

No. 772,746.

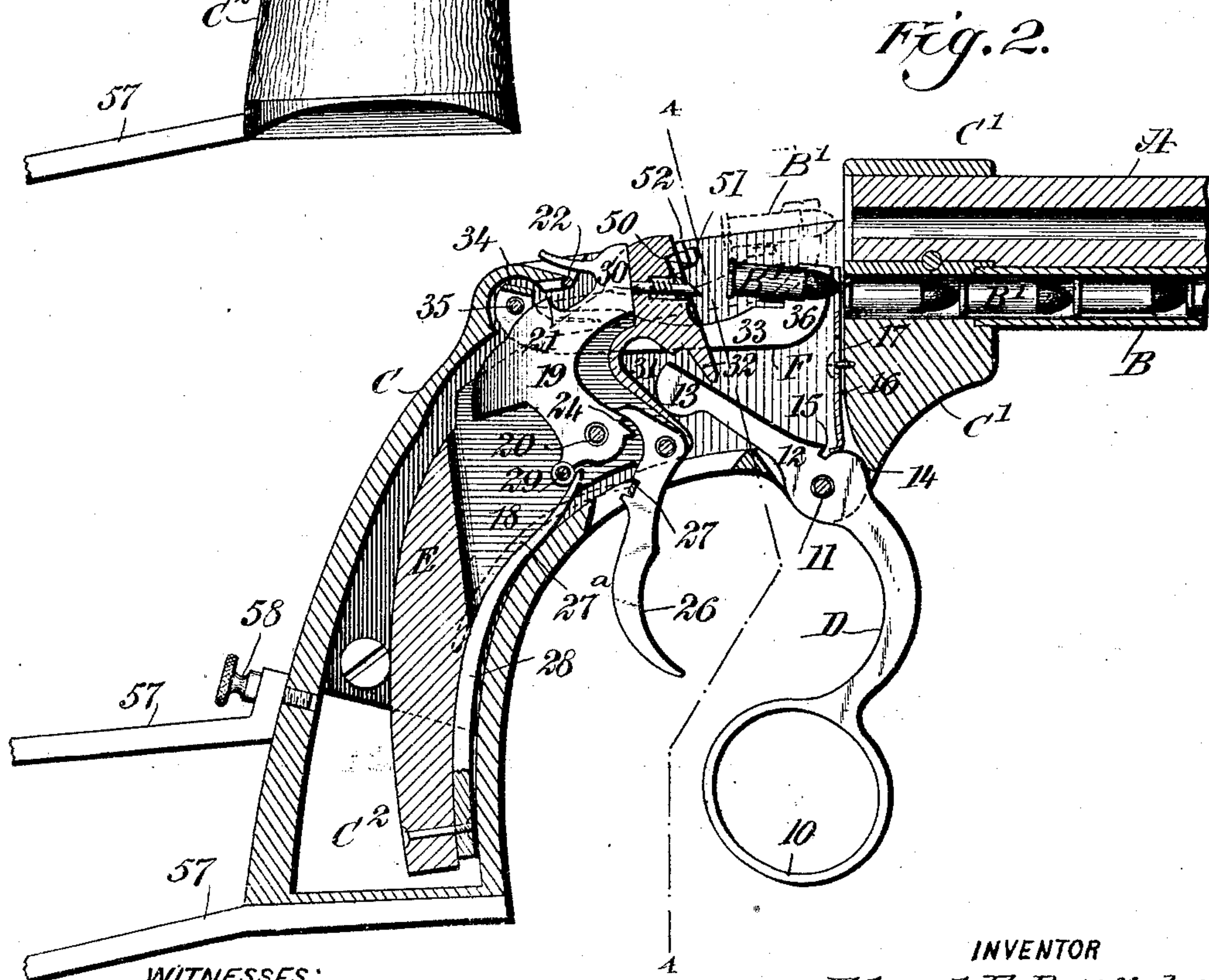
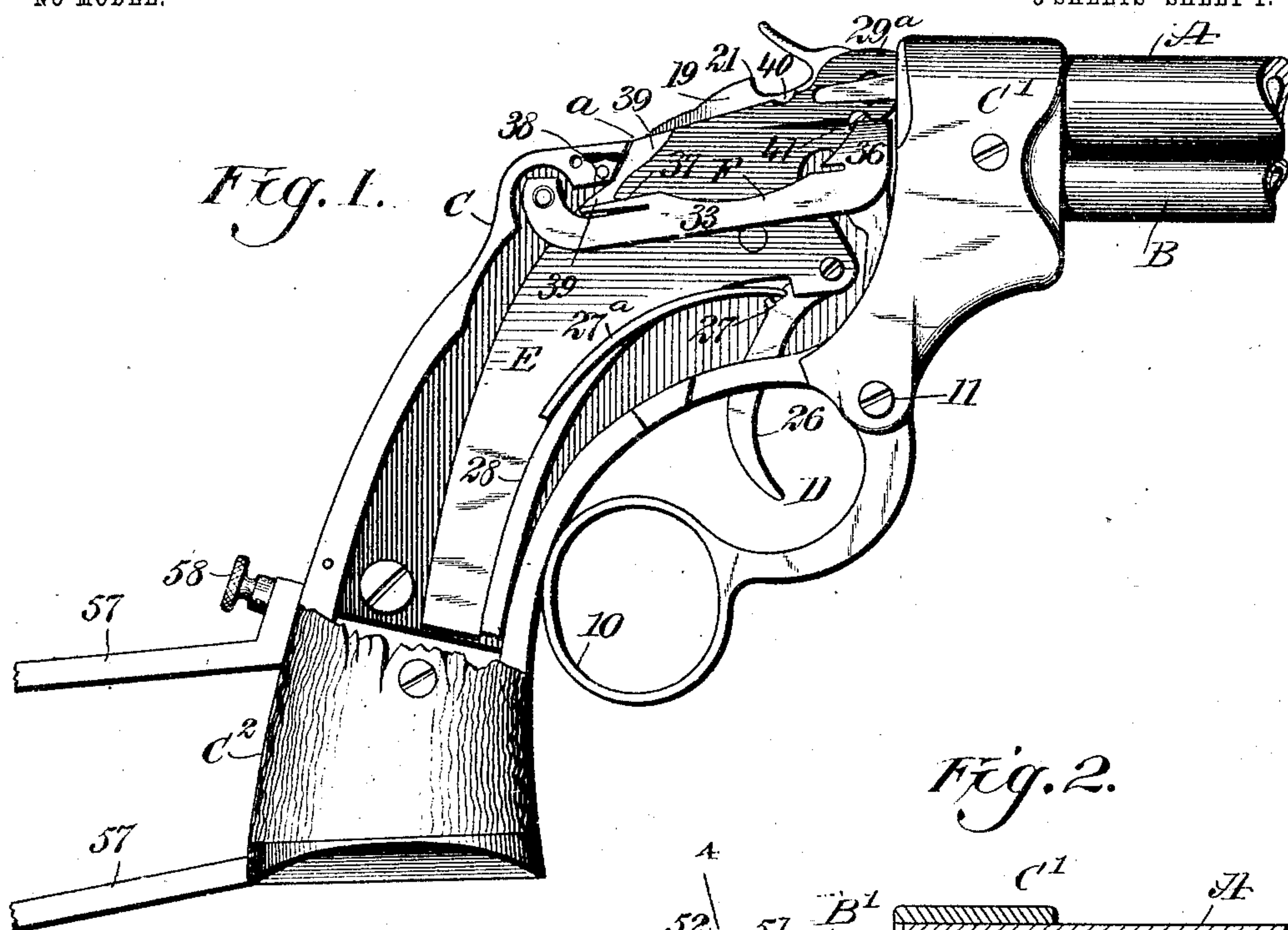
PATENTED OCT. 18, 1904.

E. E. REDFIELD.
FIREARM.

APPLICATION FILED SEPT. 12, 1903.

NO MODEL.

3 SHEETS—SHEET 1.



WITNESSES:

Paul Hunter
Fred Allen

INVENTOR

Edward F. Redfield

BY

Miner

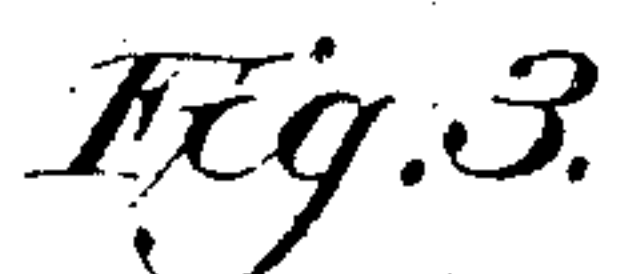
ATTORNEYS

PATENTED OCT. 18, 1904.

APPLICATION FILED SEPT. 12, 1903.

NO MODEL.

3 SHEETS—SHEET 2.



Paul Hunter
J. H. H. H. H.

ATTORNEYS

No. 772,746.

PATENTED OCT. 18, 1904.

E. E. REDFIELD.
FIREARM.

APPLICATION FILED SEPT. 12, 1903.

NO MODEL.

3 SHEETS—SHEET 3.

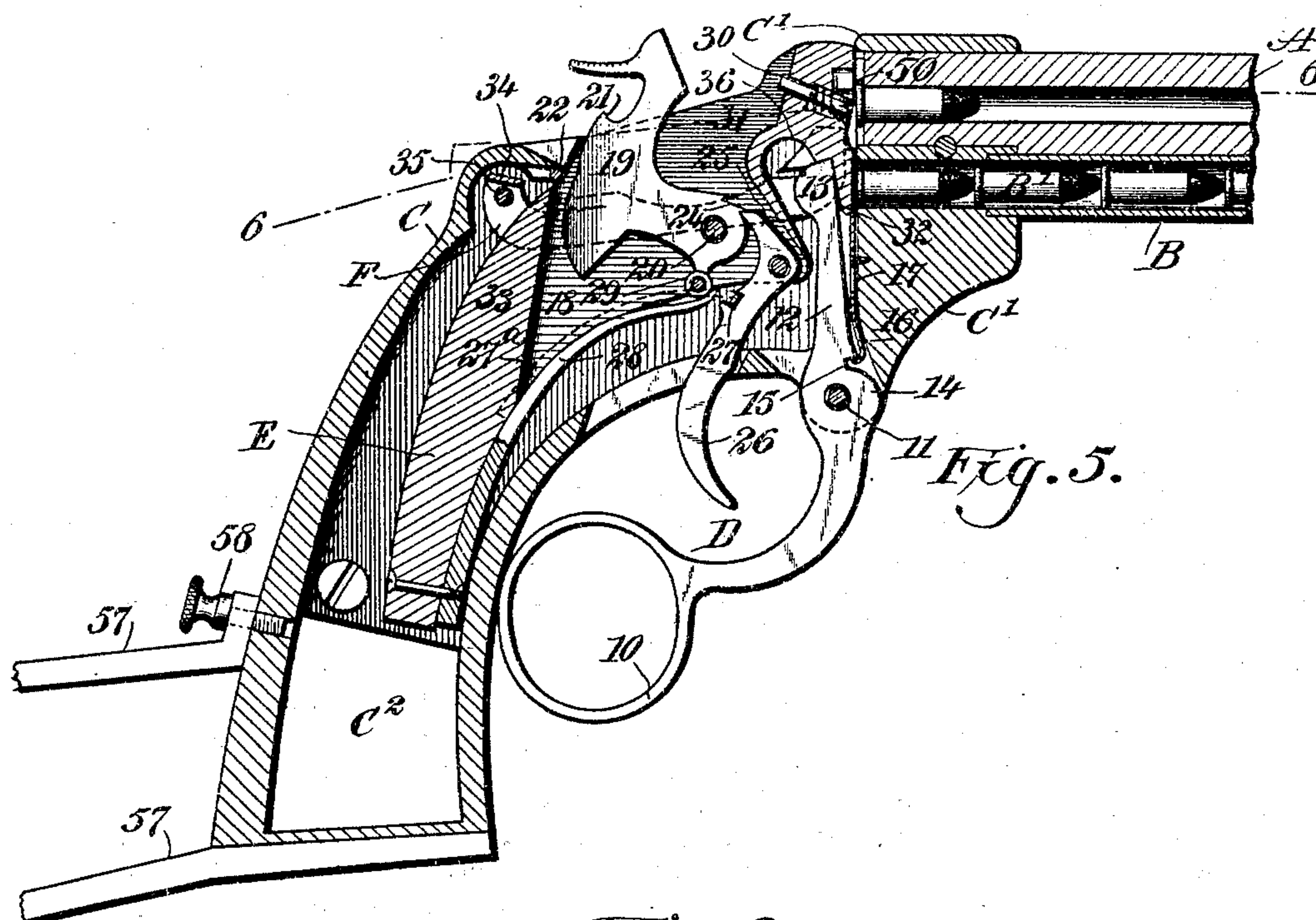


Fig. 6.

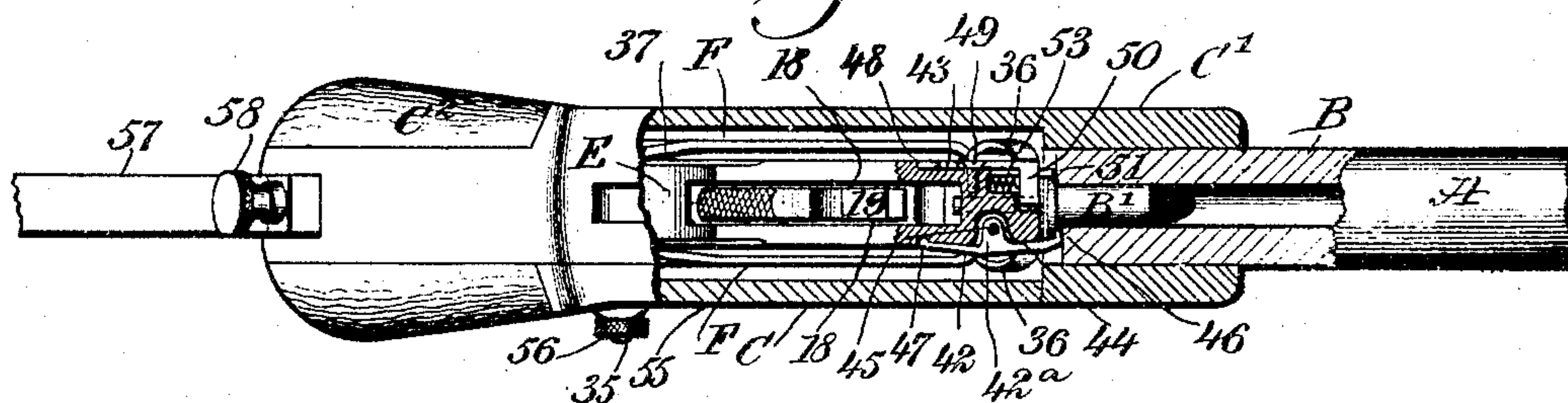
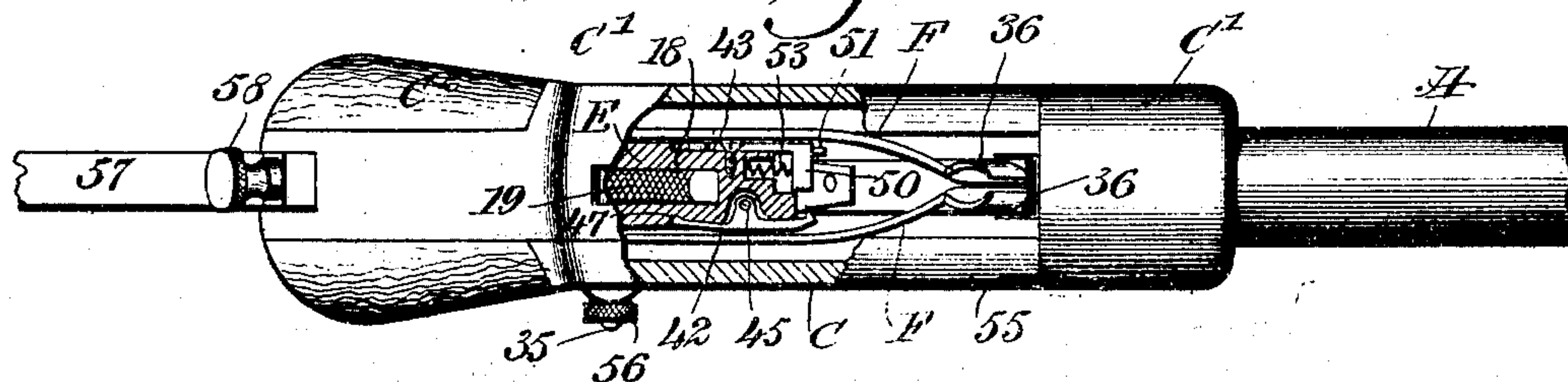


Fig. 7.



WITNESSES:

Paul Hunter
 Frederick

INVENTOR

Edward E. Redfield

BY *Munn*
ATTORNEYS

UNITED STATES PATENT OFFICE.

EDWARD E. REDFIELD, OF GLENDALE, OREGON.

FIREARM.

SPECIFICATION forming part of Letters Patent No. 772,746, dated October 18, 1904.

Application filed September 12, 1903. Serial No. 172,919. (No model.)

To all whom it may concern:

Be it known that I, EDWARD E. REDFIELD, a citizen of the United States, and a resident of Glendale, in the county of Douglas and State of Oregon, have invented a new and Improved Firearm, of which the following is a full, clear, and exact description.

The purpose of my invention is to provide a magazine pistol or gun so constructed that after a shot has been fired and the thumb-lever connected with the breech-block, and which also acts as a trigger-guard, has been carried forward the breech-block is carried rearward and the cartridge-carrier is brought into position to receive a cartridge from the magazine, clamping the cartridge and holding it without further action, and whereupon as the thumb or trigger-guard lever is restored to its guard position relative to the trigger the cartridge-carrier is elevated sufficiently to bring the cartridge in alinement with the barrel and the breech-block is brought forward to force the cartridge into firing position in the barrel, the cartridge-carrier meanwhile dropping downward out of the way of the breech-block to occupy a position close to the back of the magazine, the grip of the cartridge-carrier being opened to receive a cartridge only when the thumb or trigger-guard lever is carried forward.

A further improvement in the construction of the firearm is to provide for automatically cocking the hammer as the breech-block is moved forward.

Another purpose of the invention is to provide a special construction of extractor which when the breech-block is carried forward to firing position engages with the rim of the cartridge to withdraw the empty shell at the rearward movement of the breech-block, said empty shell being released from the extractor and being thrown from the frame by the ascending cartridge from the magazine.

The invention consists in the novel 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 characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the grip-section and frame of the improved arm, one side being removed sufficiently to disclose the operative mechanism, which mechanism is shown in the position it occupies immediately after firing. Fig. 2 is a vertical section through the grip and frame of the arm, a portion of the mechanism within the grip and frame being in vertical section, and a longitudinal vertical section through a portion of the magazine and barrel, showing the actuating or guard lever thrown forward and a cartridge in the carrier ready to be presented to the barrel and further illustrating in dotted lines a cartridge in position to enter the barrel. Fig. 3 is a view similar to that shown in Fig. 2, but illustrating the position of the parts when the actuating or guard lever has been carried partially to its normal position. Fig. 4 is a transverse section taken practically on the lines 4 4 of Fig. 2 looking toward the rear. Fig. 5 is a view similar to that shown in Fig. 3, illustrating the position of the parts when the breech-block is closed and the actuating or guard lever is in its normal position and the trigger is in position to be drawn for firing. Fig. 6 is a horizontal section taken practically on the line 6 6 of Fig. 5; and Fig. 7 is a plan view, partly in section and partly broken away, illustrating the position and appearance of the cartridge-carrier when the hammer is drawn back.

In the drawings I have illustrated the application of the improvement to a pistol, and A represents the barrel; B, a magazine beneath the barrel; C, the frame; C², the grip, which is a continuation of the frame, and C' a socket forming a portion of the frame in which the barrel and magazine are fitted, both the barrel and magazine having communication with the chamber in the frame, which is open at the top to permit of the proper movement of the breech-block E, which is adapted to slide in the frame and in the grip with a movement to and from the barrel.

B' represents the cartridges which are stored in the magazine B, being under the

influence of the usual spring, which tends to force the cartridges from the magazine, and D represents a guard-lever having a thumb-ring 10 at one end, which lever is pivoted between its ends by a suitable pin 11 in the bottom portion of the frame and is provided with a section 12 above its pivot-point extending upward into the chamber of the frame and terminating at its upper end in a head 13, which is straight at the front and more or less cylindrical at the rear, as is shown in Figs. 2, 3, and 5.

The said guard-lever D at its pivot-point is provided with a cam-surface 14, and at the upper end of the said cam-surface a recess 15 is produced. This recess 15 receives the rearwardly-bent end of a stop-slide 16, mounted for vertical movement upon the forward wall of the frame-chamber below the magazine, and the said stop-slide is provided with a suitable intermediate longitudinal slot 17, through which a screw is passed into the frame to limit the movement of the slide, and the upper portion of the stop-slide is bifurcated, so as to extend at each side of the outlet of the magazine B. When the guard-lever D is carried forward to move the breech-block E, to be hereinafter particularly described, from the barrel, the lower end of the stop-slide rides on the cam-surface 14 of the said guard-lever, and the bottom wall of the bifurcated portion of the said stop-slide is carried up sufficiently to prevent the rear-most cartridge from leaving the magazine, as is shown in Fig. 3.

The breech-block E is provided with a chamber 18 at its upper portion, open practically at the top and at the bottom, and in the said chamber 18 the lower end of a hammer 19 is pivoted by means of a suitable pin 20. The said hammer just below its thumb-piece is provided with a concaved recess, forming practically a hook projection 21, adapted when the breech-block is carried rearward to be just beneath a pin 22, located in a recess 23 in the frame communicating with the aforesaid chamber 18. As the breech-block is carried forward to firing position the hook projection 21 on the hammer engages with the pin 22, and thereby the hammer is brought to a full-cocked position by the time the breech-block has reached its forward closing position.

The hammer is provided at its pivot-point preferably with two teeth 24, adapted to be engaged by the nose 25 of the trigger 26, which is suitably pivoted in the aforesaid chamber 18 of the breech-block and extends downward through a bottom opening in the frame and is protected by the outer portion of the guard-lever D. The two teeth 24 are provided for the hammer in order that the hammer may be held in a partially-cocked or a full-cocked position. The nose 25 of the trigger 26 is held constantly in engagement

with the toothed portion of the hammer 19 by means of a spring 27^a, secured to the bottom chambered portion of the breech-block E, and this spring is preferably provided with a longitudinal slot. The spring is more or less bowed, its forward portion being made to enter a recess 27 in the rear upper portion of the trigger 26, as is shown in Figs. 1 and 3. A second and preferably a stronger spring 28 is secured to the under face of the breech-block E, and this spring 28 at its free portion is opposite the slot in the trigger-spring 27^a. The forward free end of the stronger spring 28 is made to engage with a friction-roller 29, carried on a projection from the pivot end of the hammer 19. This spring 28, which may be termed the "main" spring, is adapted as soon as the hammer is released from the trigger to force the hammer to closed or firing position.

The head 29^a of the breech-block E carries a firing-pin 30 of any suitable or approved construction, and below the head 29^a of the breech-block E a recess 31 is formed, extending diagonally upward and rearward from the bottom portion of the said breech-block. This recess 31 receives the head 13 of the guard-lever D. The forward wall of the recess 31 has a depression 32 made therein at its bottom portion, and when the guard-lever D is carried forward to move the breech-block rearward or to open position the cylindrical portion of the head of the lever engages with the rear wall of the said recess 31. As the guard-lever D is carried back to its closed or normal position the straight forward edge of the head portion of the said lever engages with the forward wall of the recess 31 in the breech-block 32, and thereby forces the breech-block toward the barrel, and when the head of the breech-block is in closed position relative to the barrel the head 13 of the guard-lever D will be in the depression 32, thus locking the breech-block in its closed position until purposely opened by the forward movement of the aforesaid guard-lever D.

In connection with the breech-block I employ a cartridge-carrier F. This cartridge-carrier is made of spring material and comprises two side members 33 and a connecting rear member 34, the rear ends of the side members 33 being upwardly curved, as is shown in Figs. 1 and 3, and just below the rear connecting member 34 a pivot-pin 35 is passed through the side members of the cartridge-carrier F, as is shown in Figs. 1 and 3. Each side member 33 of the cartridge-carrier F is provided with a jaw 36 at its forward end, and the jaws are curved in direction of each other, as is best shown in Figs. 6 and 7. Each side member 33 of the cartridge-carrier F is provided at its upper edge with a rearwardly-extending spring-finger 37. These spring-fingers are inclined in direction of each other, as is shown in Fig. 6, and are adapted to ride at times upon the rear

upper edge of the breech-block, which edge, engaged by the said spring-fingers 37, is given more or less of an undulating cam-surface 38, as is shown in Fig. 1. The side faces of the
 5 breech-block at the cam 38 are more or less beveled, as is shown at 39 in Fig. 1, as the said fingers 37 during the movements of the breech-block are in constant engagement with one or the other of the beveled surfaces 39,
 10 except when the breech-block is in its full rear position, at which time the fingers 37 of the cartridge-carrier 33 will enter a semicircular recess 40 made in the upper edge of the breech-block adjacent to its head 29^a, which recess is
 15 best shown in Fig. 1.

In the operation of the mechanism as far as has been described when the breech-block is in its closed position (shown in Fig. 1) the guard-lever D is in engagement at its front
 20 end with the grip of the frame, and the hammer may then be in full-cocked position or may have been dropped by drawing upon the trigger, which latter position of the hammer is that shown in Fig. 1. If it is now desirable to recharge the barrel, the guard-lever D
 25 is carried forward, and the cartridge-carrier will be dropped from the position shown in Fig. 1 slightly downward, so that the jaws will be opposite the magazine, as the fingers
 30 37 at that time will have passed by the lower inclined or beveled surfaces 39 of the breech-block, and the jaws of the cartridge-carrier at this time will be held widely separated by the passage between the said jaws of the beveled surface 41 at the sides of the head of the
 35 breech-block. (Shown in Fig. 1.) As the guard-lever D is thus moved forward the rear-most cartridge will enter the space between the jaws of the carrier, as when the guard-lever
 40 D is carried forward the stop-slide 16 will be drawn downward, as is shown in Fig. 3, by reason of its lower end entering the recess 15 in the said guard-lever, thus affording no obstruction to the rearward passage of the rear-
 45 most cartridge. As the guard-lever D is carried farther forward, or to the position shown in Fig. 2, the inclined portion of the head of the breech-block will have passed from between the side members of the cartridge-carrier
 50 adjacent to the jaws, thereby permitting the said jaws to close on the cartridge and grip the same. At this time the fingers 37 of the cartridge-carrier will be in the recess 40 of the breech-block. The guard-lever D is
 55 then carried rearward to its normal position, and as the fingers 37 ride out of the recess 40 on the breech-block the jaw-section of the cartridge-carrier is carried quickly upward to the dotted position shown in Fig. 2, bringing the
 60 cartridge in position to enter the barrel A. The cartridge-carrier remains in this position until the head of the breech-block in the forward movement of the same engages with the cartridge to force it into the barrel, as is shown
 65 in Fig. 3, whereupon the head of the breech-

block again enters the space between the jaws of the cartridge-carrier, separating said jaws, and the fingers 37 riding up the inclined surfaces 39 of the breech-block cause the cartridge-carrier to be carried down to its normal position. (Shown in Fig. 1.) When the
 70 breech-block is carried to the rear, the hook projection 21 on the hammer is brought below the pin 22 on the frame, as is shown in Fig. 2, and as the breech-block is carried forward this
 75 hook projection 21 is brought into engagement with the pin 22 and holds the hammer while the breech-block is carried forward, thus bringing the hammer to its full-cocked position by
 80 the time the breech-block has reached its forward normal or closing position, and the hammer will be held in its cocked position by the trigger 26 until the trigger is drawn away from the hammer, whereupon the spring 26
 85 will act to force the hammer to an engagement with the firing-pin 30. Owing to the peculiar upper and forward movement of the breech-block in closing, the hammer will be freed from the pin 22 before the breech-block
 90 reaches a full-closed position.

The extractor comprises two sections 42 and 43. The section 42, as is best shown in Figs. 6 and 7, fits in a recess 44 at the right of the breech-block, the said section being
 95 made of a spring material, preferably steel, and comprises a body member, which lies longitudinally of the breech-block, having an inwardly-directed offset 42^a, pivoted by means of a pin 45, vertically directed through the
 100 breech-block, a forward claw 46, adapted for engagement with the rim of the cartridge in the barrel, and a rear spur 47, which is fitted in a suitable recess in the breech-block. Thus it will be observed that while this section 42
 105 of the extractor has rocking movement upon its pivot-pin it is held against longitudinal or end movement. The opposing section 43 of the extractor, however, has no pivotal movement, being adapted for longitudinal or end
 110 movement in a proper recess 48 in the left-hand side of the breech-block, being held in place by a screw or like device 49, which passes through a longitudinal slot in the body portion of the said section 43 and into the
 115 breech-block. A head 50 is carried at the forward end of the block of the extractor-section 43, extending in direction of the opposing section 42, and this head carries a spur 51 at the upper portion of its left-hand side,
 120 adapted to register with a corresponding spur 52 at the upper left-hand side of the head of the breech-block, as is shown in Fig. 2. A spring 53 is located in the head of the breech-block, acting when the head is carried away from the breech end of the barrel to force the
 125 head 50 of the extractor-section 43 forward to the position shown in Fig. 2.

In the operation of the extractor when the breech-block is closed against the barrel, as is specially shown in Fig. 6, the claw 46 of
 130

the section 42 engages with the rim of the cartridge-shell, and likewise the spurs 51 and 52, while the head 50 of the left-hand section 43 of the extractor is inactive at the rear of the cartridge. The spring 53, controlling the movement of the section 43, is, however, placed under tension at such time. Therefore as the breech-block E is moved rearward the right-hand section 42 of the extractor will draw the empty shell from the barrel, and the spring 53, expanding, acts to force the left-hand section 43 of the extractor forward, releasing the empty cartridge-shell from the grip of the right-hand extractor-section 42, permitting the cartridge-carrier F in its upward movement carrying a full cartridge B to force the empty and withdrawn shell from the frame.

The chambered portion of the frame is provided at one side with a removable section 55, held in place by a thumb-screw 56 at one end of the pivot 35 for the cartridge-carrier, which end of the pivot extends through and beyond the detachable section of the frame, as is shown in Figs. 6 and 7.

If desired, an extension-stock 57 may be secured to the pistol-grip C² by means of a binding-screw 58 or equivalent means, and the barrel A of the weapon may be made as long or as short as desired. Any form of sight or sights may also be employed.

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

1. In a firearm, a breech-block having sliding movement in the frame and the grip or stock section of the arm, which breech-block is provided with exterior cam-surfaces at its forward portion, and a pivoted carrier which straddles the breech-block, receiving expansive and vertical action through the movement of the breech-block and by contact with the cam-surfaces of the same.

2. In firearms, a breech-block mounted for sliding movement in the frame and grip or stock section of the arm to and from the barrel, which breech-block is provided with exterior cam-surfaces, a pivoted carrier opened and closed and raised and lowered by the combined action of the breech-block and contact with the cam-surfaces of the same, and a trigger-guard lever having a member slidable in the breech-block to actuate the latter upon the movement of the said trigger-guard lever to opened or closed position, as set forth.

3. In firearms, a breech-block mounted for sliding movement in the frame and grip section of the arm to and from the barrel, the said breech-block having a diagonal recess in the forward portion of its lower edge, the forward wall of which recess is provided with a depression, a trigger-guard lever pivoted to the frame, an extension from the lever, which enters the said recess and seats itself in the depression of the forward wall of the recess

when the breech-block is in closed position, to lock the breech-block in such position, as described.

4. In firearms, a barrel, a magazine, a frame and stock, a breech-block mounted to slide in the frame and stock to and from the barrel and magazine, the breech-block being provided with a recess in the forward portion of its lower edge, the forward wall of which recess is provided with a depression, a trigger-guard lever pivoted to the frame, an extension from the said lever, which enters the recess and seats itself in the depression of its forward wall when the breech-block is closed, the said trigger-guard lever being provided with a cam-surface at its pivot-point and an adjacent recess, and a slide carried by the frame and adapted as a cut-off for the magazine, which slide is operated by the cam and recessed portion of the said trigger-guard lever, as described.

5. In firearms, a frame, a connected stock or grip, a breech-block having sliding movement in the frame and connected stock or grip, a hammer carried by the said breech-block, a trigger engaging with the said hammer, a trigger-guard lever pivoted on the frame and arranged to actuate the breech-block, and a bridge at the upper portion of the frame, adapted to engage with the hammer and carry the same to a cocked position as the breech-block is carried forward to a closed position, as described.

6. In firearms, a sliding breech-block, and a cartridge-carrier pivoted independently of the breech-block and having side sections which engage with the side portions of the breech-block, the side sections of the said cartridge-carrier being provided at their forward ends with jaws, and the breech-block being provided with a wedge-like forward surface adapted to enter the space between the jaws of the cartridge-carrier when the breech-block is closed, being removed from the said jaws when the breech-block is opened, as set forth.

7. In firearms, a frame, a stock, and a barrel and magazine connected with the frame, a breech-block having sliding movement in the frame and stock, to and from the barrel and the magazine, a bridge carried by the frame, a hammer carried by the breech-block and having a hook-shaped projection adapted to engage with the said bridge, a trigger connected with the said hammer, a cut-off for the magazine, and a trigger-guard lever pivoted to the frame and provided with an extension entering a recess in the breech-block, and with a surface for operating the said cut-off for the magazine, as set forth.

8. In a firearm, a sliding breech-block having cam-surfaces produced thereon, a frame and stock support for the breech-block in which the said block has movement, a cartridge-carrier expanded and permitted to con-

tract and vertically operated by the action of the breech-block and by engagement with the cam-surfaces of the said block, as described.

9. In firearms, a frame and a stock, a breech-
5 block having sliding movement in the frame and the stock, the breech-block being provided with a beveled forward head-section and with cam-surfaces at its rear upper portions, a cartridge-carrier of spring material pivoted in
10 the frame and having side members terminating at their forward ends in jaws, the side members extending along the sides of the

breech-block, and spring-fingers carried by the side portions of the cartridge-carrier, engaging at their free ends with the rear cam-
15 surface of the said breech-block, for the purpose set forth.

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

EDWARD E. REDFIELD.

Witnesses:

J. S. WINCHELL,
H. BOYD.