

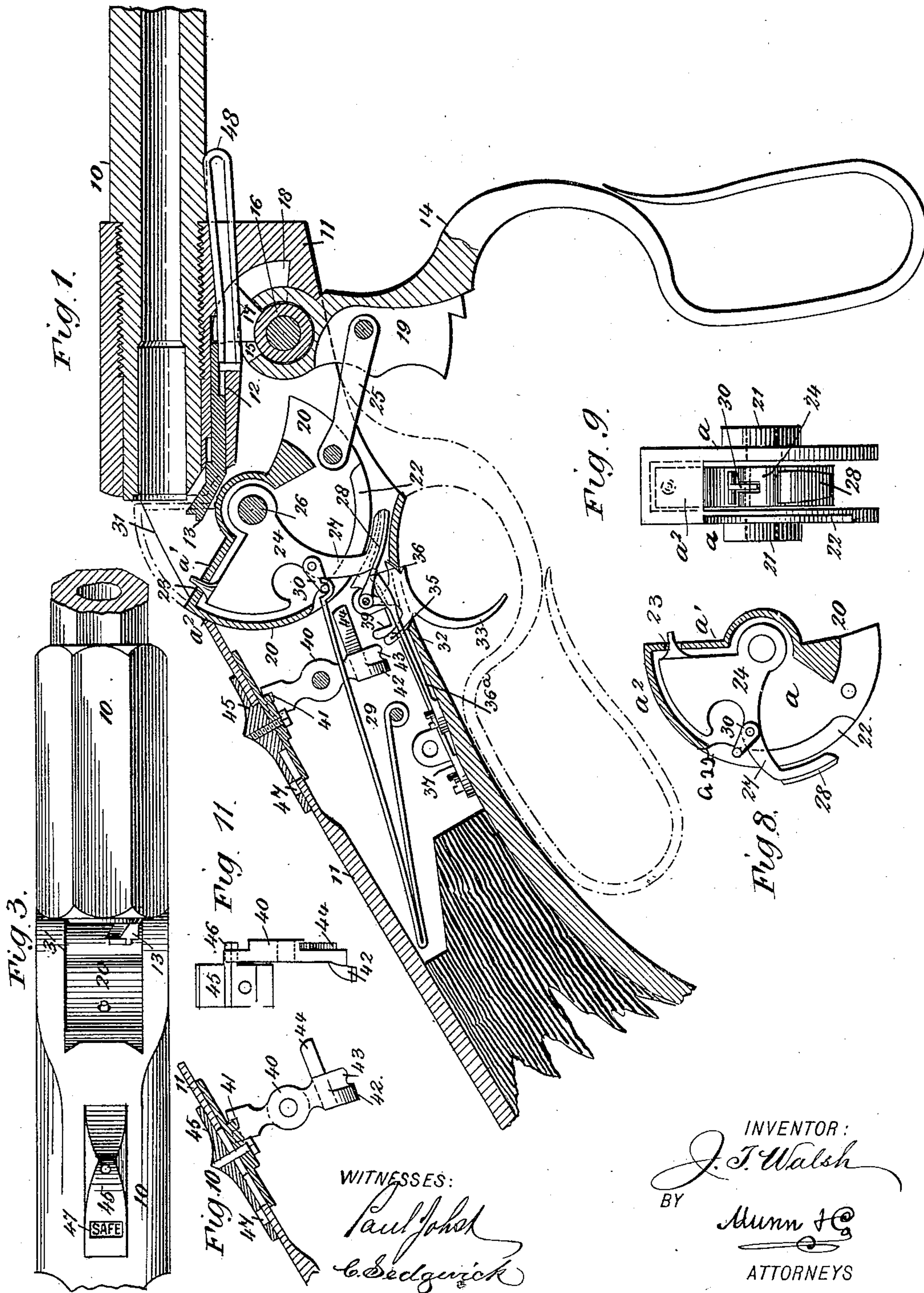
(No Model.)

2 Sheets—Sheet 1.

J. T. WALSH.
BREECH LOADING SAFETY GUN.

No. 433,260.

Patented July 29, 1890.



WITNESSES:

Paul Johnson
C. Sedgwick

INVENTOR:
J. T. Walsh
BY
Munn & Co.
ATTORNEYS

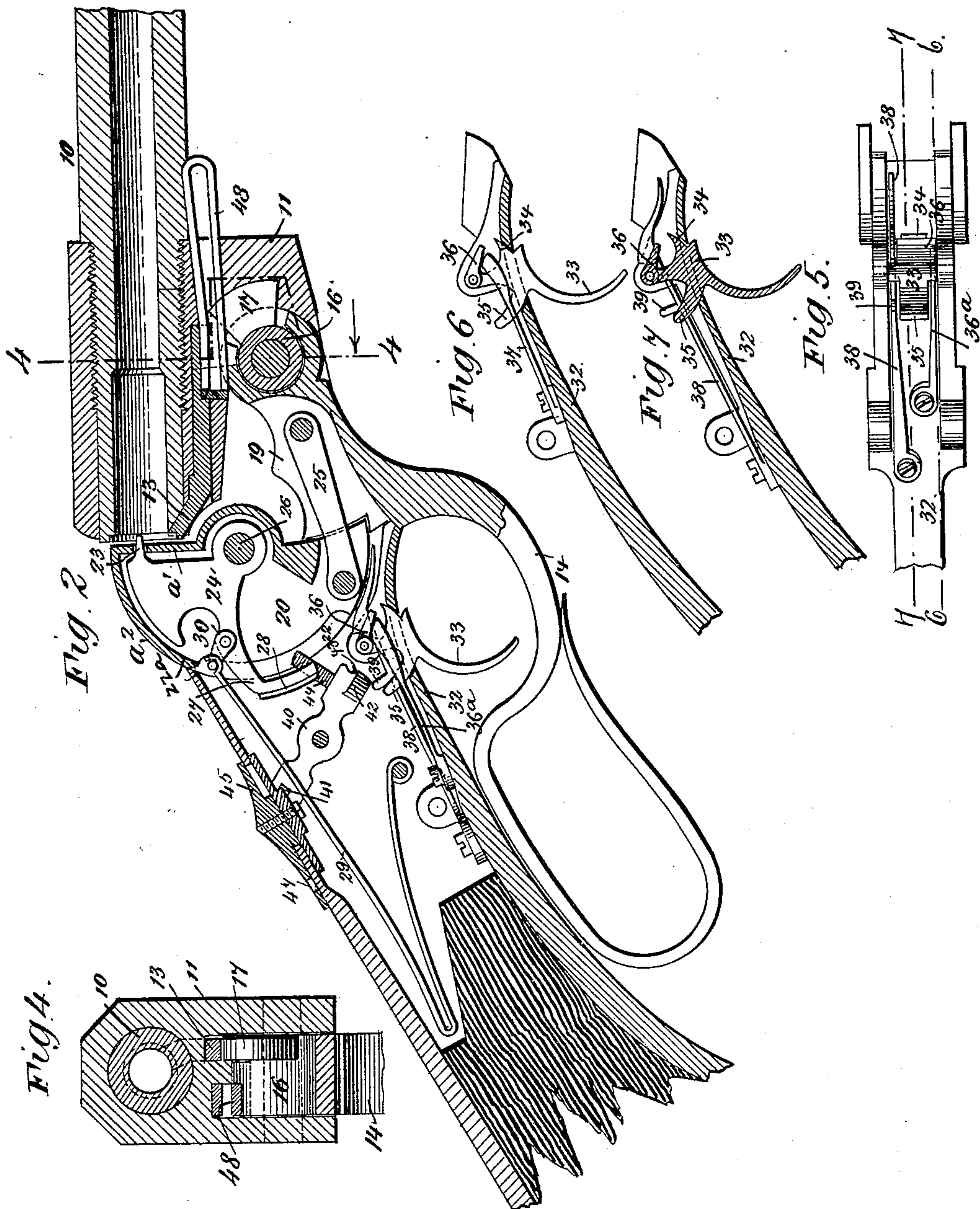
(No Model.)

2 Sheets—Sheet 2.

J. T. WALSH.
BREECH LOADING SAFETY GUN.

No. 433,260.

Patented July 29, 1890.



WITNESSES:

Paul Jones
C. Sedgwick

INVENTOR:

J. T. Walsh
BY *Munn & Co.*

ATTORNEYS

UNITED STATES PATENT OFFICE.

JAMES T. WALSH, OF RED FORK, ARKANSAS.

BREECH-LOADING SAFETY-GUN.

SPECIFICATION forming part of Letters Patent No. 433,260, dated July 29, 1890.

Application filed March 21, 1890. Serial No. 344,729. (No model.)

To all whom it may concern:

Be it known that I, JAMES TAYLOR WALSH, of Red Fork, in the county of Desha and State of Arkansas, have invented a new and useful
5 Improvement in Breech-Loading Fire-Arms, of which the following is a full, clear, and exact description.

My invention relates to an improvement in breech-loading fire-arms, especially to that
10 class of arms known as "hammerless," and has for its object to provide a simple, positive, and durable mechanism for operating the breech block or extractor, and also to employ in connection with the breech-block
15 a safety-lock capable of automatic action, and which may be applied at will to prevent the trigger from being drawn.

The invention consists in the novel construction and combination of the several
20 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
25 corresponding parts in all the views.

Figure 1 is a central longitudinal section through the frame, the mechanism contained therein, and the barrel, the breech-block being represented as being thrown in inward
30 to admit of the introduction of a cartridge into the barrel, and the safety-bolt being carried out of engagement with the breech-block. Fig. 2 is a similar section, illustrating the hammer as in contact with the cartridge and the safety-bolt in the locked position. Fig. 3
35 is a partial plan view, the parts being in the position illustrated in Fig. 1. Fig. 4 is a section on line 4 4 of Fig. 2. Fig. 5 is a plan view of the trigger-plate detached. Fig. 6 is
40 a section through the said trigger-plate on line 6 6 of Fig. 5; and Fig. 7 is a similar section on line 7 7 of Fig. 5. Fig. 8 is a central vertical section through the breech-block, the hammer appearing in elevation; and Fig. 9
45 is a rear view of the breech-block and its hammer. Fig. 10 is a central vertical section through the button of the safety-bolt, the said safety-bolt appearing in side elevation; and Fig. 11 is a front view of the said safety-
50 bolt, the button appearing in plan.

In carrying out the invention the barrel 10 is secured in the upper front portion of the

frame or housing 11 of the lock and hammer mechanism in any suitable or approved manner, and below the barrel a longitudinal horizontal channel 12 is produced in the frame, 55 in which channel the extractor 13 is held to slide, the rear end of the extractor being curved upward in the direction of the breech-bore of the barrel a sufficient distance to 60 properly engage with the rim of the cartridge located within the said bore. Beneath the barrel, at the said forward end of the housing or casing 11, a guard-lever 14 is pivoted, the said guard-lever at its pivotal point being provided 65 with a slot 15, and around the pivotal point of the guard-lever a sleeve 16 is held to turn, provided with a segmental stud 17, which stud extends through and beyond the slot 15 of the guard-lever, and is held to turn within a semi- 70 circular recess 18, produced in the casing or housing, as best illustrated in Figs. 1 and 2, the stud 17 being of sufficient length to engage at the proper time with the forward end of the extractor 13, and force the same outward 75 when the guard-lever is carried to a perpendicular position, the stud 17 being operated upon by the walls of the guard-lever slot 15. Near the pivotal end of the guard-lever, upon its upper or inner face, a projection 19 is 80 formed, adapted to pass through a slot in the housing or casing 11, when the guard-lever is carried to its normal or horizontal position beneath said casing, the said extension or projection 19 of the guard-lever being adapted 85 to essentially contact with the lower surface of the breech-block 20.

The breech-block 20 is pivoted immediately below the lower edge of the bridge of the barrel and is of semicircular contour, consisting of two side pieces *a*, connected at their 90 forward edge by a transverse plate *a'*, and at the upper portion of the rear or cylindrical edge by a like plate *a''*. A boss 21 is formed integral with each side *a* of the breech-block, 95 and the said breech-block is pivoted within the casing or housing 11 by entering the bosses 21 into proper recesses formed in the inner side faces of said casing.

In one side plate *a* of the breech-block a 100 channel 22 is produced, forming, essentially, a cam-surface, for a purpose hereinafter described.

In the upper face-plate *a'* of the breech-

block an aperture 23 is produced, through which the needle or head of the hammer 24 is adapted to extend. The lower portion of the breech-block is connected with the extension 19 of the guard-lever by means of a link 25. The hammer 24 is fulcrumed upon a pivot-pin 26, located transversely in the breech-block at or near the central portion of its forward end. The upper portion of the hammer is provided with a needle or head which projects through the aperture 23 of the breech-block, as above set forth, and an arm 27 is formed integral with the lower portion of the hammer, which arm curves rearward and downward between the side pieces *a* of the breech-block. The arm 27 upon its rear face is provided with a raised or attached lock-plate 28, the upper portion of said plate being adapted for contact with the trigger when brought to the firing or cocked position.

The hammer is normally forced within the breech-bore of the barrel by means of a main-spring 29, secured in the casing or housing 11, the forward end of which spring is connected with a T-block 30, forming a portion of the hammer-arm 27.

The upper inclosed end of the breech-block, when the latter is revolved, passes upward and moves in a slot 31, formed in the upper portion of the housing or casing 11 immediately at the rear of the breech-bore of the barrel.

In the trigger-plate 32 the trigger 33 is pivoted, the said trigger being provided at the front and rear sides with spurs 34 and 35, the rear spur 35 being the longer, and the forward spur being adapted to limit the rearward movement of the trigger. The trigger is also provided with a central spur which extends vertically upward within the casing or housing, and upon this center spur a dog 36 is pivoted, which dog is held in a position at an angle to the central spur by the trigger-spring 37, which is securely attached to the trigger-plate at one extremity and bears against the under surface of the dog 36 at its opposite end. The spring 37 normally holds the dog 36 in proper position to be engaged with the lock-plate 28 of the trigger.

The trigger-spring 37 is located at one side of the trigger-plate, and a second or safety spring 38 is located at the other side parallel with the trigger-spring, the rear end of the safety-spring being attached to the trigger-plate, and the front end is curved downward to normally engage with the under edge of one of the breech-block side plates, as illustrated in Figs. 1 and 2, whereby a certain amount of resistance is offered to the revolution of the said breech-block, and the safety-spring is also provided with an upwardly-extending spur or pin 39, located a slight distance forward and at one side of the spur 35 of the trigger.

At the rear of the breech-block a safety-bolt 40 is centrally pivoted within the housing or casing, the upper end of which safety-bolt is provided with a recess 41, and integral

with one end at one side a lug 42 is formed, and in the said lower edge next to the said lug a cavity 43 is produced. From the front edge of the safety-bolt an arm 44 is horizontally projected, the said arm being at a right angle to the body of the bolt, and the said arm is so placed upon the safety-bolt that it is capable of entering the cam-slot 22 in the breech-block.

The safety-bolt 40 is manipulated through the medium of a button 45, held to slide upon the upper or top surface of the casing or housing 11, which button upon its under face is provided with a lug-extension 46, which enters and passes through the slot 41, formed in the upper extremity of the safety-bolt. This button near its lower end is provided with an opening 47, which, when the bolt 40 is carried to the safety position, discloses the word "Safe," or an equivalent expression, upon the housing or casing 11, as best shown in Fig. 3.

The movement of the guard-lever is controlled to a great extent by a spring 48, which is secured beneath the forward end of the housing, and is bowed outward at the forward end of the same in contact with the upper pivotal section of the guard-lever.

In operation when the guard-lever is carried down to the vertical position shown in Fig. 1, the extractor is forced rearward and the shell is carried a sufficient distance out of the breech-bore of the barrel to be readily removed by the fingers, and as said lever is carried downward by means of the link-connection 25 with the breech-block, the said block is rocked in the housing until its rear cylindrical inclosed end contacts with the rear wall of the housing or casing slot 31, and when the breech-block is carried to the extracting position the plate *a'* thereof forces the hammer 24 downward also, until the lock-plate 28 of the hammer is brought into engagement with the dog 36 of the trigger. After the shell has been removed and before the guard-lever is restored to its normal position a new cartridge is introduced into the barrel, and when the guard-lever is carried upward to contact with the stock the hammer remains in its cocked or firing position—namely, in close contact with the breech-bore of the barrel—and in approaching this position the cartridge is forced into its seat in the breech-bore. In drawing the trigger 33, the hammer is released and its needle or head striking through the aperture 23 in the breech-block explodes the cartridge, the parts being in the position shown in Fig. 2. With relation to the safety-bolt, when the load has been fired the button 45 is carried downward to the position shown in Fig. 2, and to again load, the guard-lever 14 is thrown down, as illustrated in Fig. 1, whereby the breech-block 20 is also carried downward and the upper wall 22^a of the channel 22 engages with the arm 44 of the bolt 40 and carries said bolt to the rear sufficiently to cause the cavity 43 in

the bolt to be brought immediately over the spur or pin 39 of the safety-spring 38.. This action produces a slight forward movement of the button 45, and the word "Safe" is rendered visible through the slot in the button, and the trigger cannot be tripped, as the rear spur 35 of the trigger will contact with the lug 42 of the bolt. When it is desired to fire, the button is carried as far forward as possible and the trigger is then released from the bolt, and if the gun is to be used for continuous firing the button and its attached bolt are permitted to remain in this position.

I desire it to be understood that while specific construction has been shown and described, other equivalent construction may be employed without departing from the spirit of the invention.

The upper engaging-surface or cock-notch of the lock-plate 28 is quite a distance from the center or pin on which the hammer revolves, which renders the pressure very light upon the trigger, so much so that I am enabled to employ a plain single trigger that works very light.

By spacing the bosses upon the sides of the breech-block and using them as pivots for said block, the force of the discharge is brought to bear upon the said bosses and not upon the bolt pivot or hammer. The projection or extension 19 of the guard-lever also wedges in against the lower end of the breech-block, thereby relieving the link 25 from strain and rendering it utterly impossible for the breech-block to be blown backward.

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

1. In a breech-loading fire-arm, the combination, with a guard-lever, of a segmental breech-block linked to the said guard-lever, and a hammer pivoted in the breech-block capable of being forced downward thereby to the firing position, substantially as shown and described.

2. The combination, with a barrel and a guard-lever, of a segmental breech-block provided with an inclosed upper surface and an open lower surface, and a hammer pivoted within the breech-block, having its locking-arm projected outward therefrom, substantially as shown and described, whereby the hammer may be pressed downward by the breech-block, and the latter carried upward independently of said hammer to force the cartridge within the barrel, substantially as and for the purpose specified.

3. The combination, with a guard-lever and trigger, of a breech-block having an inclosed upper end and an open lower end and con-

nection between the lower portion of the breech-block and the guard-lever, and a hammer pivoted within the breech-block having an arm projected outward therefrom adapted for engagement with the trigger, substantially as and for the purpose specified.

4. The combination, with a trigger provided with a spur upon its upper surface, of a button capable of sliding upon the lock-frame of the gun, and a safety-bolt pivoted within the lock-frame, having a connection at its upper end with the button, and provided at its lower end with a projection adapted for contact with the spur of the trigger, substantially as shown and described.

5. In a breech-loading fire-arm of the character described, the combination, with a rocking breech-block provided with a cam-surface, a hammer located in said breech-block, and a trigger adapted for engagement with the hammer, provided with a spur integral with its upper end, of a slide located upon the lock-frame of the arm and provided at its lower end with a projection capable of contact with the spur of the trigger, and an arm adapted to contact with the cam-surface of the breech-block, substantially as and for the purpose specified.

6. The combination, with a rocking breech-block having a cam-surface, a trigger provided with a spur upon its upper surface, and a hammer located within the breech-block and adapted for contact with the trigger, of a slide located upon the lock-frame of the arm, a safety-bolt pivoted within the frame, connected at its upper end with the slide and provided at its lower end with a projection adapted for contact with the spur of the trigger and a cavity near the said projection, an arm horizontally projected from one edge of the safety-bolt, adapted for engagement with the cam-surface of the breech-block, and a spring secured within the frame, provided with a spur capable of entering the cavity in the safety-bolt, substantially as and for the purpose specified.

7. In an arm of the character described, the combination, with a guard-lever having a slot near its fulcrum, and a sleeve held to turn within the guard-lever at its fulcrum, provided with a stud extending through the slot of the guard-lever, the slot being of greater length than the width of said stud, of an extractor adapted to slide beneath the barrel and operated upon by the guard-lever, substantially as shown, and for the purpose specified.

JAMES T. WALSH.

Witnesses:

JOHN W. COMBS,
JOHN T. SMITH.