejecting the cartridge shells from the rear end of the barrel simultaneously with the dropping of a breech-piece which is supported in front of the breech end of the barrel by means of a contrivance which will admit of the full insertion of the cartridge when the hammer is at half cock, as will be hereinafter described. Another object of my invention is to connect the hammer and the breech-piece together, when the former is closed or partly closed, in such manner that the breech-piece will be sustained by the hammer, as well as by the solid breech-check of the frame, when the piece is discharged, as will be hereinafter described.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

In the accompanying drawings, A represents the metallic lock frame, which has secured to it the barrel B and the stock C. D represents the breech-piece for closing the rear end of the barrel, which piece is constructed with a forward extension, D', that extends forward beneath the barrel, and is supported upon an open vibrating fulcrum, a. The ends of this fulcrum-piece a are rounded and fitted into corresponding depressions which are formed in the frame A, and in the lower edge, near the front end of the breech-piece D, as clearly shown in fig. 13. The upper end of the piece a is allowed to have a free vibrating movement backward and forward, and it is prevented from lateral displacement by the side plates of the lock frame. The forward part of the breech-piece extension D' abuts snugly against the upper side of the chamber beneath the barrel, and this piece D D' is allowed to have a free longitudinal play at the same time that it vibrates upon the fulcrum-piece a. When

the breech-piece is released from a supporting latch, which is applied beneath its rear end, it is depressed to the position shown in fig. 10, by a spring, a^1 , which is secured at one end forward of the fulcrum-piece a , passed forward through this piece, and connected to the lower face of the extension D' by a link, a^2 . When the breech-piece is raised, as shown in figs. 9, 11, and 13, its rear end is sustained by the curved face abutment b , which is formed upon the frame A . This abutment b forms a seat against which the breech-piece is brought by allowing the latter to move upward and backward in bringing it to a position for closing the rear end of the barrel. To obtain this backward movement of the breech-piece when raised, its forward abutting surface is curved as shown in the drawings, which surface is brought in contact with a correspondingly curved surface of the breech end of the barrel. The curved face of the abutment b is nearly perpendicular to the axis of the barrel, but may incline forward a little, as shown in fig. 13, so that there will be no downward tendency of the breech-piece when it receives the shock of the discharge. The rear edge of the breech-piece is curved so that it may be lifted to its seat and fit snugly therein, as shown in fig. 13. At the rear end and lower side of the breech-piece a notch is formed for receiving a latch, d , the lower forked ends of which receive between them the trigger e , and are pivoted to the trigger-pin e' , as shown in fig. 5. The trigger-spring f is connected to the forked latch d at one end, and presses upon the trigger at the other end so that this spring serves for both the latch and trigger. When the rear enlarged end of the breech-piece is raised to a position for closing the rear end of the barrel, the spring f will force the upper end of the latch forward beneath the breech-piece and hold it there. The object of the latch d is to support the breech-piece in the position shown in figs. 9, 11, and 13, when it is not sustained by the forward extension of the hammer G . The latch d has a spring-pin, i , passing transversely through it near its upper end, one end of which pin projects from the side of the latch and is slightly bevelled, so that in the act of drawing back the hammer an offset, g , on the inner face of this hammer, will be brought in contact with pin i , and move the latch back far enough to allow spring a^1 to depress the breech-piece $D D'$, as shown in fig. 10. When the hammer G is released from a full cock, the offset g on its face being bevelled forward will readily pass by the pin i by thrusting it inward. The hammer G is arranged on one side of the breech-piece and pivoted between the side plates of the lock frame, and to these plates by means of studs j . The upper part of the hammer is the segment of a circle concentric to its axis of motion, and on the inner face of the segment is a concentric flange, g^1 , which is received in a slot, g^2 , in the side of the breech-piece when the hammer is closed. This flange is designed for connecting the breech-piece and hammer together in such manner that the latter will afford an auxiliary support for said piece during the discharge. The breech-piece $D D'$ is raised to a position, shown in figs. 9 and 11, for closing the rear end of the barrel by means of a forward extension, h , of the hammer, shown clearly in figs. 4 and 11, which is brought in contact with the bottom of said breech-piece, as the hammer is moved from a half cock to full cock. The hammer-spring J proceeds forward between the forked ends of the latch d , and is connected to a lateral projection of the hammer by a link, k . The screw on the trigger e enters notches which are formed in the lower rounded edge of the hammer, and holds the hammer at half cock or at full cock. The lower part of the hammer thus forms the tumbler for the trigger. The cartridge-shell extractor l , is fitted into a recess formed in one side of the frame A and barrel B , so as to have a longitudinal movement in a direction with the length of said barrel, as shown in figs. 9, 10, 11, and 13, sheet 2. The extractor is partially ejected beyond the end of the barrel by means of a bevelled finger, n' , which is formed on a slotted plate, n , that is pivoted to the inner face of the movable lock-plate face, as shown in fig. 7. The plate n receives in its slot a stud, p , which projects from the forward extension of the breech-piece, so that when this breech-piece drops, as shown in fig. 10, plate n will bring its finger n' in contact with the forward end of a bevelled spring portion, v' , on the extractor l , and eject the cartridge suddenly by a blow. The extractor l can then be moved back to its place by the insertion of another cartridge. When the breech-piece is raised to its place by the full cocking of the hammer G , the bevelled spring piece v' on the extractor l , will allow the finger n' to pass by it and fall in front of it again in a position to again eject a cartridge shell when the breech-piece is depressed. The sight-piece s is pivoted to two plates $t t$, the lower ends of which are pivoted to the base-piece F , so that the sight-piece s is raised and depressed in the arc of a circle. The pivot pin of the upper plate t has a slight movement in its bearings which is allowed by the oblong holes through the side pieces $m m'$, through which the ends of said pin pass. The edges of the side pieces $m m'$ are curved concentric to the axis of the pivot pin of the upper plate t , and the edge of the segment m' has teeth cut in it for receiving the worm on a screw, v , which is applied to an offset on the upper plate t , as shown in fig. 8. This worm screw has a milled head on it, by which it is turned with the fingers and the sight raised or lowered. A spring, w , which acts upon the pin of the upper plate t , holds the worm screw down in place upon its toothed segment. Instead of having the sight-piece s pivoted to two plates $t t$, as above stated, it may be secured to the upper end of the upper plate t and the lower plate dispensed with. The hammer is provided with a safety notch to keep the firing pin from touching the cartridge when the arm is charged. Thus the hammer can be let down from a full cock to said notch and the arm carried without danger. It will be seen that when the breech D is down, the hammer cannot move forward, nor can the hammer strike upon the cartridge until every part is in its proper position. Instead of using the sight-piece s , a globe-sight may be applied to the parallel pieces $t t$, and instead of applying the worm screw v to the upper piece t , it may be applied to the base F . The oblong holes through which the pivot of the upper plate t passes, allows of the adjustment of the sight without using the worm screw v , and the spring w keeps this screw v in place upon the toothed segment m' .

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

1. Sustaining the forward extension of the breech-piece upon a vibrating fulcrum-piece, a , substantially as described.
2. The combination of the breech-piece D , fulcrum-piece a , and latch d , operating substantially in the manner set forth.

3. Constructing the fulcrum-piece *a* so as to receive through it the spring *a'*, which depresses the breech-piece when the latter is released from the latch *d*, substantially as described.
4. The arrangement of the cartridge-shell extractor *l l'*, so as to be operated upon with the full force of the spring *a'* through the agency of the intermediate slotted device *n n'*, and the breech-piece *D D*, the said parts being thrown into action by the act of cocking the arm, substantially as described.
5. Constructing the hammer *G* with a flange, *g¹*, for entering a recess, *g²*, formed in the breech-piece and assisting in holding the latter firmly in place, substantially as described.
6. Constructing the latch *d* of the breech-piece so as to receive the forward end of the main-spring *J* through it, said latch *d* being pivoted upon the trigger-pin *e'*, substantially as described.
7. Applying the pin *i* to the breech-holding latch, and operating said pin by the projection *g* on the inside face of the hammer *G*, substantially in the manner shown and described.

REUBEN McCHESNEY.

Witnesses:

J. ALBERT CIPPERLY,
DE WITT CHURCHILL.