



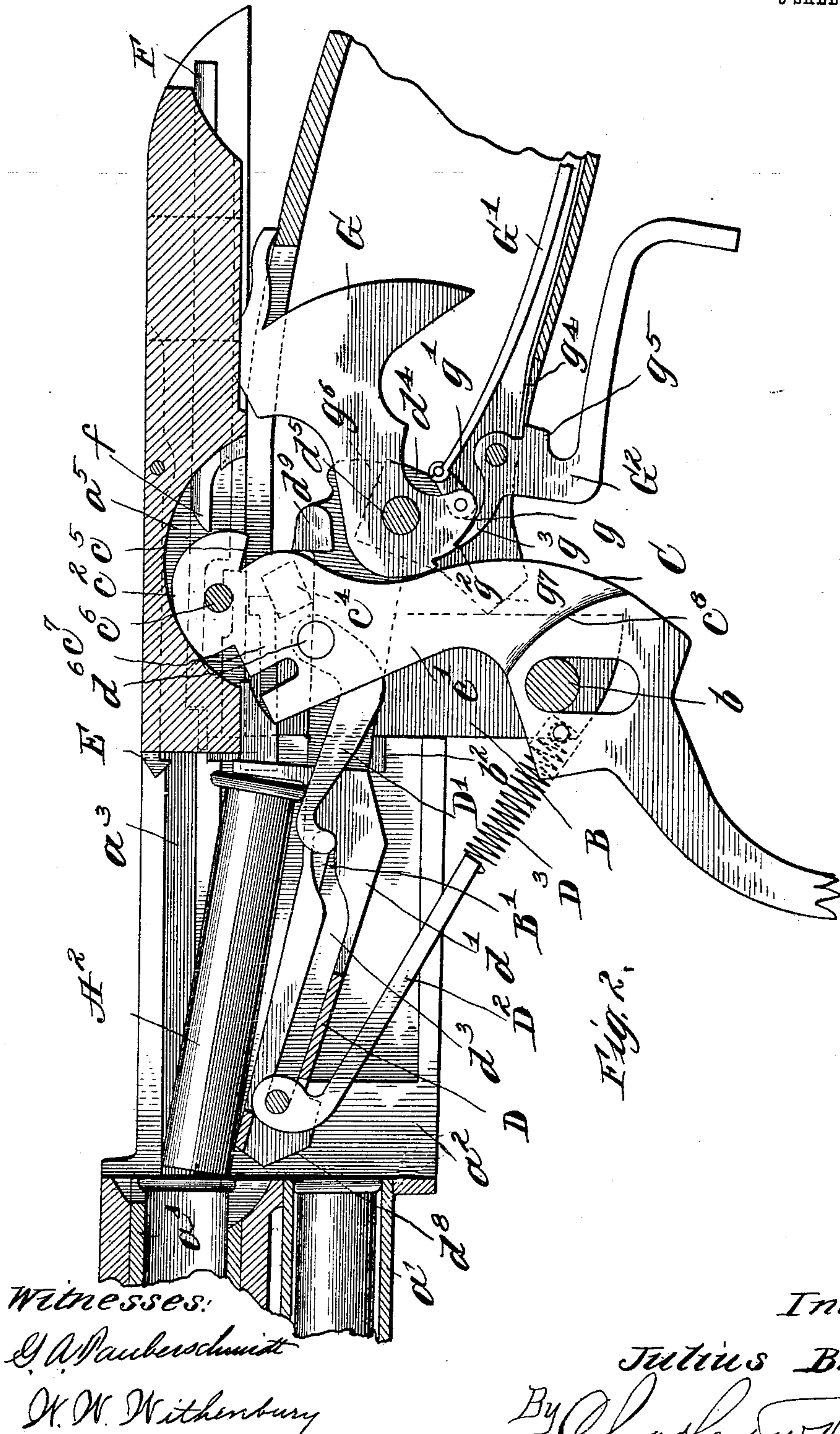
No. 861,632.

PATENTED JULY 30, 1907.

J. BRADER.  
BREECH LOADING MECHANISM.

APPLICATION FILED JUNE 11, 1906.

3 SHEETS—SHEET 2.



Witnesses:  
J. A. Pauberschmidt  
W. W. Withenbury

Inventor:  
Julius Brader  
By Charles W. Fries  
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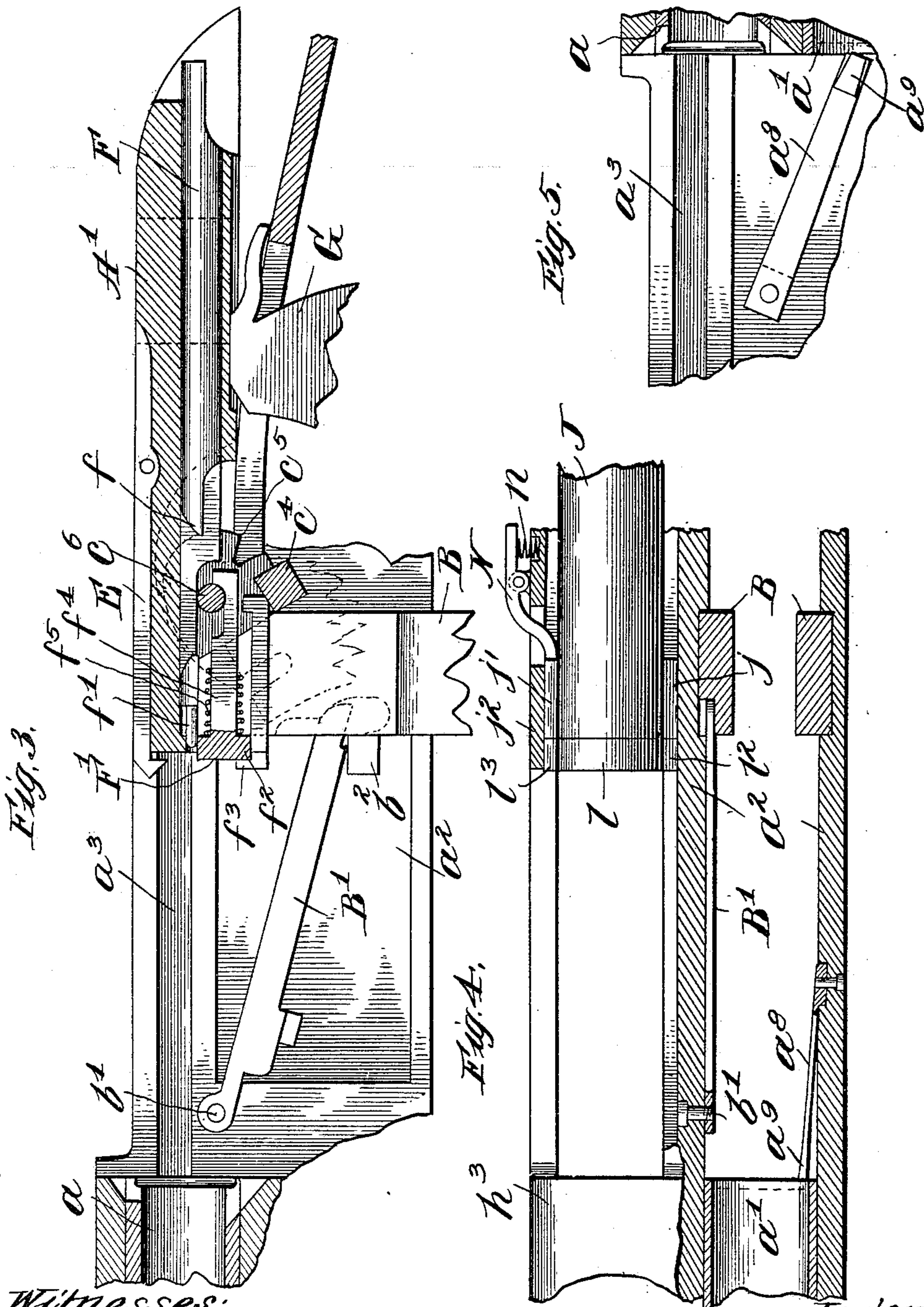
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# UNITED STATES PATENT OFFICE.

JULIUS BRADER, OF MILWAUKEE, WISCONSIN.

## BREECH-LOADING MECHANISM.

No. 861,632.

Specification of Letters Patent.

Patented July 30, 1907.

Application filed June 11, 1906. Serial No. 321,164.

*To all whom it may concern:*

Be it known that I, JULIUS BRADER, residing at Milwaukee, Wisconsin, have invented a Breech-Loading Mechanism, of which the following is a specification.

5 The object of this invention is to produce a novel and improved breech-loading mechanism designed more particularly for shot-guns.

My improved construction is fully illustrated in the accompanying drawings in which,

10 Figure 1 is a fragmentary longitudinal section of a breech mechanism according to my invention, showing the operating mechanism in elevation and the action closed. Fig. 2 is an enlarged longitudinal section in the same plane as Fig. 1 showing the action  
15 open and the breech-block in section at one side of its center. Fig. 3 is a view similar to Fig. 2 but with parts removed and showing the breech block in central section. Fig. 4 is a fragmentary central horizontal section through the breech of the gun, with parts re-  
20 moved. Fig. 5 is an enlarged fragmentary view of the receiver, showing the magazine-stop in elevation. Fig. 6 is a fragmentary perspective view of the finger-lever operating the breech mechanism. Fig. 7 is a perspective view of the shell carrier.

25 The frame or stock A carries the barrel  $a$ , having below it a magazine chamber  $a'$  and a receiver  $a''$  at the rear thereof, all of which may be of any preferred or usual construction. Said receiver is shown as open at the top for the reception of loaded shells and  
30 expulsion of empties and is provided in the side walls thereof near the top with longitudinal grooves or ways  $a^3$ — $a^3$  adapted to receive the breech block  $A'$  which, as shown, comprises a block of metal approximately rectangular in cross section and provided on the sides  
35 thereof with longitudinal ribs  $a^4$ — $a^4$  adapted to slide in said grooves  $a^3$ . Slidably engaged in vertical grooves in the walls of said receiver are the locking bolts B which as shown are rigidly connected at their  
40 lower ends by a transverse bolt or pin  $b$ . When the action is closed as shown in Fig. 1 the locking bolts B extend upwardly, flush with the top of the breech block  $A'$  which, as shown, is provided in each side with a vertical groove to receive said bolts B when  
45 the block is at the forward limit of its movement thereby locking said block against rearward movement until said bolts are retracted. A locking bar  $B'$  is pivoted at its forward end on a pin  $b'$ , secured in the wall of the receiver and the rear end thereof is movably engaged in a recess in the adjacent locking  
50 bolt B thereby permitting said bolt to travel vertically and carry the end of the bar therewith. A lug or stop  $b^2$  on the wall of the receiver limits the downward movement of said bar but permits the locking bolt to move downwardly a sufficient distance to release the  
55 breech block.

Pivotally supported on the bolt or pin  $b$  and extend-

ing inwardly between the locking bolts is the finger lever C which, as shown, at its point of support is provided with an elongated slot to receive said bolt or pin  $b$  thereby permitting said lever to slide longitudi- 60 nally on said pin when operated. Said lever is provided at its outer end with an operating handle  $c$  as is usual in such constructions and the inner end  $c'$  thereof extends upwardly and forwardly and is provided with rounded apertured lugs  $c^2$ — $c^3$ , the former of which 65 is integral with said lever and the latter of which is secured thereto, laterally thereof, by a block  $c^4$  and is spaced a distance therefrom as is shown more clearly in Fig. 10. Said lugs  $c^2$ — $c^3$  are rounded thereby af-  
70 fording cam surfaces and at their rear sides are provided with abrupt shoulders  $c^5$ . Said breech block as shown more clearly in Figs. 2 and 9 is recessed on its under side to provide downwardly opening recesses which are separated by a central web  $a^5$  and in  
75 which the lugs  $c^2$  and  $c^3$  on the finger lever project and are secured therein by means of a pivot pin  $c^6$  extending transversely therethrough and through the breech block.

The magazine  $a'$  is provided with a spring controlled follower  $a^7$  by means of which the shells are moved 80 into the receiver, as is usual in such devices and rigidly engaged on the side of the receiver and extending forwardly and inwardly is a leaf spring  $a^8$  which normally projects in front of the magazine as shown  
85 more clearly in Fig. 4, and is provided on its forward end with a beveled stop block  $a^9$  adapted to engage against the shells  $A^2$  and prevent them from being projected into the receiver when the action is open.

The carrier D comprises as shown two parallel bars  $d$  and  $d'$  which are integrally connected at their forward 90 ends and are provided with upwardly and outwardly directed lugs or stops  $d^2$  against which the head of the shell abuts when forced into the receiver from the magazine. Said bar  $d'$  as shown is provided with a longitudinal slot  $d^3$  which curves upwardly at its rear end 95 and at the rear end of said bar is an integral extension or arm  $d^4$  which extends rearwardly between the bolts B—B and is pivoted upon the transverse pivot bolt or pin  $d^5$  which is rigidly engaged in the walls of the receiver rearwardly of said locking bolts B. A down- 100 wardly and forwardly curved arm or link  $D'$  is pivoted at its upper end to the inner end of the finger lever by means of a pivot pin or stud  $d^6$  extending through said lever and at its lower or forward end is provided with a pin or stud  $d^7$  which is slidably engaged in the slot 105  $d^3$  of the carrier and when said finger lever is operated to close the action said link  $D'$  moves to the forward end of said slot and forces the forward end of said carrier downwardly beneath the mouth of the magazine to the position shown in Fig. 1. Owing to sliding en- 110 gagement of said link with the carrier the latter may be depressed in filling the magazine without moving the



breech block forwardly. The forward end  $D^8$  of the carrier  $D$  is beveled downwardly to engage the stop block  $a^9$  and force it laterally thus permitting a shell to be forced rearwardly into the receiver from the magazine onto the carrier  $D$  and into engagement with a shoulder  $c^7$  on the forward end of the finger lever as shown more clearly in Fig. 1. As shown the finger lever  $C$  is provided above the pivotal point with shoulders  $c^8$ — $c^8$  upon which the carrier rests when the action is closed thereby limiting the downward movement of said carrier.

A push bar  $D^2$  is pivoted at its forward end to the forward end of the carrier and extends rearwardly and downwardly beneath the same and a push spring  $D^3$  is engaged at one end on the rear end of said bar and at its other end is seated in a suitable seat in the forward side of the finger lever slightly below its pivotal point and acts when the gun is thrown into open action to force the forward end of said carrier upwardly but when the action is closed acts to hold the lever from operation, thereby preventing downward movement of the locking bolts.

Near the rear end of the extension or arm  $d^4$  is provided an integral, transversely directed lug or stop  $d^9$  which extends into the path of movement of the end  $c'$  of the finger lever  $C$  and acts to limit the rearward movement of said lever thereby preventing the forward end of the carrier being thrown into too high a position for the shell to enter the gun barrel.

The breech block  $A'$  is provided in the top thereof with a resilient retractor  $E$  which may be of the usual or any preferred construction and adapted to engage over the head of the shell and withdraw the same from the barrel after discharge and as shown, a firing pin  $F$  is slidably engaged in a longitudinal bore in said breech block and adjacent the lugs  $c^2$  and  $c^3$  of the finger lever is reduced in thickness to pass between said lugs. Said pin is cut away on its under side to permit the same to pass over the pivot pin  $c^6$  connecting said finger lever with the breech block and is provided with a contact point  $f'$  adapted to contact with the cap of the shell as is usual in such devices. Near the rear end of said reduced portions of the firing pin are the forwardly and downwardly beveled shoulders  $f$  against which the lugs  $c^2$  and  $c^3$  of the finger lever engage when the action is open to hold the firing pin retracted but which when the action is closed may enter beneath the shoulders  $c^5$  on said lever in discharging the gun.

The breech block as shown is provided in its forward

end beneath the firing pin with a chamber in which is slidably engaged the ejector  $F'$  which, as shown, comprises a head  $f^2$  which when the breech block is retracted, rests against the upwardly directed lugs  $f^3$  integral with and extending forwardly a slight distance from the front face of said breech block and limiting the outer movement of said head beneath the pivot pin  $c^6$  and a coiled spring  $f^5$  is carried thereon and engages at one end against said head and at the other end against the finger lever and acts normally to hold said ejector at its outer limit of movement as shown more clearly in Figs. 2 and 3.

A hammer  $G$  of any desired construction is pivoted on the pin  $d^5$  and is adapted to be cocked by the rearward action of the breech block in the usual manner. Said hammer as shown is provided on its lower end with a rearwardly directed lug  $g$  on which is pivoted a link bar  $g'$  the upper end of which is engaged by the main spring  $G'$  which is rigidly secured at its rear end in the stock in any desired manner and which acts normally to force said hammer forwardly. Said hammer is provided on its lower end with notches or teeth  $g^2$  adapted to receive the nose  $g^3$  of the trigger  $G^2$  which as shown is pivoted on the stock adjacent the hammer and a spring  $g^4$  also carried on said stock engages at its forward end a lug  $g^5$  on said trigger and acts to hold said nose in engagement with said teeth  $g^2$  when the gun is cocked. As shown, lugs  $g^6$  extend upwardly from the rear wall of the receiver and are apertured to receive the pivot pin  $d^5$  and act as guides to center the hammer. Extending downwardly and forwardly from said lugs are the arms  $g^7$  which act to impinge against the finger lever  $C$  and to hold it from movement when the action is closed.

In a breech-loading magazine gun, the combination of a carrier pivoted at its rear end and adapted to receive cartridges from the magazine and raise them to the barrel of the gun, a finger-lever having a pivotal movement in a vertical plane and adapted by its movement to open the lock and raise said carrier, a push-bar pivoted to the forward end of said carrier, and a compression-spring connecting the rear end of said bar to said finger-lever close to and slightly below the pivot of said finger-lever when the latter is closed, whereby said spring acts to hold the finger-lever in closed position and to raise said carrier when released by the opening movement of said finger-lever.

In testimony whereof I have hereunto subscribed my name in the presence of two subscribing witnesses.

JULIUS BRADER.

Witnesses:

CHAS. O. TELLEFSON,  
S. HAIGHT.