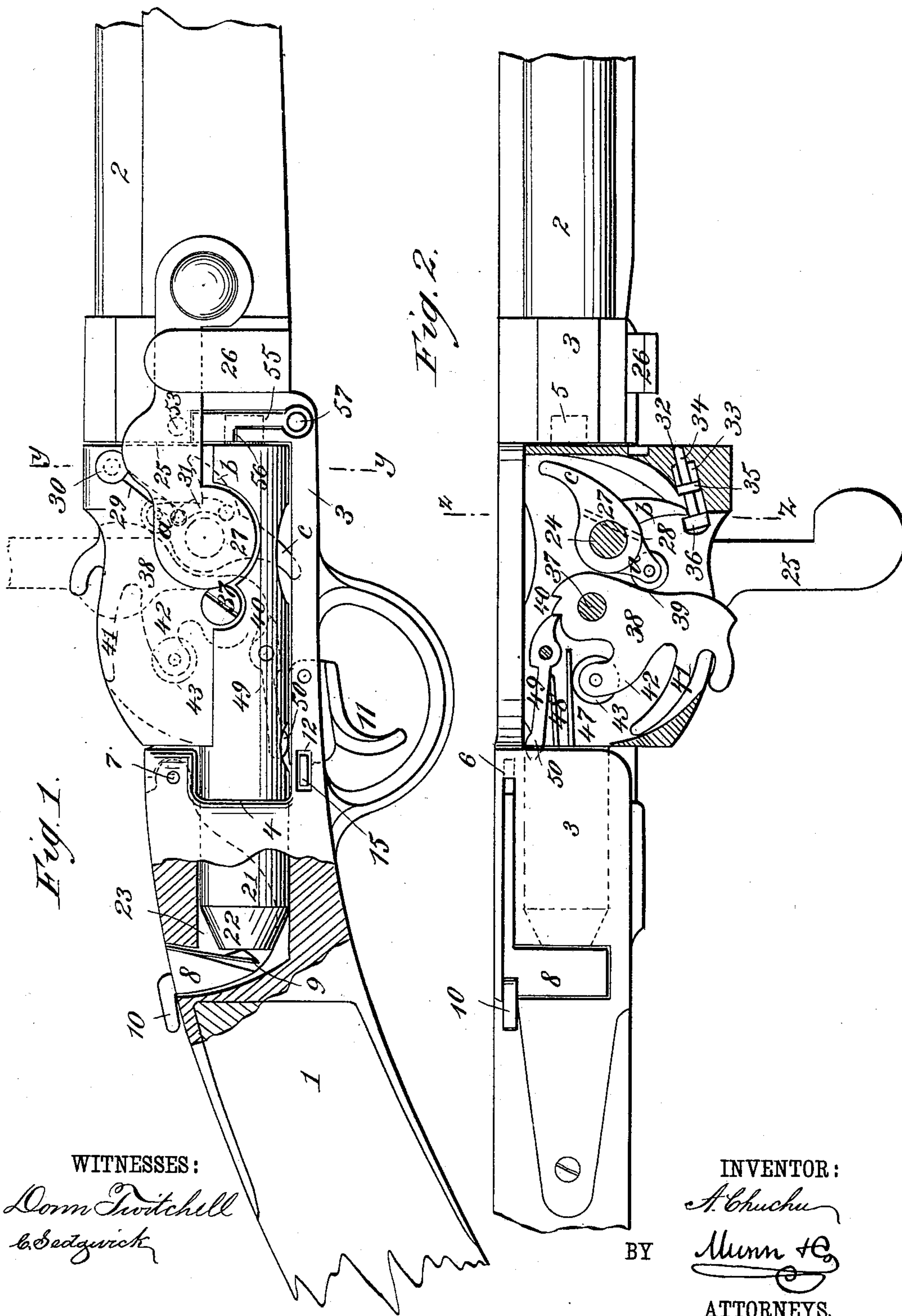


A. CHUCHU.

FIRE ARM.

No. 359,428.

Patented Mar. 15, 1887.



WITNESSES:

Dom Twitchell
L. Sedgwick

INVENTOR:

A. Chuchu

BY

Munn & Co.

ATTORNEYS.

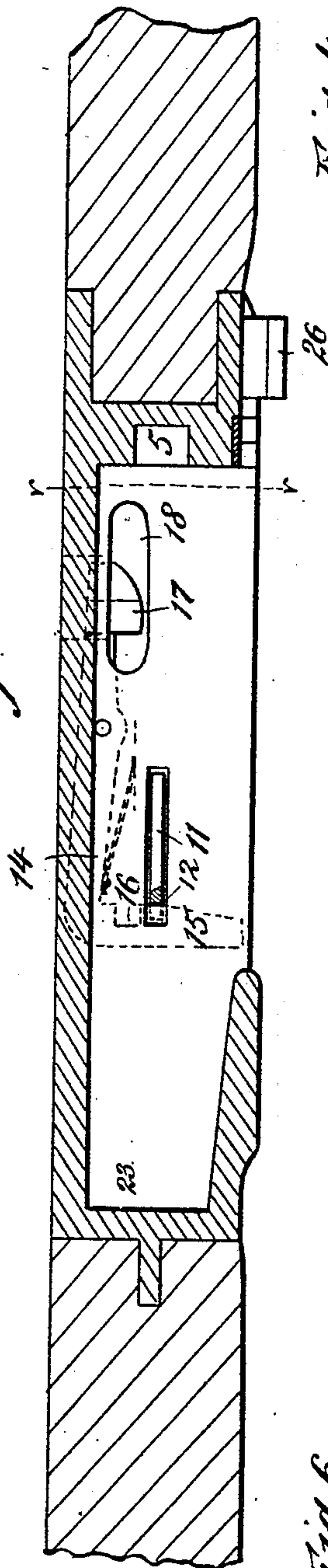
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Fig. 3.



WITNESSES:

Don Twitchell
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Fig. 4.

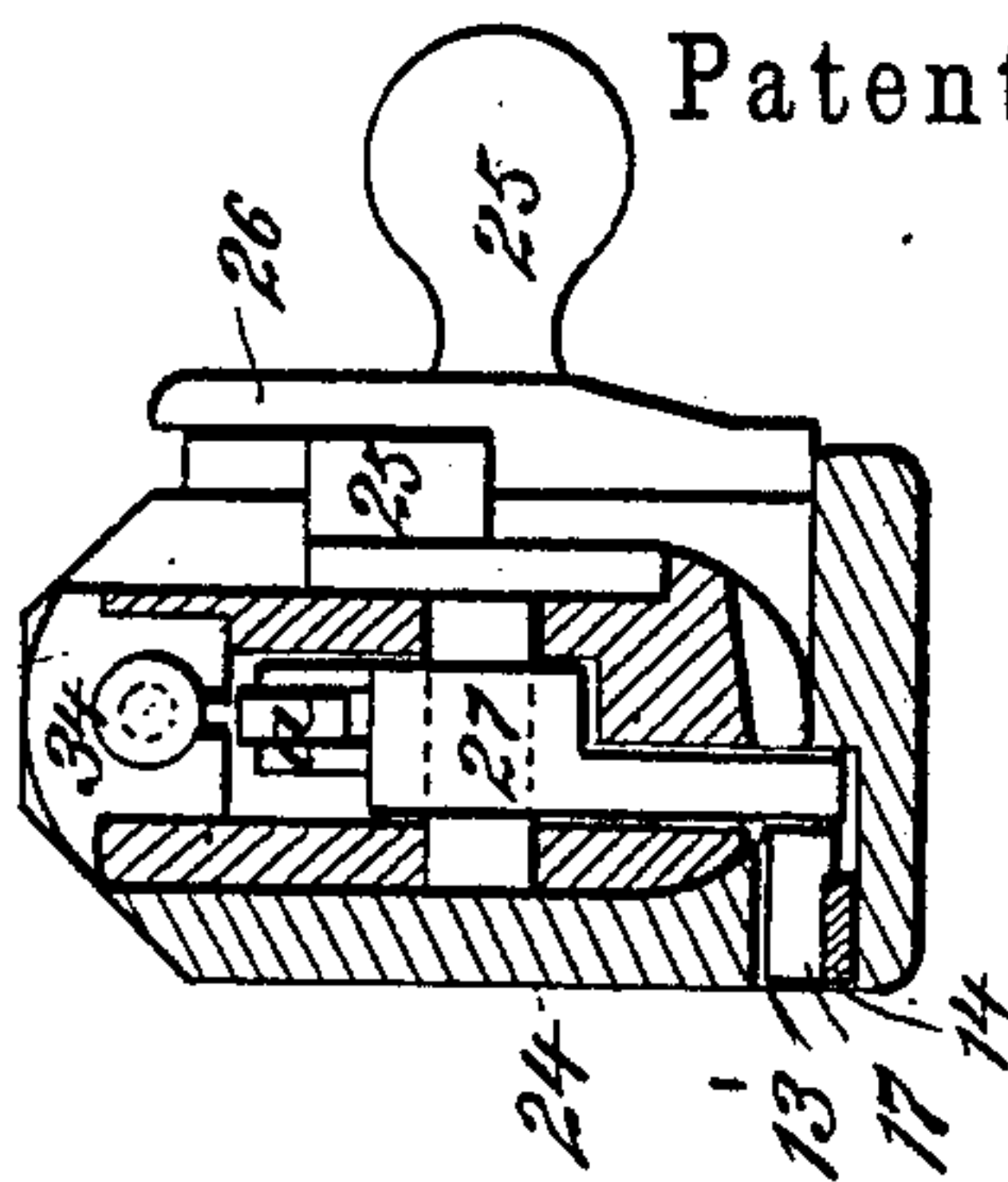


Fig. 5.

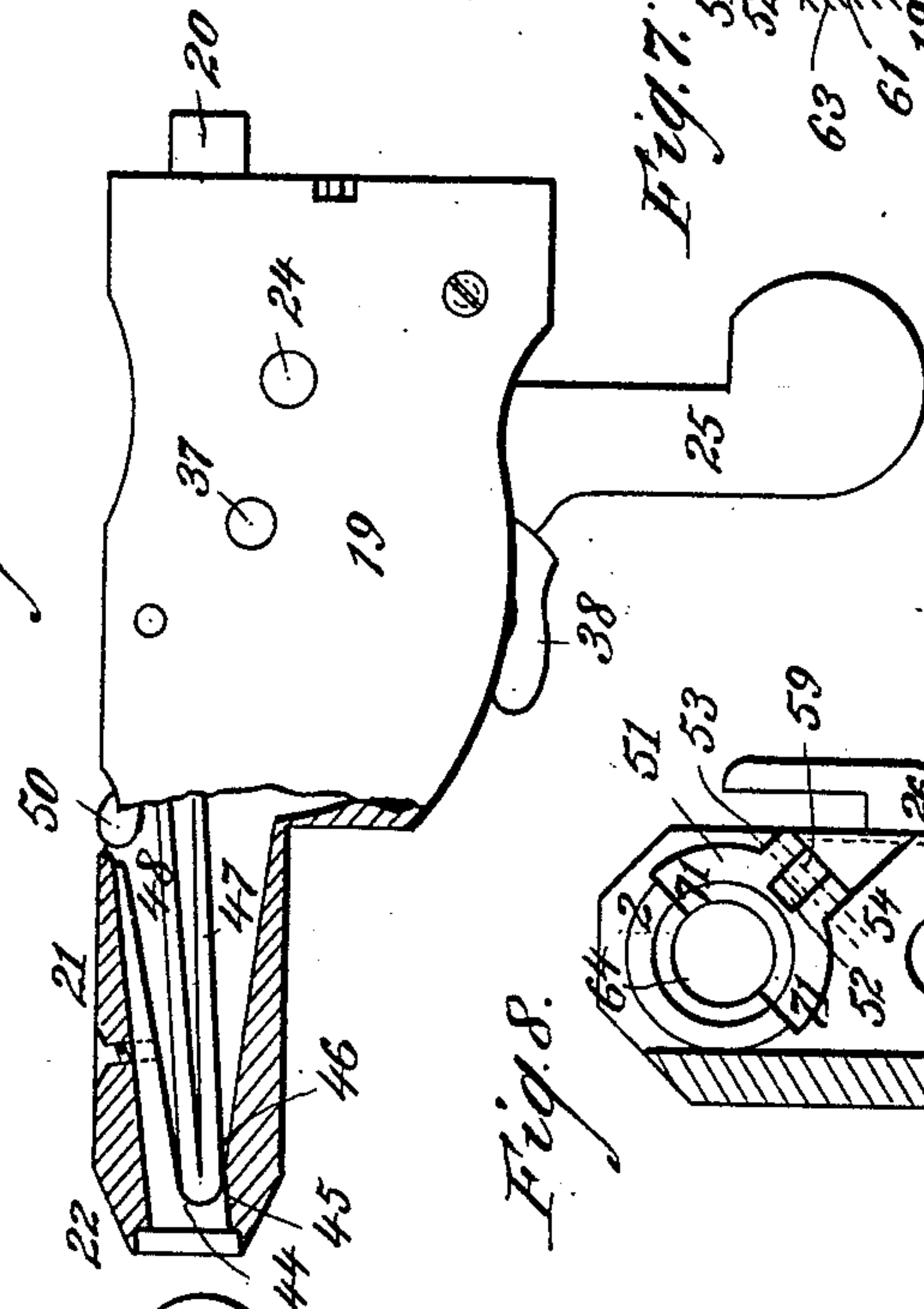


Fig. 6.

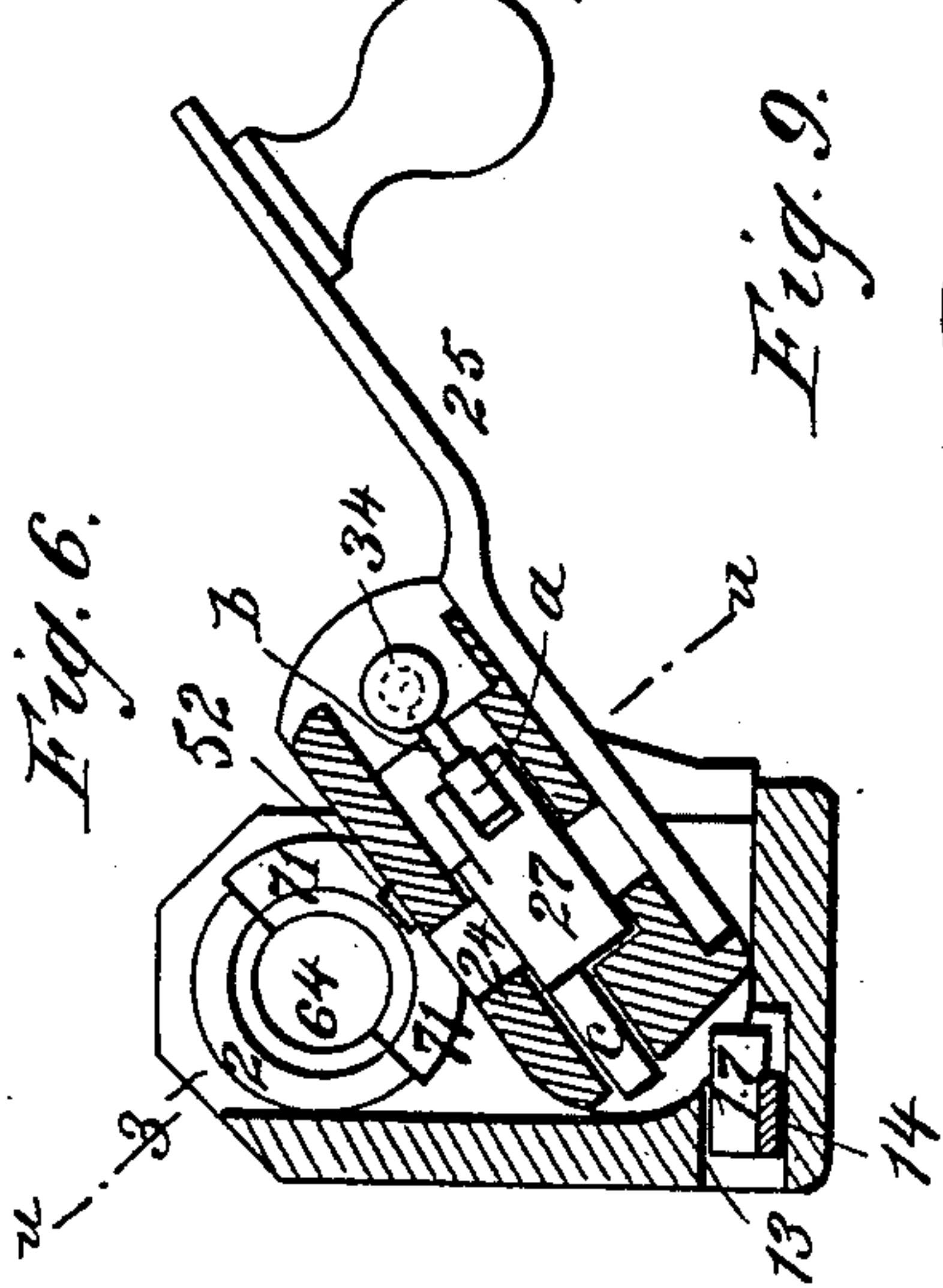


Fig. 7.

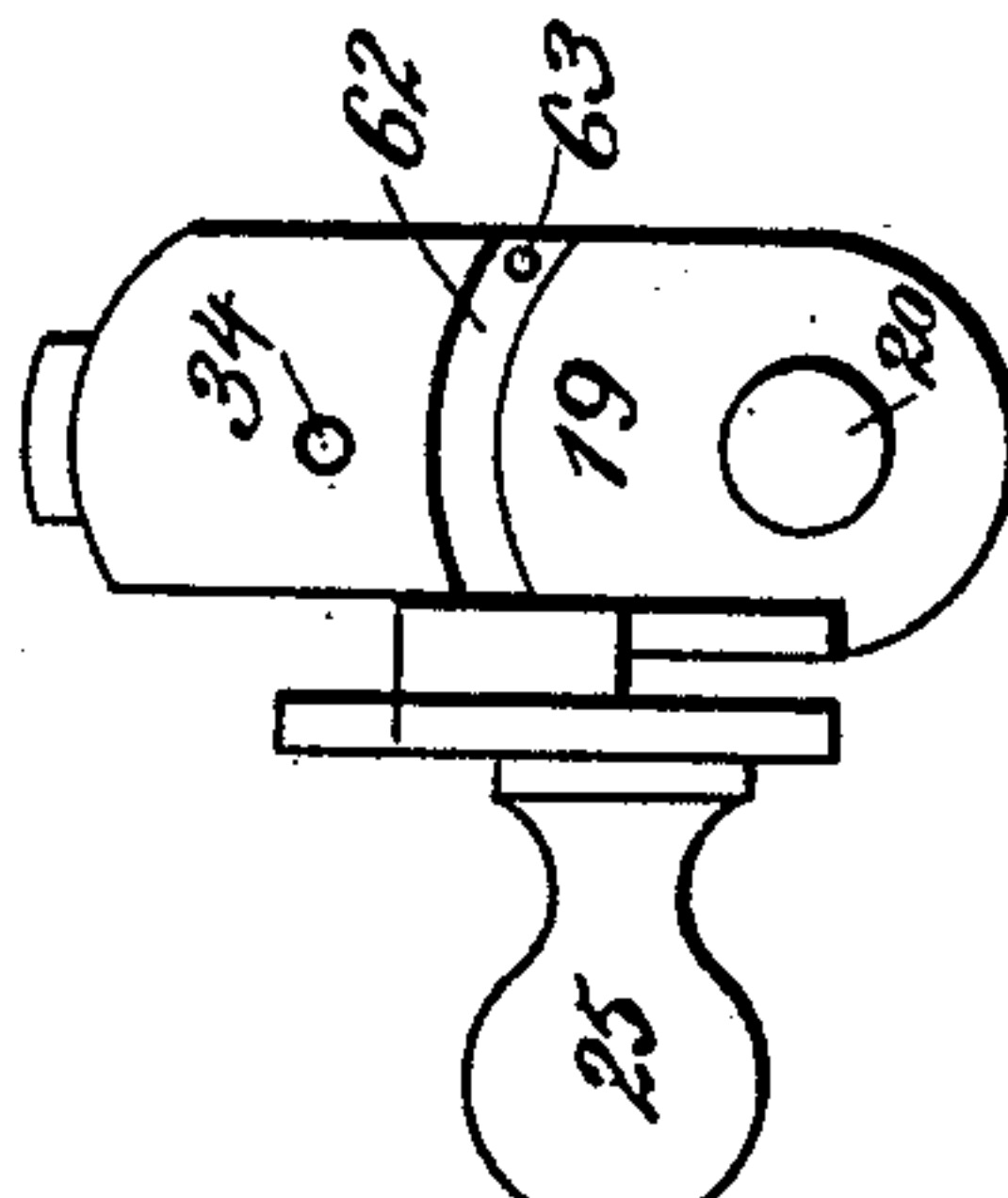


Fig. 8.

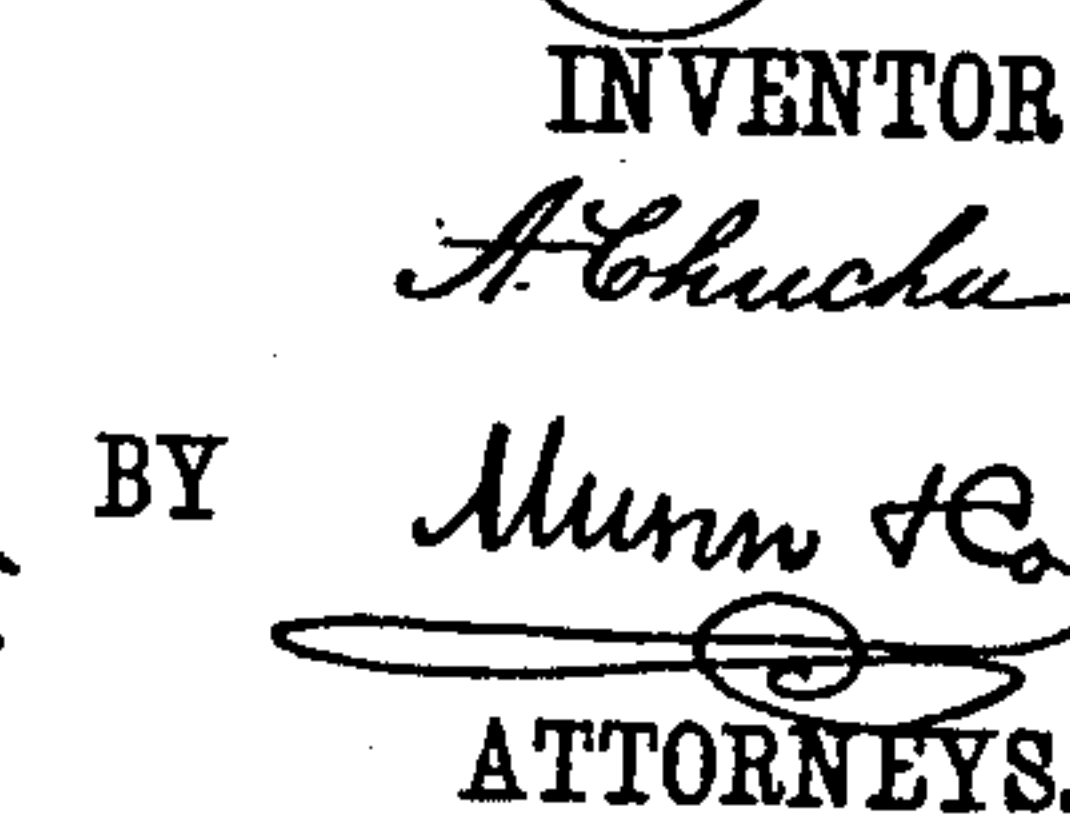
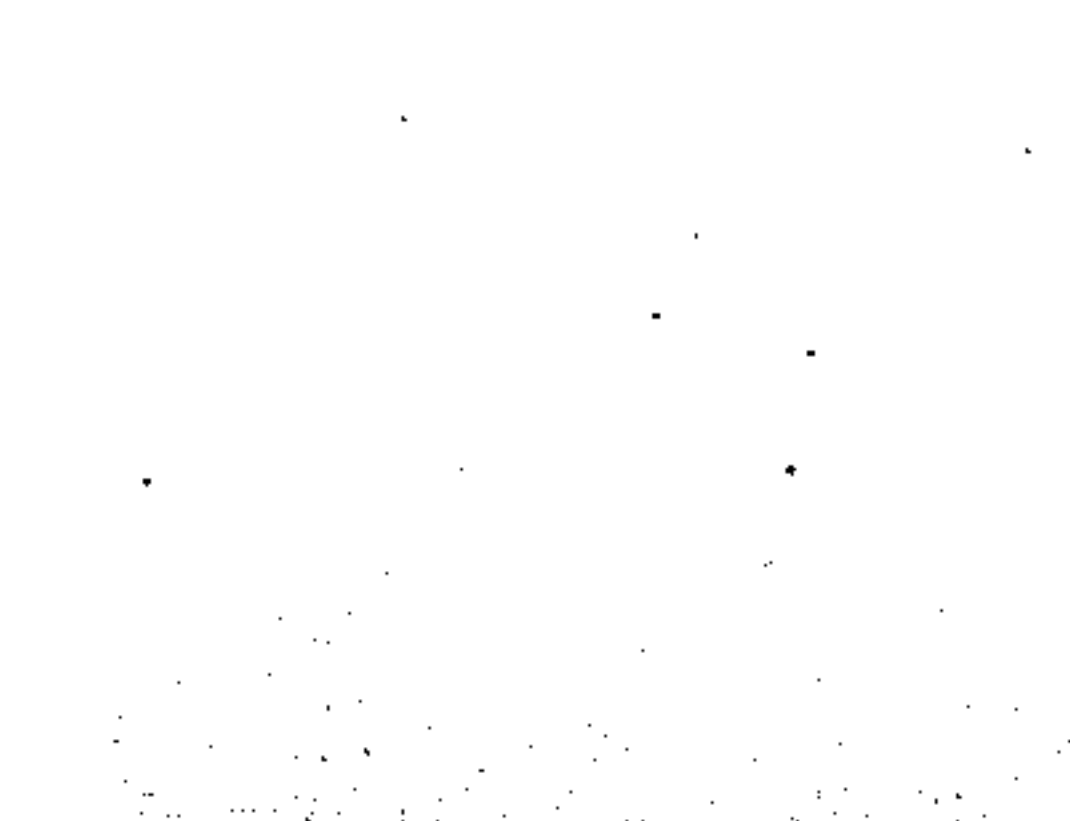


Fig. 9.



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UNITED STATES PATENT OFFICE.

ATHANASE CHUCHU, OF BAHIA, BRAZIL.

FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 359,428, dated March 15, 1887.

Application filed December 15, 1886. Serial No. 221,593. (No model.) Patented in France March 2, 1886, No. 161,833; in Belgium March 2, 1886, No. 53,252; in England March 12, 1886, No. 3,543, and in Brazil March 13, 1886, No. 334.

To all whom it may concern:

Be it known that I, ATHANASE CHUCHU, of Bahia, Brazil, have invented new and Improved Breech-Loading Fire-Arms, (for which Letters Patent have been granted by the following countries, viz: Brazil, No. 334, dated March 13, 1886; France, No. 161,833, dated March 2, 1886; Belgium, No. 53,252, dated March 2, 1886, and England, application No. 3,543, March 12, 1886,) of which the following is a full, clear, and exact description.

My invention relates to an improvement in breech-loading fire-arms, and has for its object to provide a quick, simple, and convenient means for loading, firing, and extracting the cartridge-shell from the barrel, and wherein, by the upward movement of a hand-lever pivoted to the breech-block, the hammer and operative parts contained in said breech-block will be positioned for firing, and by a continued lateral movement of said block in the shoe the old shell will be extracted, admitting a speedy insertion of a loaded shell, and wherein, further, although the breech-block be again carried to its normal position within the shoe, the hammer and operative parts being still positioned for firing, the hammer cannot be tripped by the trigger until the aforesaid hand-lever is carried down again to its first position.

The invention consists in the construction and combination of the several parts, as will be hereinafter fully set forth and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of a rifle having my improvement applied, partly in section, illustrating the position of the operative parts in dotted lines immediately after firing. Fig. 2 is a plan view of the same illustrating the breech-block carried out from the shoe partly in section, the operative parts positioned for firing, also showing the detachment of the trigger from the hammer. Fig. 3 is a longitudinal horizontal section, on line *x x* of Fig. 1, through the shoe, the breech being removed. Fig. 4 is a transverse vertical section on line *y y* of Fig. 1; and Fig. 5 is a side elevation,

partly in section, of the breech-block detached. Fig. 6 is a transverse vertical section on line *z z* of Fig. 2, and Fig. 7 is a section taken on line *u u* of Fig. 6. Fig. 8 is a transverse vertical section on line *v v* of Fig. 3, and Fig. 9 is a forward end view of the breech-block shown in Fig. 5.

In the application of my invention I attach, by screws or otherwise, to the stock 1 and barrel 2 a shoe, 3, which shoe is provided with a recessed portion, 4, upon the right-hand side, as shown in Fig. 1, and an opposite curved upper central edge upon the left-hand side, as shown in Fig. 2. Within the said shoe, centrally the top, I also provide a recess, 5, while at the base, upon top the shoe, to the left, an L-shaped slot, 6, is cut, in which slot, at its upper end, is pivoted, at 7, a similar-shaped latch, 8, provided upon the inner face of its short arm with a spring, 9, and upon its upper face with a grip, 10.

Centrally in the shoe, upon the under side, a trigger, 11, is pivoted, the said trigger being provided in the upper rear edge with a notch, 12, and from the outer left-hand side of the shoe 3, near its under edge, a slot, 13, is cut, (shown in Fig. 4,) through which slot an angle-lever, 14, is entered from the outside and pivoted, as illustrated in dotted lines, Fig. 3. The short arm 15 of the said lever 14 is adapted to extend transversely through the shoe, engaging in its passage the notch 12 in the trigger, and the said short arm is provided upon its inner edge, near the angle of the lever, with a notch, 16. The upper end of the longitudinal arm of the said lever 14 is provided with a rounded inwardly-projecting head, 17, adapted to extend within the shoe 3 a short distance within a recess, 18, in the bottom of said shoe, immediately over said head, whereby it is exposed to view from the interior, as shown in Fig. 3, for a purpose hereinafter set forth. The entire angle-lever 14 is actuated in one direction by a spring attached thereto and bearing against the wall of the lever-recess, the tendency of this spring being to retain until otherwise acted upon the short arm 15 in contact with the trigger, so that the said trigger may not be operated. A breech-block, 19, is now provided, adapted to fit into the shoe 3 in a longitudinal direction, so that in

operation it may be moved a quarter-turn laterally, the said breech-block being also adapted to contain internally the cocking and firing mechanism. About centrally the upper forward end of the block 19 an integral pin, 20, is formed, adapted to enter the upper end recess, 5, in the shoe, the body of the said breech-block being made of a contour best adapted to fill the recessed shell of the shoe, while the rear portion of the block is provided with a tubular shank, 21, having a beveled end, 22, the said shank being less in diameter than the width of the block, with its under side in substantially the same longitudinal plane with the under side of said block, the sides of the shank and block being ordinarily made continuous.

The breech-block is readily entered in position within the shoe by raising the pivoted catch 8 with the left hand, while with the right the shank of the block is entered the lower tubular portion, 23, of the shoe. The pin 20 is then entered into the recess 5 and the catch again closed in its slot, the spring 9 thereupon pressing against the beveled end of the shank, holding the block securely in place. The spring now acts as a pivot for the shank end of the block, the said pin 20 constituting the pivot for the forward end. Thus the block may be turned outward to the right easily and at pleasure, and as readily extracted from the shoe by simply raising the pivoted catch 8. About centrally of the breech-block, near the forward end thereof, a pin, 24, is journaled, to one end of which pin, projecting through the right-hand side of the block, a hand-lever, 25, is secured, adapted, when in its normal position, to extend longitudinally in the direction of the barrel and rest in a shield, 26, made integral with the side of the shoe. Within the breech-block, upon the journaled pin 24, a three-armed lever, 27, is keyed by a screw, 28, extending transversely through said lever and pin, as shown in Fig. 2. Each of the said arms *a*, *b*, and *c* has a separate function, which will be hereinafter stated.

To the upper and outer right-hand side of the breech-block 19 a spring, 29, is secured by a screw, 30, which spring, extending at an angle downward, is provided at its lower end with a knob adapted to travel in a semicircular groove, 31, cut in the under face of the hand-lever 25, to one side of and above the lever-connection with the pin 24. The said groove is formed with recesses at each end, whereby the said hand-lever is held in either a horizontal or vertical position, as desired, and illustrated in Fig. 1.

About centrally of the upper edge and forward end of the breech-block 19, and in alignment with the center of the barrel, when the said block is in its closed or normal position, a recess, 32, is made about the diameter of an ordinary firing-pin, having an enlarged inner portion, 33. Into this recess 22 the point of a firing-pin, 34, is inserted, provided at a suitable distance from its point with an annular

flange, 35, adapted to have play in the enlarged inner recess, 33, and find a bearing upon the shoulder formed by reason of the two connecting recesses 32 and 33 when the pin has been projected for firing. The inner end of the firing-pin 34 is provided with an annular head, 36, a space intervening between the said head and the annular flange 35.

To the rear and slightly below the pin 24 a second pin, 37, is journaled transversely in the breech-block 19, having keyed thereon, within said block, a hammer, 38, having a centrally-concaved front edge, 39, teeth 40 cut in its lower edge, and a curved guide-arm, 41, integral with its upper rear edge, adapted to engage the inner top surface of the block 19 to steady the movement of said hammer. A downwardly-curved integral arm, 42, is also provided the rear edge of the hammer located about centrally of the guide-arm 41, and the base of the hammer having pivoted thereto a roller, 43.

Within the beveled end 22 of the tubular shank 21 of the breech-block a screw, 44, is inserted, adapted to extend up parallel with one side and attached thereto. The said screw is provided at the end of the shank 21 and below the head of the screw with a curved recess, 45, into which the bent end of a U-shaped spring, 46, is made to rest, as shown in Fig. 5. One member, 47, of the said spring, as shown in Fig. 2, is made to bear against the roller 43, attached to the hammer, while the other member, 48, is made to bear against the upper side of a pawl, 49, pivoted within the breech-block, the forward end of which pawl is adapted to engage the teeth 40 in the hammer 38, while the other end, having a slight rounded projection, 50, (shown in Figs. 1, 2, and 5,) is adapted when the breech-block 19 is in its normal position to rest upon the upper surface of the trigger 11.

Within the upper portion of the shoe, in diagonal alignment with the base of the barrel 2, an extractor, 51, is pivoted in a recess made to receive it, the said extractor being provided with a semicircular upper portion, 71, adapted to partially encircle the barrel-orifice intervening between the rim of the cartridge and the barrel. The under portion of said extractor is centrally projected and provided with a recess, 52, as shown in Fig. 8. Through this centrally-projected portion of the extractor and its recess 52 a pin, 53, is passed at an incline from the outer right-hand side of the shoe (see Fig. 1) into the inner solid portion, 54, thereof, as shown in Fig. 8. A spring, 55, is now entered through a slot, 56, cut in the shoe below the head of said pin 53, as shown in Fig. 1, one end being secured by a screw, 57, near the lower edge of the right-hand side of the shoe 3, the said spring being provided with an upper angular portion, 58, adapted to project inward and upward, as shown in Fig. 7, engaging the outer face of the lower projection of the extractor, and also bearing against the under face of a lever, 59, pivoted in the

recess 52 of the extractor by its pivotal pin 53. The said lever is more or less triangular in form. The upper end, being more or less hooked, engages the upper curved surface of the extractor, while the inner edge, 61, is made to project beyond the normal plane of the extractor and travel in a semicircular groove, 62, cut centrally in the outer edge of the breech-block 19, the said groove having at one end, centrally situated therein, a pin, 63, which pin is adapted as the breech-block is carried outward laterally to engage the inner end, 61, of the lever 59, and in its passage bear the said lever down, causing the hooked end 60 thereof to turn quickly backward the extractor upon its pivot and thereby extract the shell 64, the spring 55, after the pin has passed the lever, restoring the extractor to its normal position (see Fig. 7) and retaining it in place, likewise the lever 59, until again acted on by the pin 63.

The operation of the gun is as follows: After having been fired, as shown in Fig. 1, the hand-lever 25 is carried upward from a horizontal to a vertical position, as shown in dotted lines, same figure. By this movement of the hand-lever 25 the parts are positioned as shown in Fig. 2—that is to say, the roller-carrying arm *a* of the three-armed lever 27 carries the hammer back to a cocked position, compressing the spring 46 in the shank of the block between the roller upon the hammer-arm 42 and the pawl 49, now in engagement with the notches 40, at the base of said hammer. Simultaneously with the above movement of the arm *a* the hooked arm *b* engages the annular cap 26 of the firing-pin 34, carrying it back into position for firing while the lower arm, *c*, is withdrawn from the slot 18 in the shoe and engagement with the lever 14, pivoted in said shoe, whereupon the short arm of said lever is carried back to its normal position, locking the trigger. Thus all danger of premature firing is avoided. The operative mechanism remaining in the position above described, the breech-block 19, containing said mechanism, is by means of the said hand-lever 25 carried over laterally to the right. The pin 63 in the groove 62 of said block in the passage thereof engages the angular lever 52, which, operating upon the extractor in manner described, throws out the old shell. A new cartridge being inserted, the breech-block is returned to its normal position within the shoe. When ready for firing, the hand-lever is carried down to its normal or horizontal position within the shield 26, the roller-carrying arm *a* and the hooked arm *b* of the three-armed lever 27 being carried forward out of contact with the hammer 38 and firing-pin 24, while the lower arm, *c*, of said lever is simultaneously carried down to a contact with the shoe-lever 14, causing the notch 16 in the short arm of said lever to register with the trigger-arm, leaving the said trigger to trip the hammer by engagement with the enlarged lower end, 50, of the pawl 49.

It will be seen from the above that when the hand-lever is in a vertical position, although all the parts are positioned for firing, no communication is had between the said parts and the trigger, but that when the said hand-lever is placed horizontally no obstruction to immediate firing is offered. - It will be also observed that all the operative parts, which are few in number, are contained in the breech-block, and that when desirable for cleaning or other purposes the said breech-block may be quickly and readily removed from the shoe, and, therefore, from all connection with the arm.

My invention is equally as applicable to pistols as to rifles.

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

1. In a fire-arm, the shoe having a recessed side, and a trigger extending up through a slot in the bottom of the shoe, in combination with a laterally-swinging breech-block within said recess, a firing mechanism carried by said block, having a releasing dog or pawl in alignment with the trigger when the block is closed, a transverse pin projecting through the outer side of the block and provided with a vertically-swinging hand-lever on its outer end, and a lever on the said transverse pin within the case and engaging the firing mechanism for setting the same for action by the trigger, substantially as set forth.

2. The combination, with the recessed shoe having a rear tubular portion having a transverse recess, a latch entering the said transverse recess and a recess in the front end wall of the recessed shoe, in alignment with the bore of the tubular portion, of a breech-block having a pin in its front end entering the front recess of the shoe, and a rearward-extending shank entering the tubular portion and engaged by said latch, and a firing mechanism carried by said breech-block, substantially as set forth.

3. The combination, with the shoe having a recess in its front wall, a rearward-extending tubular portion, an L-shaped slot communicating with said tubular portion, and an L-shaped latch working in said slot with its short arm entering the bore of the tubular portion, and provided with a spring on its forward face, of a breech-block within said shoe, and having a forward pin entering the recess in the front wall of the shoe, a rearward-extending shank entering the tubular portion and pressed forward by said latch-spring, and a firing mechanism carried by said breech-block, substantially as set forth.

4. The combination, with the breech-block, the hammer, and the firing-pin, of a lever journaled between the hammer and firing-pin and provided with arms engaging the said hammer and pin for setting the same, and a hand-lever at the side of the block for operating said inner lever, substantially as set forth.

5. The combination, with the shoe having a shield on its outer forward side and vertical slots in its bottom, the trigger projecting into

the rear bottom recess, the trigger-locking lever having an arm adapted to engage and lock the trigger, and a projection entering the forward bottom recess, of the laterally-swinging breech-block, the firing-pin therein, the hammer in rear thereof, the pawl or dog engaging said hammer and having its free end in line with the trigger when the block is closed, a three-armed lever journaled in the block between the firing-pin and hammer, one arm engaging the firing-pin to withdraw it, one arm retracting the hammer, and the third arm engaging the projection in the forward bottom recess of the shoe to unlock the trigger when the block is closed and release it when the block is opened, and a hand-lever at the outer side of the block for operating said three-armed lever, and adapted to enter said shield when the firing mechanism is set, substantially as set forth.

6. In fire-arms, the combination, with a shoe provided with a pivoted extractor, and a triangular lever pivoted to said extractor, of a breech-block pivoted longitudinally in said shoe, having a groove in its upper end, and a pin in said groove adapted to engage said triangular lever, together with a hand-lever pivoted in said breech-block, substantially as shown and described, whereby the said breech-block is rotated laterally and the extractor simultaneously operated thereby, as set forth.

7. In fire-arms, the combination, with a shoe, 3, having attached thereto a barrel, 2, a semi-circular extractor having a recess, 52, and pivoted in engagement with the base of said barrel, an angular lever, 59, pivoted in said recess 52, and a spring, 55, adapted to engage said extractor and lever, of the breech-block 19, pivoted in said shoe, provided with a central groove, 62, in its forward end, having a pin, 63, therein adapted to engage said lever, substantially as shown and described, whereby the extractor is operated simultaneously with the movement of said breech-block, as set forth.

8. In fire-arms, the combination, with a shoe having a recessed side, 4, a recess, 5, in its forward end, and an inner tubular rear portion provided with an angular slot, 6, a latch, 8, having attached spring 9, pivoted in said slot, of a detachable breech-block, 19, provided with a pin, 20, upon its forward end, a hand-lever, 25, pivoted to its side, and a reduced tubular shank, 21, having a beveled end, 22, substantially as shown and described, whereby the said breech-block may be rotated laterally in said shoe in one direction, as set forth.

9. The combination, with the shoe 3, constructed substantially as described, of a detachable breech-block, 19, pivoted in said shoe, provided with a pivoted hand-lever, 25, a three-arm lever, 27, held upon the same shaft with said hand-lever, a firing-pin aperture, 32, in the front wall and enlarged at 33, a firing-

pin held in said recess and aperture, together with a spring-actuated hammer, 38, and a pawl, 49, pivoted to engage said hammer, substantially as shown and described, whereby the hammer is cocked and the firing-pin positioned simultaneously with the upward movement of said hand-lever, as set forth.

10. In fire-arms, a detachable breech-block provided with a hand-lever, 25, pivoted to one side thereof, an inner lever, 27, held upon the same shaft with said hand-lever, provided with integral arms *a b c*, a firing-pin aperture in its front wall, enlarged at 33, a firing-pin, 34, having a flange, 35, and head 36, adapted to be engaged by the lever-arm *b*, a spring-actuated hammer, 38, adapted to be engaged by the lever-arm *a*, and a pawl, 49, engaging said hammer, substantially as shown and described, whereby through the upward movement of said hand-lever the hammer and pin are positioned for firing, as set forth.

11. The combination, with the swinging breech-block 19, having a hand-lever, 25, constructed as herein described, of the shoe 3, provided with a side slot, 18, a trigger, 11, pivoted therein and having a recess, 12, in its rear edge, a horizontal spring-actuated L-shaped lever, the short arm of which engages the trigger-recess and is provided with a recess adapted to register with the trigger-recess to allow the trigger free movement, substantially as set forth.

12. In fire-arms, the combination, with a shoe provided with an aperture therein below the barrel, a trigger having a recessed projection, an L-shaped lever adapted to engage said recess, and a pivoted locking device, of a breech-block provided with a pin at one end and a tubular shank at the other, adapted to enter said shoe, and a hand-lever pivoted in said block, having an attached three-armed lever adapted to engage the projecting head of said L-shaped lever, substantially as herein shown and described.

13. In fire-arms, the combination, with a shoe constructed as herein described and provided with a shield upon one side and a trigger and locking device therefor, of the breech-block pivoted within said shoe, provided with a hammer, a spring and pawl adapted to operate in connection with said hammer, a firing-pin, and a hand-lever pivoted in the side of said breech-block, having attached thereto a three-armed lever, the arms of which engage the hammer, the firing-pin, and the trigger-locking device, respectively, substantially as herein shown and described, whereby the hammer and pin are positioned for firing and the trigger locked when said breech-block is rotated in said shoe by the said hand-lever, as set forth.

ATHANASE CHUCHU.

Witnesses:

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