(No Model.)

J. P. LAVIGNE.

BREECH LOADING ORDNANCE.

No. 421,730. Patented Feb. 18, 1890.

Fig. 1

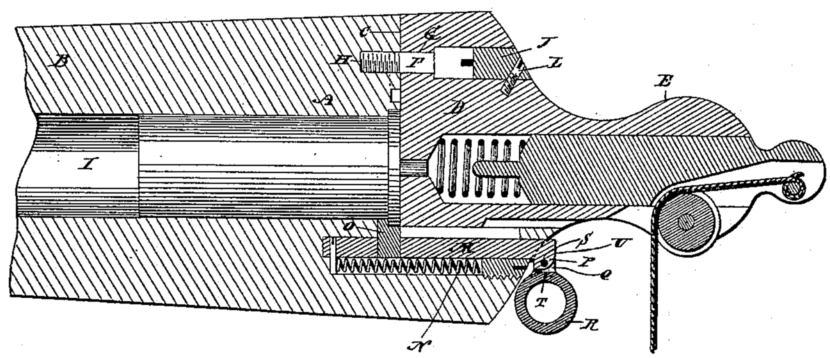


Fig. 2

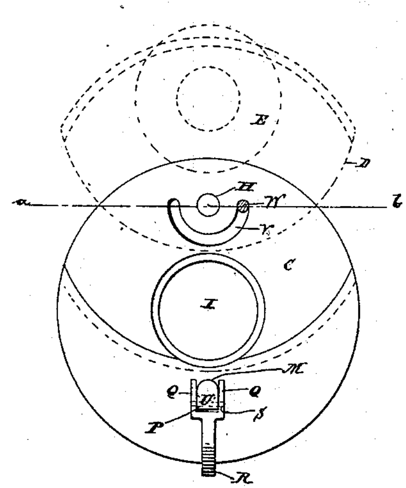


Fig. 4

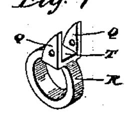
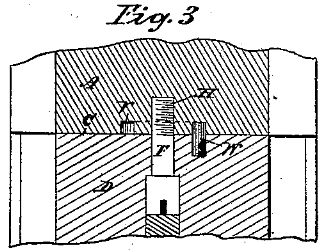


Fig. 3



Witnesses:
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UNITED STATES PATENT OFFICE.

JOSEPH P. LAVIGNE, OF NEW HAVEN, CONNECTICUT.

BREECH-LOADING ORDNANCE.

SPECIFICATION forming part of Letters Patent No. 421,730, dated February 18, 1890.

Application filed March 27, 1889. Serial No. 304,978. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH P. LAVIGNE, residing at New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Breech-Loading Ordnance; and I do declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an improvement in breech-loading ordnance, the object being to provide guns of this class with improved extracting and breech-block-controlling devices.

With these ends in view my invention consists in certain details of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a broken view of the gun in vertical longitudinal section. Fig. 2 is a rear view of the gun with the breech-block removed, but indicated in its open position by broken lines. Fig. 3 is a view of the breech and breech-block in transverse section on the line *a b* of Fig. 2, and showing the breech-block, stop; and Fig. 4 is a detached perspective view of the cammed finger-piece.

As herein shown, the breech A of the gun B is provided with a transverse recess, having a straight inner wall C and receiving a breech-piece combining the breech-block D and the breech-knob E, and pivotally hung in the recess on a screw-pivot F, passing through a pivot-hole G, formed above the center and midway between the ends of the block, and entering a screw-hole H, formed in the wall C of the recess in the vertical line through the axis of the bore I of the gun. A beveled plug J, inserted into the outer end of the hole G and secured in place by a small screw L, conceals and protects the said pivot-screw. The gun is chambered below its bore and recess to receive the extracting-bar M and the spring N, the former being provided at its inner end with an extracting-finger O and at its outer end with a depending lug P. A finger-piece consisting of two arms Q Q, each having a beveled inner face and a ring R, is pivoted by a pin S to the said lug P, which is received between the two arms, the pin being located below the center of the said bar. The lug and the finger-piece are constructed so that the lower wall T of the slot or opening between the arms Q Q will engage with the rear edge U of the lug and stop the rotation of the finger-piece on the pivot and prevent it from being lifted into a horizontal plane, whereby, when the bar is pulled back into the gun by the spring, the cammed edges of the arms of the finger-piece will always be presented to the breech of the gun in such position that the spring can act on the finger-piece and pull it down into place, a leverage being obtained by pivoting the finger-piece below the center of the bar. Normally the beveled faces of the said arms engage with the beveled outer face of the breech. Then when the finger is slipped through the ring and the finger-piece pulled outward, the beveled faces of its arms will cam against the gun. The power so obtained readily starts the shell, no matter how tightly it may be stuck in the bore of the gun. After the shell has been started the extractor operates like the ordinary extractor in withdrawing the shell. When the ring is let go, the spring at once pulls the bar back to its normal position, and in so doing insures the restoration of the finger-piece to its right place.

To stop the breech-piece in its full open position, and to prevent it from being carried beyond the vertical and so interfere with introducing a cartridge into the gun or the removal of a cartridge therefrom, the wall C is furnished with a semicircular slot V, located below the screw-hole H, concentric therewith and having its ends terminating in a horizontal plane passing through the center of the said hole. This slot receives a pin W, projecting from the inner face of the breech-block and placed therein in position to be brought into the said plane when the block is in its full open or vertical position, whereby the pin will engage, when the block is in such position, with the wall at one end of the slot, and so stop the block. When the block is closed, the pin will travel around to the other end of the slot.

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

1. In a breech-loading cannon, the combination, with the breech thereof, of an ex-

tractor mounted therein and provided at its outer end with a cammed finger-piece pivoted thereto to work against the outer face of the said breech and assist in starting the spent shells, substantially as set forth.

2. In a breech-loading cannon, the combination, with the breech thereof, of an extractor mounted therein and provided at its outer end with a finger-piece consisting of two cammed arms, between which the bar of the extractor is pivoted, and of a ring to receive the finger, substantially as set forth.

3. In a breech-loading cannon, having a transverse recess formed in its breech and a curved slot formed in the inner wall of the said recess, the combination, with a breech-block pivoted in the said recess in the vertical line through the axis of the bore of the gun on a pivot with which the said curved slot is concentric, and a pin mounted in the inner face of the block and entering the said slot, the slot and pin being protected and concealed, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JOSEPH P. LAVIGNE.

Witnesses:
CHAS. B. SHUMWAY,
WM. J. DE MAURIAC.