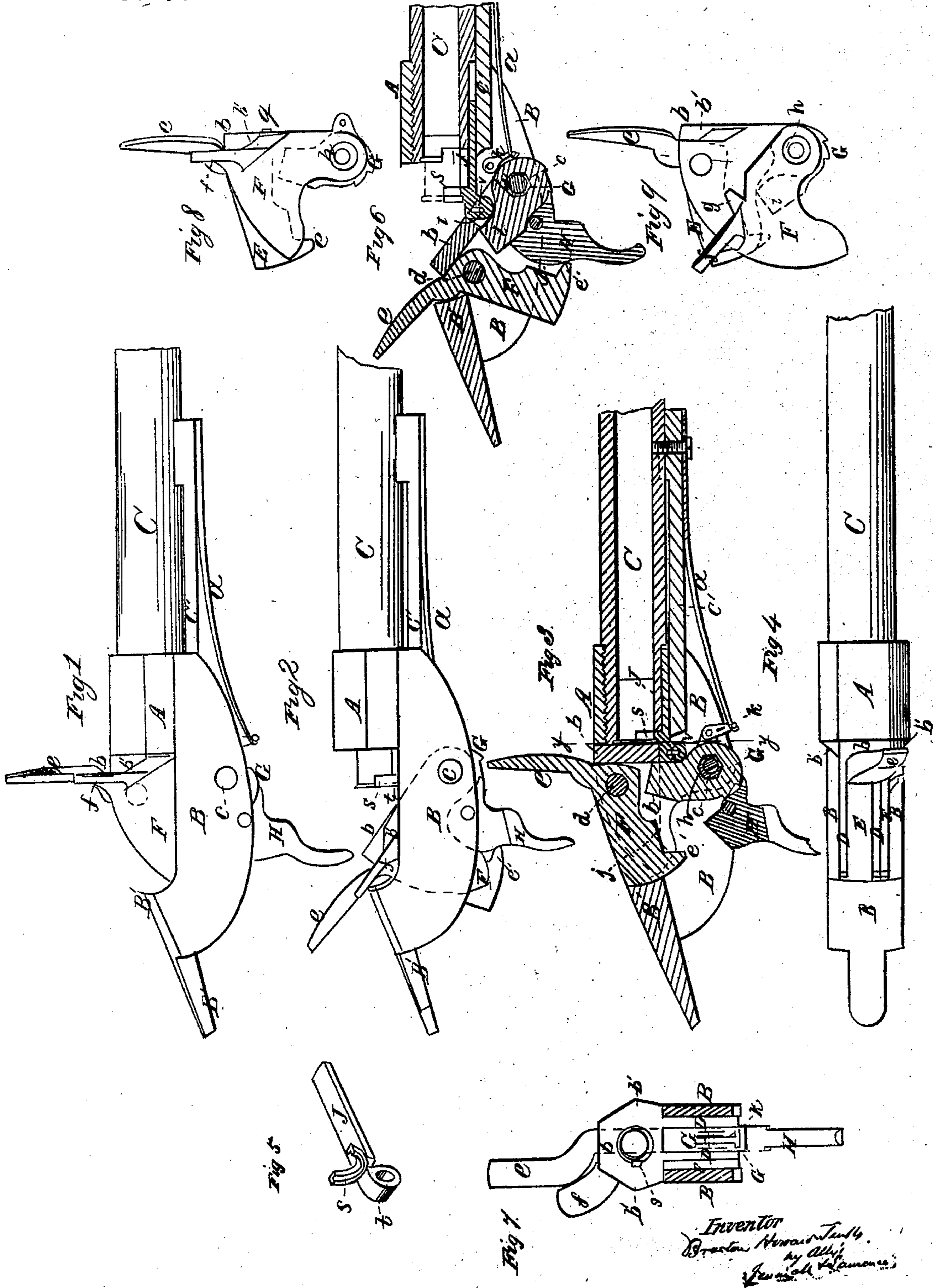


B. H. Jenks.
Breech Loader.

No. 74,700

Patented Feb. 25, 1868



Inventor
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United States Patent Office.

BARTON H. JENKS, OF BRIDESBURG, PENNSYLVANIA.

Letters Patent No. 74,760, dated February 25, 1868.

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, BARTON H. JENKS, of Bridesburg, in the county of Philadelphia, and State of Pennsylvania, have invented certain novel Improvements in Breech-Loading Fire-Arms; 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 is a view of that side of the arm upon which the hammer is arranged, showing both the breech-closer and the hammer in a forward position.

Figure 2 is a similar view, showing the hammer and also the locking-latch drawn back to their fullest extent, to cock the piece and to insert a cartridge.

Figure 3 is a longitudinal central section through the arm, showing the position of the parts when the breech-closer is locked in a proper position against the breech of the barrel.

Figure 4 is a top view of fig. 1.

Figure 5 is a perspective view of the cartridge-shell retractor and its slide.

Figure 6 is a sectional view, similar to fig. 3, but showing the position of the parts when the breech-closer is drawn back, as in fig. 2.

Figure 7 is a vertical cross-section of the arm, taken at the point indicated by line *yy*, in fig. 3, showing the forward end of the breech-closer.

Figure 8 is a side view of the hammer and breech-closer, and the locking-latch, in the position of fig. 1.

Figure 9 is a similar view of the same parts, showing the hammer cocked and the breech-closer in the position of fig. 8.

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

This invention relates to an improvement on that class of breech-loading arms, which are adapted for the use of fixed ammunition and cartridge-shells, having the percussion-powder confined within flanges, which are formed around the butts of the shells, so that when these flanges are struck by a hammer, the powder in the shells will be ignited.

The main object of this invention is to combine with a slotted frame of an arm, a vibrating breech-closer, a vibrating locking-latch, and brace for keeping the breech-closer firmly against the breech-end of the barrel when the arm is charged for firing, and also a vibrating-hammer, which latter is applied on one side, and outside of the said breech-closer, in such manner that, in the act of exposing the breech of the barrel by drawing back the breech-closer, the hammer will be cocked; then, upon returning the breech-closer to its place against the breech of the barrel, and locking it there, the hammer will be in a position for firing the piece, and at the same time provision is made for cocking the hammer without moving the breech-closer, as will be hereinafter described.

Another object of my invention is to provide for securely locking the breech-closer in its proper position, against the breech of the barrel, before the hammer can be released to explode the cartridge, as will be hereinafter described.

In the accompanying drawings I have not represented the wooden stock and hand-pieces of the arm, as these parts may be made of the usual well-known forms, and constitute no part of my invention.

The metallic frame, to which the barrel and the other parts of the arm are secured, consists of a hub-piece, A, two vertical checks, B B, having a longitudinal space between them, which extends back to the tang B', and forward to the breech-end of the barrel C. The lower forward extensions of the cheeks B B also form a space below the hub A, and have secured between them a longitudinal portion, C', which projects forward, and is secured to the bottom of the barrel C, at its forward end, by means of a screw, which also secures the main-spring *a* in place, as shown in fig. 3. The rear end of the barrel C is screwed or otherwise secured into the hub A, so that the rear end of the barrel is flush with the rear vertical end of the hub portion A. The rear end of the barrel is reamed out to receive the cartridge-shells, as shown in figs. 3 and 6, and a semicircular portion is cut out of the barrel, at its rear end, and below its axis, for receiving the cartridge-shell retractor *s*, as will be hereinafter described, and below this space the rear end of the portion C' is cut away for the purpose of allowing the retractor-stem and portion *s* to be moved snugly up to their place. Within the vertical space enclosed by the cheeks B B is pivoted a vibrating breech-closer, D, of a segment form. The front flat face of this closer

D is constructed with an enlarged solid portion, *b*, having lateral projections *b' b'*, so as to present a strong abutment to the breech-end of the cartridge-shell, and to fit snugly against the vertical end of the barrel and hub, when the arm is in a condition for firing, as shown in figs. 1, 3, and 4. The front face of this portion *b* is shown clearly in fig. 7, where it will be seen that there is a perforation through it on one side of its centre, through which the nose of the hammer passes to strike upon the flange of the cartridge. This segmental breech-closer is slotted vertically, so that all that portion of it which is in rear of and below the solid check-piece *b*, forms two cheeks for receiving between them the locking-latch or brace, and also the tumbler, to which the hammer is secured. This segment, D, is pivoted between the two cheeks, B B, of the metallic frame by means of a transverse pin, *c*, which is located below the longitudinal axis of the barrel C, and slightly in rear of its breach, as shown in figs. 1, 2, 3, and 6, and the upper edges of its cheeks are curved concentric to the axis of said pin *c*, so that these edges will pass freely without touching the forward end of the tang B', as the segment is vibrated about its axis. The range of vibrating movement of the segment D will be seen by reference to the two figs. 3 and 6, one of which shows it when it is forced forward against the barrel, and the other shows it when drawn fully back. Between the two cheeks of the vibrating-segment D is the locking-latch E, which is pivoted by a transverse pin *d*, and allowed to have a vibratory movement independently of the movement of the segment to which it is pivoted. The pivot-pin *a* of this latch is located near the solid breech portion *b*, and from its upper edge, near its forward end, a finger-piece, *e*, projects, as shown in several figures of the drawings. The forward end of this locking-latch E is bevelled so as to allow it to have a limited motion about its axis, and the rear end of this latch is curved concentrically to the axis of the pin *d*. The bottom edge *j* of the latch E has a nose, *e'*, projecting from it for a purpose which will be hereinafter explained.

The object of the piece E is chiefly to hold the segment breech-closer D firmly in the position, shown in figs. 1, 3, and 4, so that the recoil or shock of the discharge will be resisted by the solid portion or tang B'. To effect this object, and also to allow this closer, D, to be drawn back to the position shown in figs. 2 and 6, for the insertion of a cartridge, the removal of a cartridge-shell or blank, and for other purposes, the forward end of the tang B' is curved concentric to the axis of the pin *d* of said latch, when the closer is forced forward to the position shown in figs. 1 and 3. In order to expose the breech of the barrel C it will be necessary to place the hand upon the projection *e*, and force the rear end of the latch down clear of the abutment or tang B', when, by a further backward movement of the hand, the segment D can be drawn back to the position shown in figs. 2 and 6, which will give sufficient space in front of this closing-segment for the insertion of a ball-cartridge or the removal of an exploded shell.

On the outside of the segment breech-closer D is the hammer F, which corresponds in segment-form to this closer, and which is pivoted upon the same pin *c* therewith, but not to this pin. This hammer F is constructed with a finger-piece, *f*, projecting from its forward upper corner, and also with a nose, *g*, on its forward edge, which nose is of sufficient length to pass through the perforation, which is made through one of the lateral projections, *b*, of the solid closing-portion *b'*, and strike the flange of the cartridge and explode the same, when the hammer is allowed to fly from a full cock to the position shown in figs. 1 and 8. The front edge of the hammer F is notched so that it will fit snugly against the back surface of the projection *b'*, when in the position shown in figs. 1 and 8. This hammer is secured to a tubular bearing, *h*, which passes through the cheeks of the segment D, and to this tubular bearing the tumbler G is secured between the cheeks, so that the hammer and tumbler shall both move together about the axis of the pin *c*. The tumbler G is notched on its lower rounded edge to receive the sere of the trigger H, and it is also constructed with an extension, *i*, which is of such length that, in moving forward, its extreme upper end would strike the lower edge *j* of the locking-brace E, and force this brace upward before the hammer could strike and explode the cartridge. But when the brace E is in a position in which it will sustain the shock of the discharge against the abutment of the tang B', as shown in fig. 3, then the hammer will not be arrested in its forward movement. This projection or inclined plane *i*, on the tumbler G, will effect the secure locking of the breech-closer D, before the hammer can explode the cartridge.

When the locking-latch E is released from its shoulder-abutment on the tang portion B', and the segment breech-closer D is drawn back to the position shown in figs. 2 and 6, the hammer F, with its tumbler, G, will be cocked. The segment D is then moved forward again and locked in the position shown in fig. 9, leaving the hammer cocked. During the act of exposing the breech of the barrel, by drawing back the segment D, the nose *e'*, on the latch E, will impinge upon and move over the rounded back edge of the trigger H, and prevent any movement of the same until the breech of the barrel is again closed, and the segment locked in place.

The main-spring *a*, which may be applied as shown in the drawings, or in any other suitable manner, is connected at its rear end to the link *k*, which is pivoted to the tumbler G, and causes the hammer to explode the cartridge when this hammer is released from the trigger. Directly above the link *k* is the slide J, carrying the retractor for withdrawing the cartridge-shells from the breech of the barrel after every discharge of the piece. This slide J moves longitudinally in a slot at the bottom of the barrel C, and is constructed with a semi-circular portion, *s*, on its rear end, which embraces one-half of the cartridge-shells and their flanges and withdraws the shells. On the extreme rear end of this sliding retractor is an enlargement, *t*, transversely through which is an oblong slot. Through this slot a pin, *v*, passes, which connects the slide to the vibrating-closer D, directly beneath the check-plate *b*, as shown in figs. 3 and 6.

When the breech of the barrel is exposed, by drawing back the segment D, the cartridge, or the blank cartridge-shell, as the case may be, will be drawn out as indicated in fig. 6. Before closing the breech of the barrel, a cartridge is partially inserted therein, so that its flange will be in front of the retractor *s*, after which it may be forced in place by moving the parts in the position for firing the arm.

It will be seen from the above description that I effect the combination of a vibrating breech-closer, a vibrating-hammer, and a vibrating locking-brace or latch, and at the same time have the hammer so arranged

that it may be, at pleasure, cocked or half cocked, or released from a full cock, without moving the breech-closer. Also, that said hammer will be brought to a full cock by drawing back the breech-closer to insert a cartridge, or to retract a blank shell. It will also be seen that the tumbler, which is connected to the tubular bearing of the hammer, as above set forth, is so arranged between the cheeks of the segment D, that it will prevent a premature discharge of the piece should the hammer be released when the locking-latch is not in a position to sustain the shock of the discharge against the abutment B'.

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

1. Combining a vibrating slotted breech-piece, D, a vibrating locking-latch, E, and a hammer, F, in such manner that these parts are confined between the cheeks B of the frame, and the hammer is on the outside of the breech-piece, substantially as described.

2. Arranging the tumbler G between the cheeks of the vibrating breech-piece D, and affixing the hammer to one end of the tubular bearing of said tumbler, substantially as described.

3. So combining a vibrating-hammer, F, which is arranged outside of a vibrating breech-piece, and between the frame-checks B, that said hammer can be full cocked or half cocked without moving the breech-piece, substantially as described.

4. Providing for cocking a hammer, which is arranged outside of and pivoted to the axis *c* of a vibrating breech-piece, in the act of drawing back the latter by means of an extension, *b'*, or its equivalent, substantially as described.

5. The relative arrangement of the breech-piece D, locking portion E, tumbler G, and trigger H, the same being constructed and operating substantially as set forth.

BARTON H. JENKS.

Witnesses:

WILLIAM DOBSON,
R. M. SHOUSE.