(No Model.) 2 Sheets—Sheet 1.

G. S. BOESCH.

BREECH LOADING GUN.

No. 408,453. Patented Aug. 6, 1889.

Fig. 1.

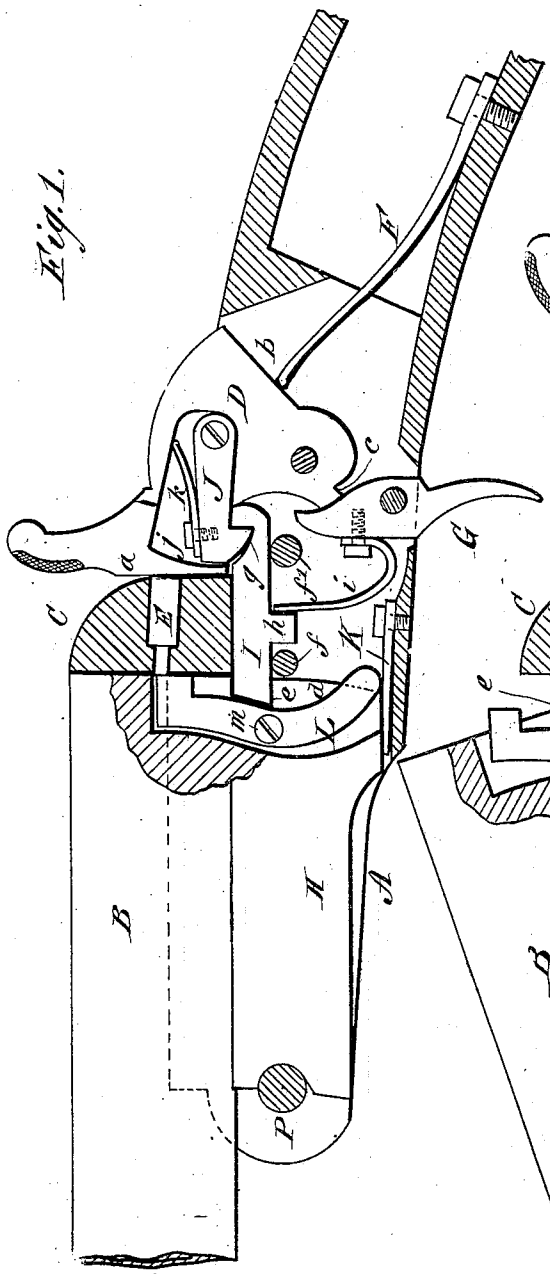
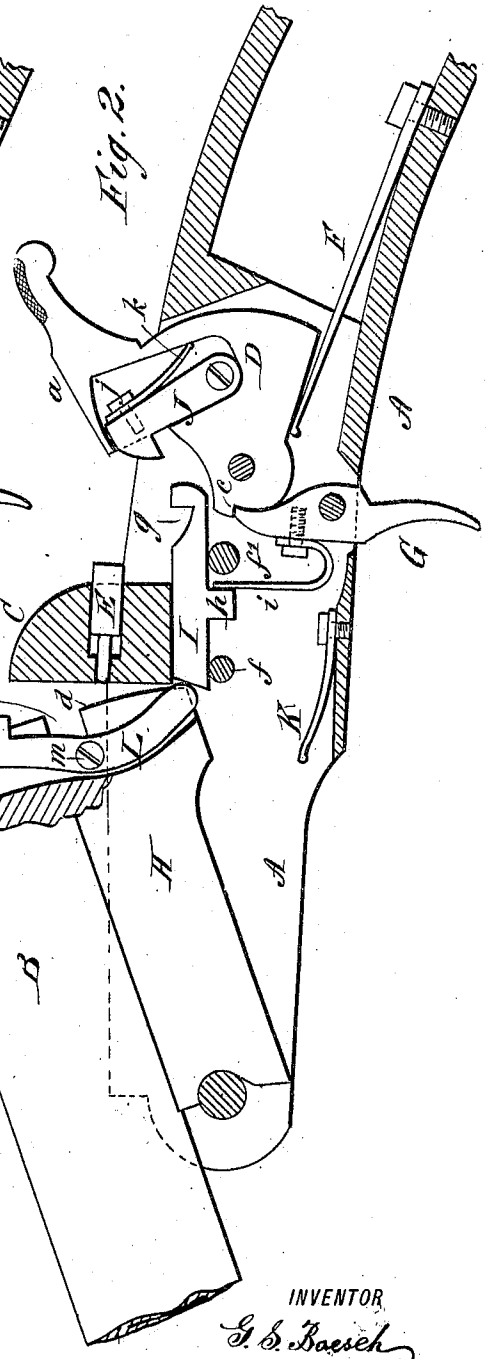


Fig. 2.



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ATTORNEY

(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

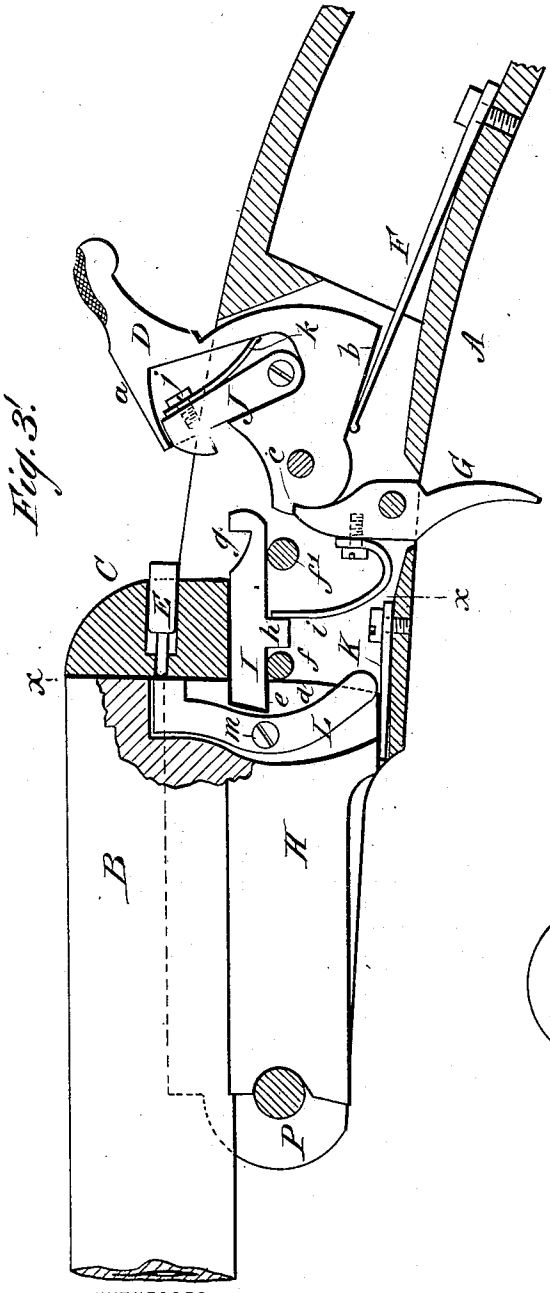
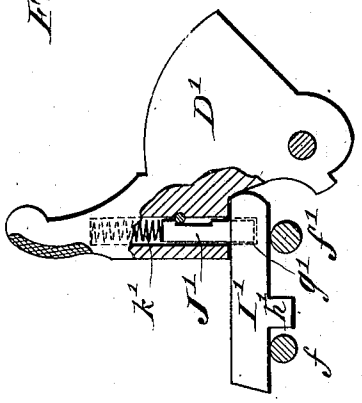


Fig. 5.



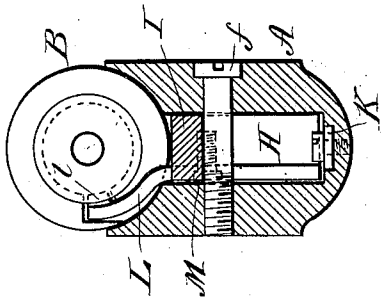


Fig. 4.

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Donn Tuttchell

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UNITED STATES PATENT OFFICE.

GUSTAVE S. BOESCH, OF FREETOWN, MASSACHUSETTS.

BREECH-LOADING GUN.

SPECIFICATION forming part of Letters Patent No. 408,453, dated August 6, 1889.

Application filed March 2, 1889. Serial No. 301,736. (No model.)

To all whom it may concern:

Be it known that I, GUSTAVE S. BOESCH, of Freetown, in the county of Bristol and State of Massachusetts, have invented a new and Improved Breech-Loading Gun, of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—

Figure 1 is a side sectional elevation of a portion of a gun embodying my improvement and showing the breech closed. Fig. 2 is a similar view showing the breech open. Fig. 3 is a side sectional elevation showing the breech closed and the gun in condition to fire. Fig. 4 is a transverse section taken on line *x x* in Fig. 3; and Fig. 5 is a side elevation, partly in section, of a hammer and locking-pin, showing a modified form of catch.

Similar letters of reference indicate corresponding parts in all the views.

The object of my invention is to provide a breech-loading gun which may be rapidly loaded and fired, and in which the firing cannot be accomplished without the closing and locking of the breech.

My invention consists in the construction and arrangement of parts, as will be hereinafter fully described and claimed.

In the stock A is pivoted the barrel B upon the pin P. To the stock is secured a solid breech-piece C, and in the stock, at the rear of the breech-piece, is pivoted a hammer D. The breech C is bored to receive the firing-pin E, which is arranged axially in line with the barrel B when closed, and the hammer D is provided with a striking-face *a*, which is adapted to contact with the firing-pin E and drive it forward into the percussion-cap of the cartridge contained by the barrel B. The hammer D is furnished with a shoulder *b*, which is pressed by the mainspring F. It is also provided with a notch *c* for receiving the inner end of the trigger G. To the under surface of the rear end of the barrel B is attached a rib H, having a curved rear end *d*, in which is formed a notch *e*.

In the stock A, underneath the breech-piece C, is arranged a locking-bolt I, which in the present case is supported by two transverse screws or pins *f f'*, passing through the stock; but I do not limit or confine myself to this construction, as the bolt I may be placed in a mortise or supported in any convenient manner.

The end of the bolt I adjoining the rib H is beveled to adapt it to engage with the curved surface *d* of the said rib, and the beveled end of the bolt I is adapted to enter into the notch *e* and lock the barrel in a closed position. The bolt I extends rearwardly, and is provided with a notch *g* near its rear end, and its under surface is furnished with a lug *h*, which is engaged by a curved spring *i*, secured to the front of the trigger G, and serving the double purpose of pressing the bolt I forward and of holding the trigger G in engagement with the hammer D.

The hammer D is provided with a recess *j*, in which is pivoted a catch J, which is adapted to engage the notch *g* of the bolt I, and to the back of the catch J is secured a spring *k*, which presses the catch J forward, so that it engages with the notched end of the bolt I when the hammer D moves forward to strike the firing-pin E.

When the barrel B is tilted, as shown in Fig. 2, the bolt I will be prevented from moving forward by the curved end *d* of the rib H, and the said bolt I extends rearwardly into the path of the hammer D, so that should the hammer D be accidentally released the bolt I will prevent the hammer from moving forward sufficiently to strike the firing-pin E, thus rendering it impossible to fire the charge prematurely or to disarrange the parts of the firing and locking mechanism.

In the bottom of the stock, underneath the breech-piece C, is secured a spring K, which is compressed when the barrel B is carried downward to a closed position, and which serves to lift the said barrel when it is released in the manner presently to be described. In a recess formed in the side of the rib H and the rear end of the barrel B is placed a cartridge-extracting lever L, provided with a lug *l*, which extends toward the bore of the barrel B. The lever L turns upon a pivotal screw *m*, passing through the said lever into the rib H, and the lower end of the lever L is curved rearwardly and rounded to enable it to strike

the breech-piece C as the barrel B is tilted, thus throwing the lug *l* forward and starting the cartridge-shell.

The parts being arranged as shown in Fig. 3, with a cartridge in the barrel B, the barrel shut down in front of the breech-piece C, and the hammer D cocked, the cartridge is discharged by pulling the trigger G, releasing the hammer D, when the spring F throws the hammer forward into contact with the firing-pin E, thus driving the said pin forward against the cap of the cartridge, discharging the load, after which the parts occupy the position shown in Fig. 1. When it is desired to reload the barrel B, the hammer D is drawn back, and by virtue of the engagement of the catch J with the bolt I the said bolt is also drawn back against the pressure of the spring *i*. The withdrawal of the bolt I from the notch *e* releases the barrel B, so that the spring K can tilt it, as shown in Fig. 2. In its upward movement the barrel carries the cartridge-lever L against the breech-piece C, thereby turning the lever on its pivot and starting the cartridge-shell, so that it may be readily removed and replaced by a loaded shell. While the barrel B is tilted, or at any time before the bolt I enters the notch *e*, the release of the hammer D will result only in the striking of the said hammer against the rear end of the bolt I; but as soon as the said bolt enters the notch *e* the hammer D when released can strike the firing-pin E. The bolt I is carried forward into the notch *e* by the spring *i*. The engagement of the upper end of the lever L with the breech-piece C carries it back into its recess in the end of the barrel, and the downward movement of the rear end of the barrel B compresses the spring K and stores therein the power required to again tilt the barrel when the hammer D is again drawn back.

It is obvious that I may provide different means for withdrawing the bolt I from the notch *e* by the motion of the hammer D. I have shown a modified form of this device in Fig. 5, in which the hammer D′ is bored to receive the bolt J′, which is pressed by the spring *k*′, placed in the bore of the hammer above the bolt, and in the bolt I′ there is a cavity adapted to receive the end of the bolt J′. With this arrangement, when the hammer D′ strikes against the firing-pin, the bolt J′ enters the cavity *g*′ in the bolt I′, so that when the hammer D′ is withdrawn it draws back the bolt I′, as in the other case.

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

1. The combination, in a breech-loading gun, with the stock, the barrel, and the sliding locking-bolt, of a hammer provided with a catch separate and independent from the bolt and adapted to engage it when thrown forward and to retract it and become disconnected therefrom when raised into the firing position, substantially as set forth.

2. In a breach-loading gun, the combination of the tilting barrel B, provided with the rib H, having the notch *e* and the convex surface *d*, the breech-piece C, the firing-pin E, inserted in the said breech-piece, the hammer D, provided with the spring-actuated catch J, and the spring-pressed bolt I, adapted to be engaged by the catch J, substantially as specified.

3. The combination, with the hammer D, provided with the notch *c*, of the trigger G, adapted to enter the said notch, the barrel B, having the notched rib H, and the double-acting spring *i*, attached to the trigger and adapted to press forward the bolt I, substantially as specified.

4. The combination, with the stock and the tilting barrel, of the transverse screws *f f*′, the locking-bolt sliding thereon, a spring throwing said bolt, and mechanism for retracting the bolt, substantially as set forth.

5. The combination, with the stock and the tilting barrel, of the sliding locking-bolt having a lug on its under side, transverse screws supporting the bolt at opposite sides of its lug, a spring engaging said lug and throwing the bolt into engagement with the barrel, and mechanism for retracting the bolt, substantially as set forth.

6. The combination, with the stock having the breech-piece C, provided with the firing-pin E, the longitudinally-sliding bolt I thereunder, having a notch in the rear end of its upper side, and the tilting barrel, of the hammer D, provided with a notch *c*, a spring-actuated catch mounted upon the hammer and adapted at its free or outer end to enter the bolt-notch, a trigger G, engaging the hammer, a spring *f*′, bearing at its lower end against the front edge of the trigger above its pivot and at its upper end against the said bolt to throw it forward, and the spring for throwing the hammer, substantially as set forth.

7. The combination, with the stock, the tilting barrel having a rib on its breech end, the firing-pin, and the hammer, of a sliding locking-bolt extending through the breech-piece and in the path of the forward edge of the hammer and the rear face of said rib, whereby, when the barrel is tilted and the hammer cocked, the rib will force the rear end of the locking-bolt into the path of the hammer and prevent it from descending and striking the firing-pin, substantially as set forth.

GUSTAVE S. BOESCH.

Witnesses:

SILAS P. RICHMOND,

GILBERT M. NICHOLS.