

(No Model.)

2 Sheets—Sheet 1.

J. DUVAL.  
BREECH LOADING FIRE ARM.

No. 307,273.

Patented Oct. 28, 1884.

Fig 1

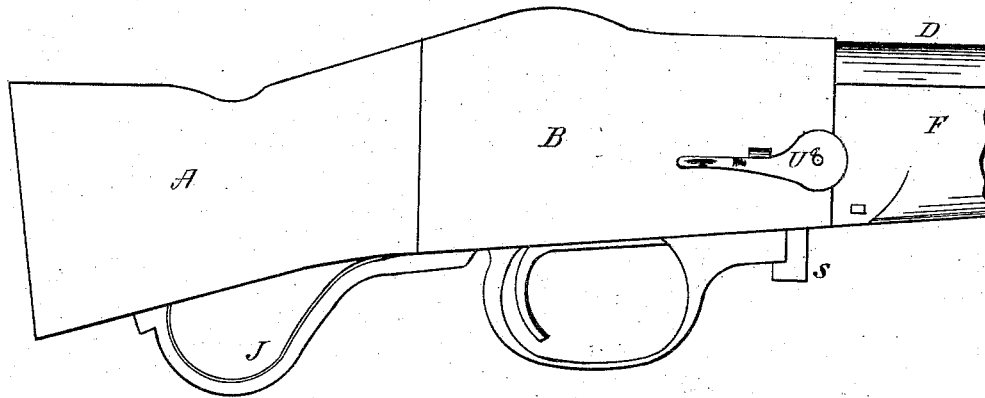


Fig 2

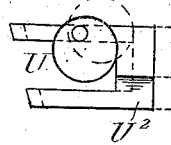
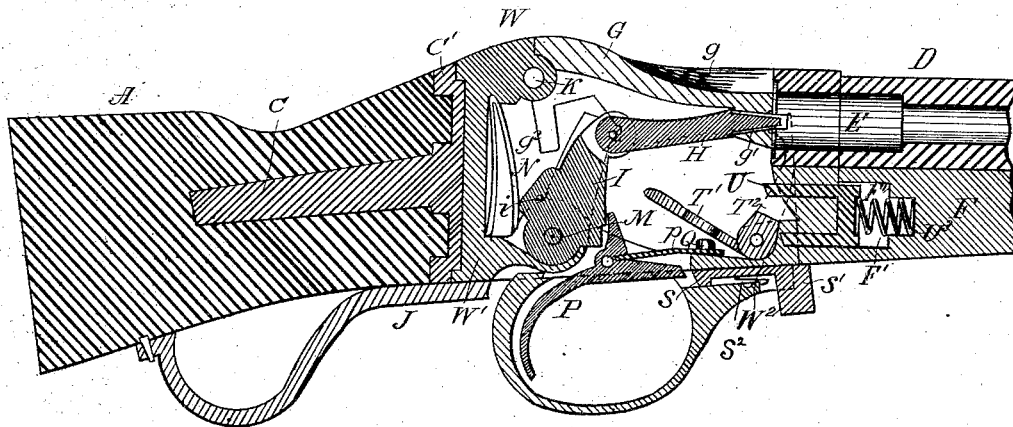


Fig 3.



Witnesses.

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Fig 4.

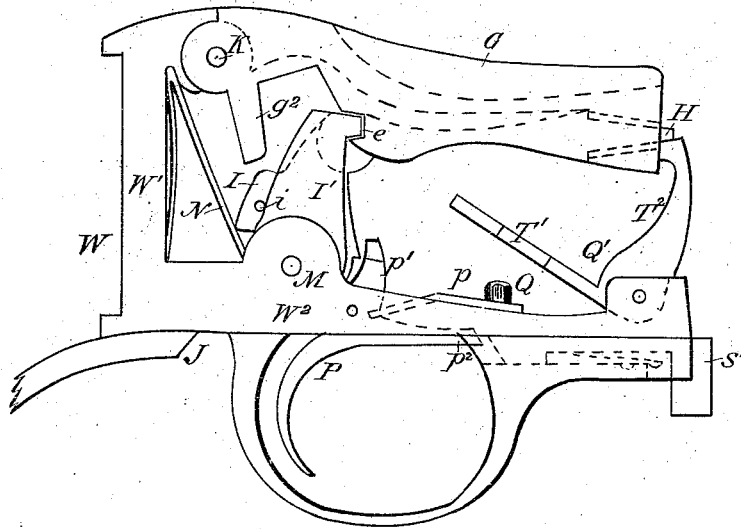


Fig. 5.

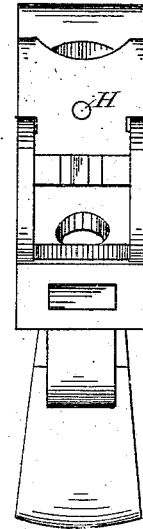
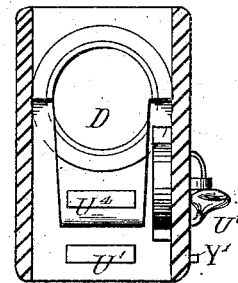


Fig. 7.



*Fig. 6*

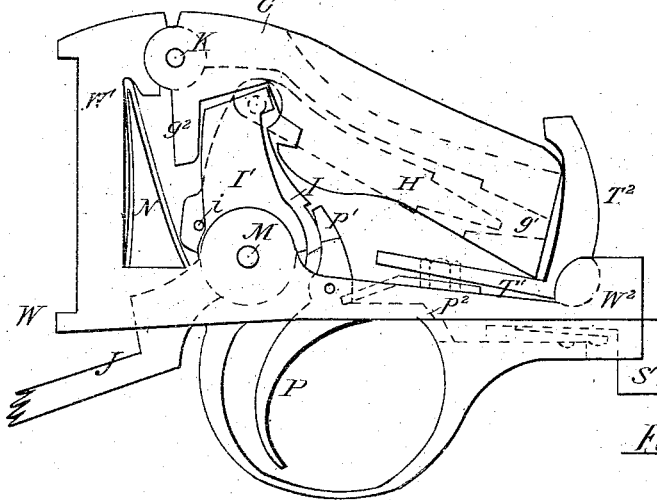
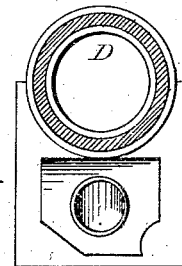


Fig. 8.



Witnesses

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# UNITED STATES PATENT OFFICE.

JOSEPH DUVAL, OF LAPRAIRIE, QUEBEC, CANADA, ASSIGNOR TO FRANCOIS  
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## BREECH-LOADING FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 307,273, dated October 28, 1884.

Application filed February 26, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH DUVAL, of the village of Laprairie, in the county of Laprairie and Province of Quebec, Dominion of Canada, have invented certain new and useful Improvements in Breech-Loading Fire-Arms; and I do hereby declare that the following is a full, clear, and exact description of the same.

This invention relates to improvements in breech-loading fire-arms; and its object is to furnish a gun which will be simple in construction and cheap to manufacture, in which the number of parts shall be reduced to a minimum, in which the operative mechanism may be readily removed when necessary, and which can be loaded and fired with great rapidity.

The invention consists, partly, in an improved construction and arrangement of the loading, cocking, and firing devices; further, in the manner of securing the operative mechanism in the gun and locking it in a peculiar manner, so that it may be instantly removed; and, further, in various details of construction, and in the novel combinations of the parts, all fully hereinafter explained.

In the drawings, Figure 1 is a side elevation; Fig. 2, a detail of the cam and key for removably securing the operative parts within the chamber. Fig. 3 is a longitudinal vertical section. Fig. 4 is a partial side elevation, the gun having just been fired. Fig. 5 is an end view of Fig. 4. Fig. 6 is a view similar to Fig. 4, with the gun in position for reloading. Fig. 7 is a section on line *xx* of Fig. 3. Fig. 8 is a section on line *yy* of Fig. 3.

A represents the stock, B the side walls of the slotted chamber, C the tang embedded in the stock, and D the barrel, all of the usual construction.

The barrel D is screwed to a suitable lug, so that it may be removed in order that rifled and smooth-bore barrels may be used interchangeably.

E is the cartridge-chamber, in line with the bore of the barrel.

F is an extension of the stock which supports and partly incloses the barrel, Fig. 1. The operative mechanism is supported by a frame, W, Figs. 4 and 6. This frame is composed of a vertical standard, W', and a slotted

base-plate, W<sup>2</sup>. The standard W' has two shoulders, *w w*, which enter rabbets in the metal plate C', such plate being rigidly connected to the stock by the tang C. The standard there fits closely and bears firmly against the plate C' at the rear. The breech-block G closes the slot in the chamber, and is pivoted upon a pin, K, in the standard W'. It extends forward to the cartridge-chamber, and has a cartridge-groove, *g*, upon its upper surface, and a horizontal perforation, *g'*, through which the firing-pin projects. At its rear is a downward projection, *g''*, the object of which will be hereinafter explained. The hammer I is pivoted upon a pin, M, in the base-plate W<sup>2</sup>, a rounded hinge-joint being formed, as shown in Fig. 3. The block-spring N, which projects the hammer forward, is of an inverted-V shape, and its free end bears upon a projection, I', on the rear of the hammer. The latter is also provided with the ordinary half and full cock notches, Fig. 3. The firing-pin H is pivoted at the upper extremity of the hammer, and projects forward through a perforation in the breech-block. The trigger P is pivoted upon a transverse pin in the base-plate, and has projecting spurs *p' p''*, which engage with either of the notches in the hammer. The trigger-spring *p* is of ordinary construction, and is held by a screw, Q. The extractor Q' is a bell-crank lever pivoted in the base-plate W<sup>2</sup>, and having arms T' T<sup>2</sup>. One arm of the lever extends backward, Fig. 6, in position to be struck by the descending breech-block. The extracting-arm projects upward and engages with the rim of the cartridge.

S is a safety-key which slides in a space between the stock and trigger-guard, and is provided with a handle, S', and a light spring, S<sup>2</sup>. The end of the key is slipped below the end *p''* of the trigger, obviating all danger of accidental discharge.

J represents the lever pivoted on the pin M, which supports the hammer. The lever extends down through the slot in the base-plate to a point below the stock, where it may be easily reached by the hand. It also extends up above the pivot, its upper end being formed with a projection, which enters a notch in the breech-block when the latter is elevated. When the lever is thrown down, its rear por-

tion strikes a pin, *i*, on the hammer and throws the latter back to half or full cock. It will be readily understood from this that the lever and hammer, being pivoted upon a common pin, move backward as one, but may move forward independently, as will be more fully described hereinafter.

The operation of the parts thus far described is as follows: Supposing the gun to have just been fired, Fig. 4, the lever J is first thrown down, throwing back the hammer and striking the projection *g* of the breech-block. The breech-block falls, bringing the cartridge-groove in line with the chamber E. In its descent it strikes the extractor, which throws out the exploded shell. A cartridge is placed in the groove of the breech-block and readily pushed into the chamber. The gun at this time may be either at half or full cock, and Fig. 6 shows the exact position of the parts. The lever is now thrown up. The hammer, which is held by the trigger, remains stationary, while the upper end of the lever, bearing on the breech-block, elevates the latter until the projection of the lever enters the notch in the breech-block, Fig. 4. If the gun is at full-cock, it is now ready to be discharged. When the trigger is pulled, the hammer is thrown forward independently, driving the pivoted firing-pin against the primer of the cartridge.

In Figs. 2, 3, and 7 is illustrated a device for locking the frame W within the breech, and permitting it, with the breech-block, hammer, lever, trigger, and extractor, to be removed at once and by a single movement. A cavity, *F'*, is formed in the part F of the stock, in which is a strong pressure-spring, *U*<sup>3</sup>. This spring bears on the end of a double sliding key, *U*<sup>2</sup>, the arms of which enter slots *U'* *U*<sup>4</sup>, the slot *U'* being in the end of the frame W, while the inner face of the key bears against the end of said frame and forces it back. Be-

tween the arms of the key is pivoted upon a transverse bolt a cam, *U*, which has a projecting thumb-piece or handle, *U*<sup>6</sup>, Fig. 1. By means of this handle the cam is forced against the key, crowding it into the cavity in the stock, and withdrawing the sliding arms from engagement with the slots *U'* *U*<sup>4</sup>. By a slight forward movement of the lever J the frame W is disengaged from the plate *C'*. If the lever is then forcibly pulled down, the entire frame and all the parts pivoted therein may be withdrawn from the breech, either for purposes of cleaning or repair or to render the gun useless in case of necessity.

Having thus described my invention, what I claim is—

1. In a breech-loading gun, the combination, with the chambered stock, of a supporting-frame, W, having the breech-block, hammer, lever, and extractor pivoted therein, and a sliding key, *U*, working in the recess *F'* of the stock for locking such frame, constructed and operated substantially as described.

2. The combination, with the stock, of the removable frame W, carrying the lock mechanism, the key *U*, sliding within the recess *F'* of the stock for securing the frame, and the spring *U*<sup>3</sup>, substantially as described.

3. The combination, with the chambered stock, of the plate *C'*, the removable frame W, supporting the lock mechanism and composed of a base-plate and standard, the key sliding within the recess *F'*, and the cam for operating the same, all substantially as described.

4. In combination with the chambered stock having the recess *F'*, and with the lock-bearing frame W, the double sliding key, the pivoted cam having the handle *U*<sup>6</sup>, and the spring *U*<sup>3</sup>, substantially as described.

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Witnesses:

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