

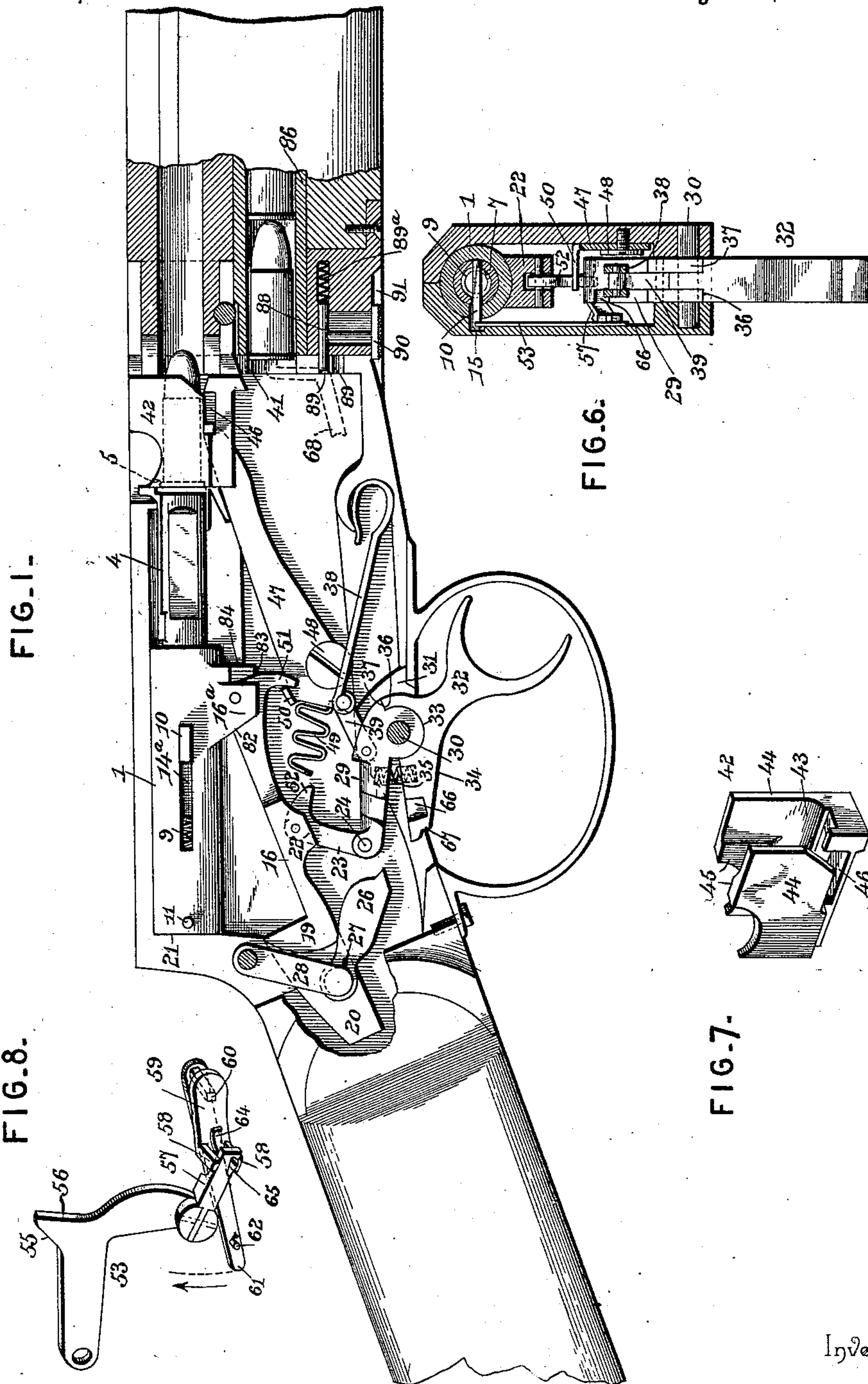
(No Model.)

4 Sheets—Sheet 1.

R. DINSMORE.
MAGAZINE FIREARM.

No. 560,348.

Patented May 19, 1896.



Inventor

Robert Dinsmore

Witnesses

Jas. H. McArthur.
R. M. Smith.

By his Attorneys.

C. A. Snow & Co.

(No Model.)

4 Sheets—Sheet 2.

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FIG. 2 -

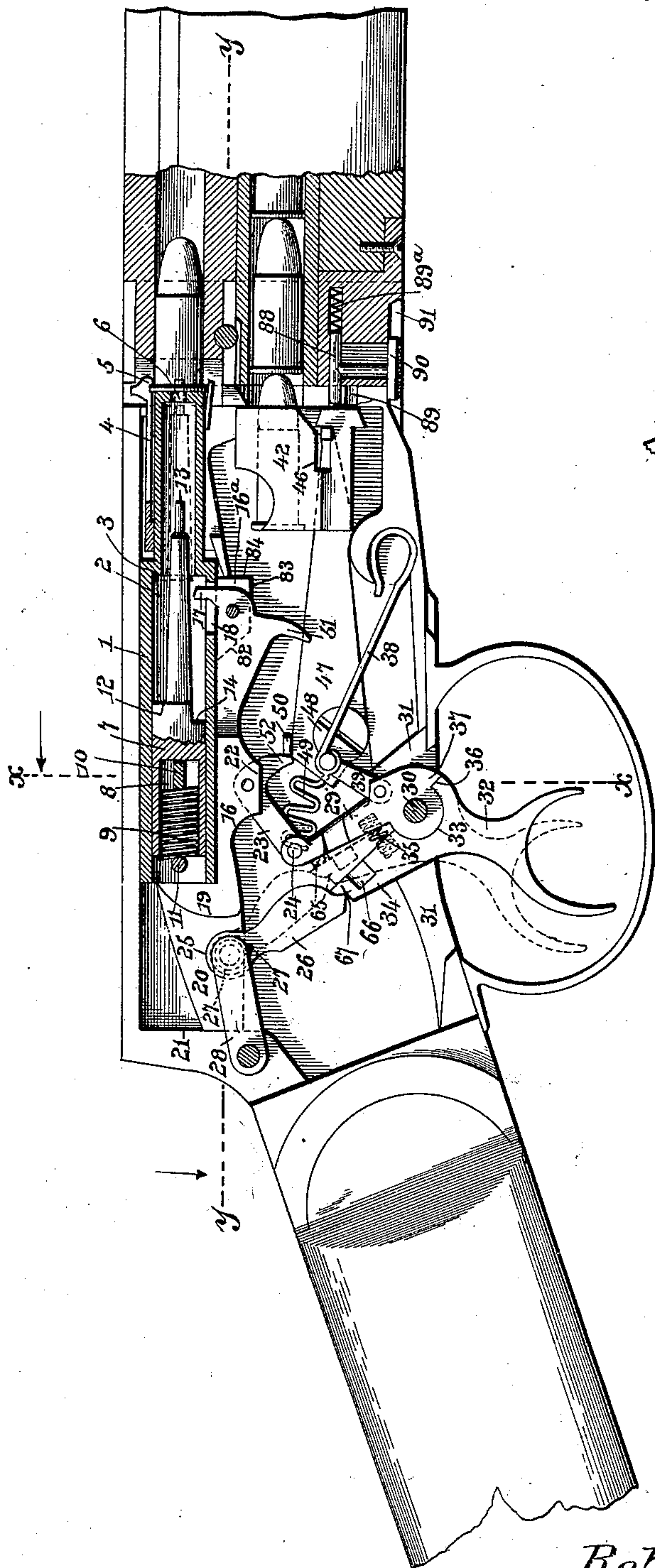
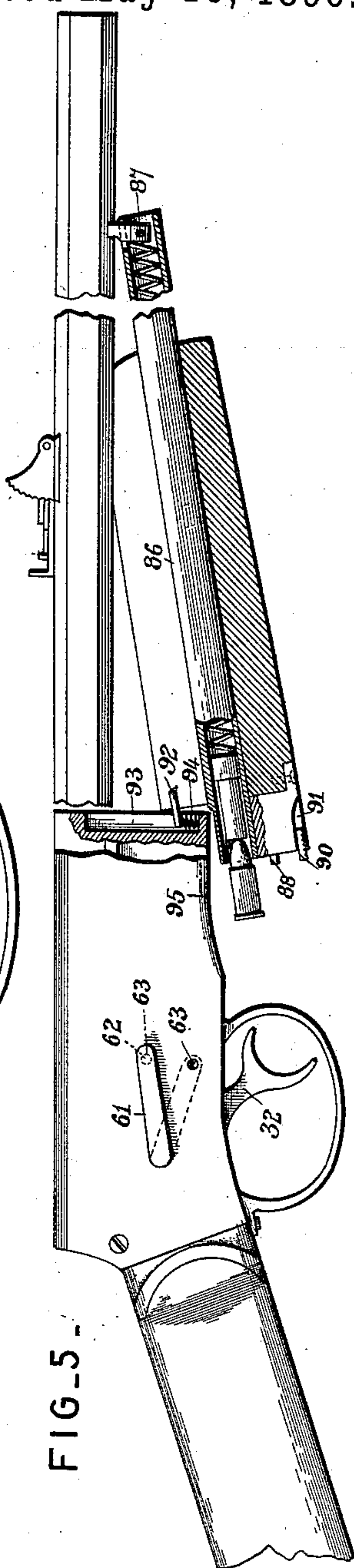


FIG. 5 -



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R. M. Smith.

(No Model.)

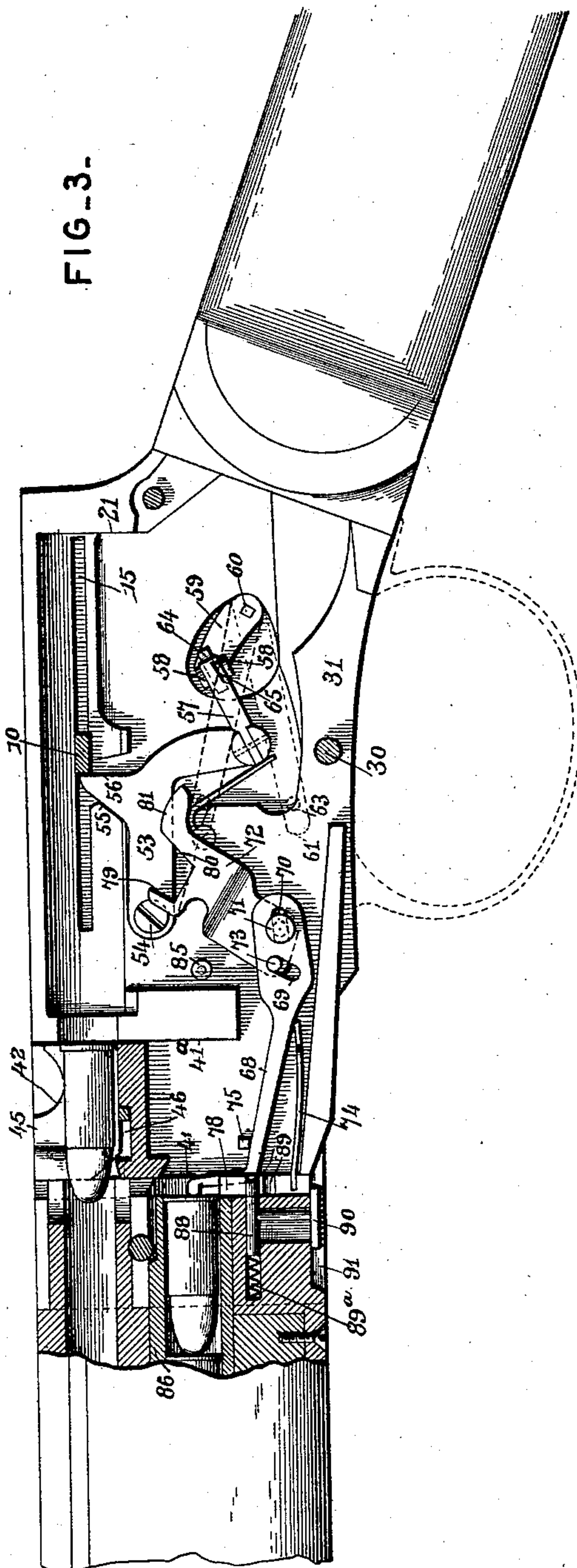
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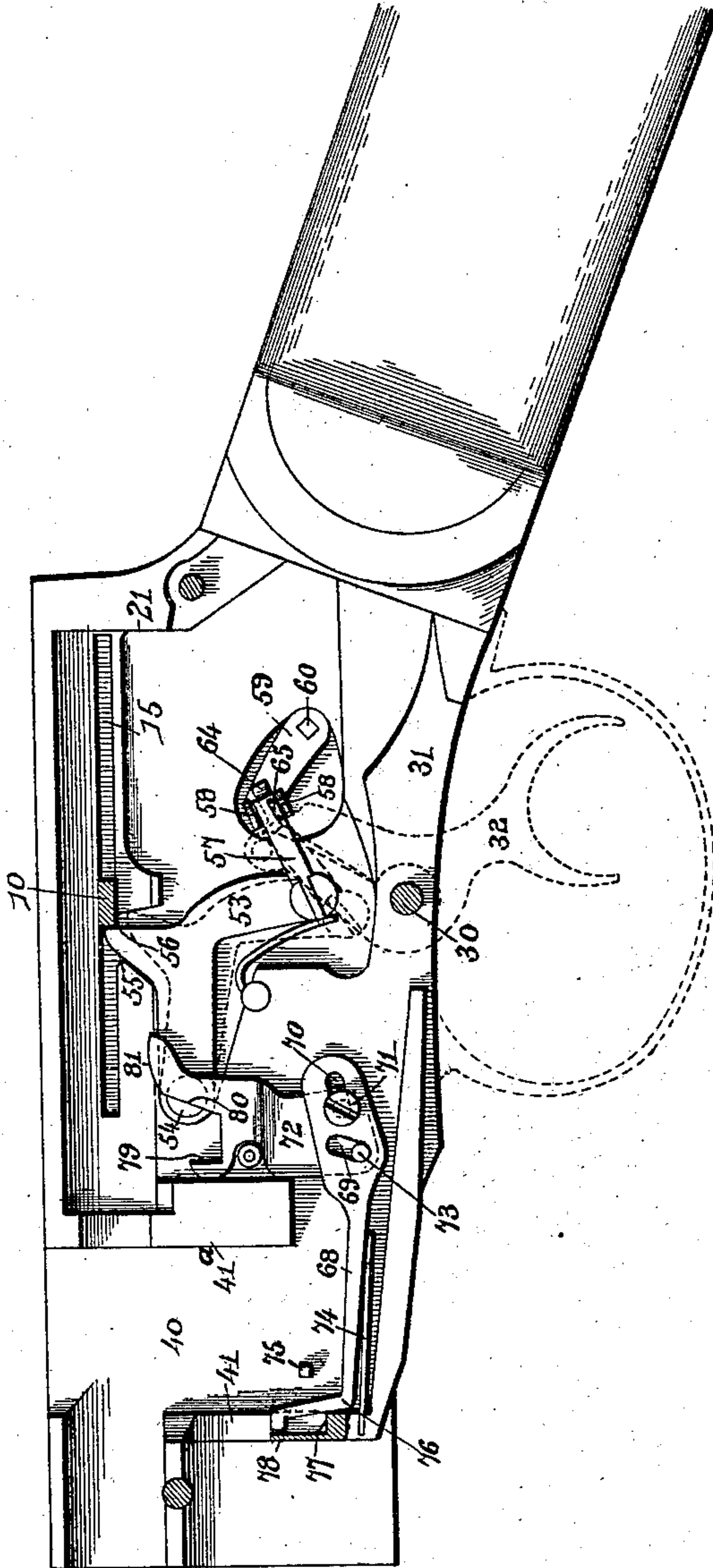
FIG. 3.



Witnesses

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FIG. 4.



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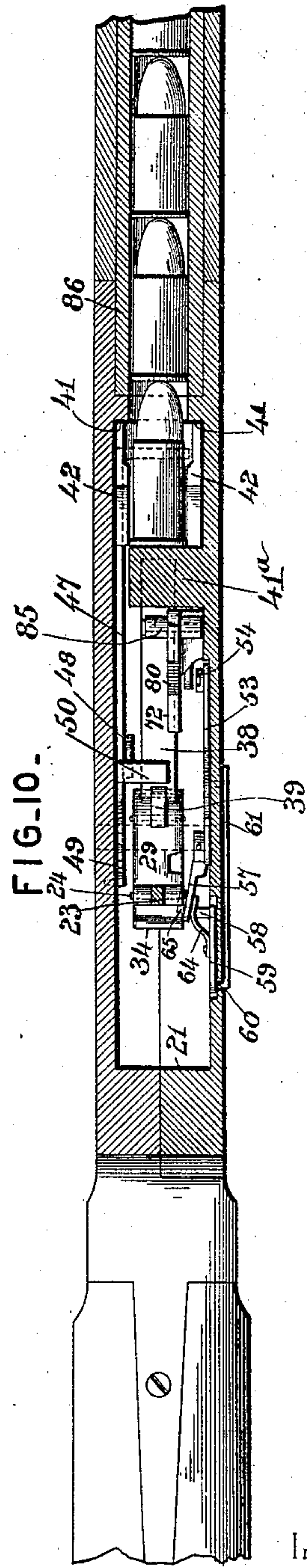
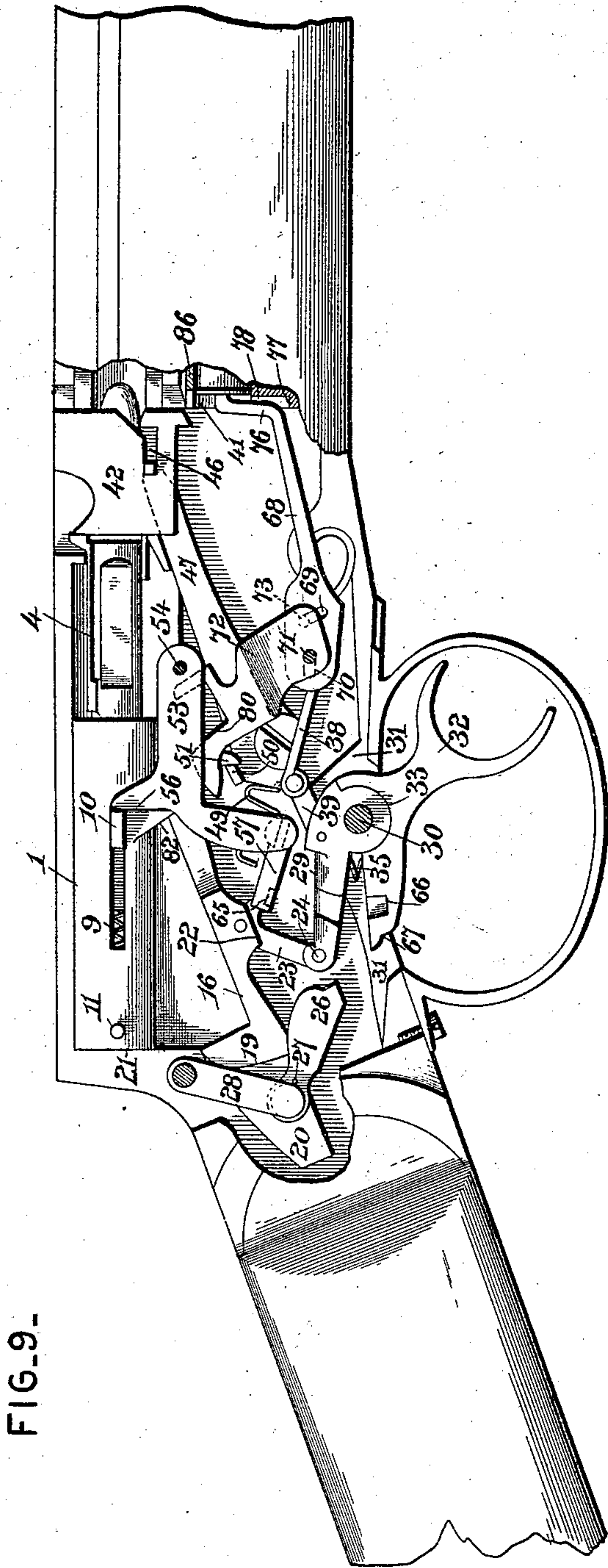
(No Model.)

4 Sheets—Sheet 4.

R. DINSMORE.
MAGAZINE FIREARM.

No. 560,348.

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Inventor

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R. M. Smith.

By *his* Attorneys.

Robert Dinsmore

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

ROBERT DINSMORE, OF WESTON, WEST VIRGINIA, ASSIGNOR OF ONE-HALF
TO MORIS GREENSTEIN, OF SAME PLACE.

MAGAZINE-FIREARM.

SPECIFICATION forming part of Letters Patent No. 560,348, dated May 19, 1896.

Application filed April 8, 1895. Serial No. 544,990. (No model.)

To all whom it may concern:

Be it known that I, ROBERT DINSMORE, a citizen of the United States, residing at Weston, in the county of Lewis and State of West Virginia, have invented a new and useful Firearm, of which the following is a specification.

This invention relates to an improvement in firearms of that class known as "repeating."

The object of the present invention is to simplify and improve the construction shown and described in a former patent granted to me March 7, 1893, No. 492,864, for improvement in magazine-guns.

The primary object of this invention is to provide a novel form of trigger and lock operating in connection therewith, whereby a brace is formed between the trigger and the locking-bolt for effectually preventing said locking-bolt from being thrown down by the concussion caused by the explosion of the cartridges.

A further and very important object of this invention is to provide the locking-bolt at its forward end with a depending lug which is adapted to operate against a fixed stop or roller secured within the frame of the gun for the purpose of starting a cartridge-shell from the firing-chamber preparatory to the ejection of the shell from the gun.

A further object of the invention is to provide a trigger of novel construction, comprising two sections which are pivotally connected with each other and arranged and combined with the other operative parts in such manner that the trigger is adapted for a repeating or set trigger.

Another object of this invention is to provide a novel form of cartridge-stop and means for automatically actuating the same, whereby said cartridge-stop is adapted to operate upon the adjacent cartridge at the mouth of the magazine for forcing said cartridge slightly forward out of the path of the cartridge-carrier, thereby preventing the cartridge from bearing against said carrier, and leaving the latter perfectly free to travel up and down within the frame of the gun.

A further object is to construct the cartridge-stop in such manner that when thrown

forward into engagement with a cartridge said stop will be effectually locked in place and prevented from being thrown down or accidentally removed from behind the cartridge until withdrawn by suitable devices for that purpose.

A further object of the invention is to provide a simple magazine, which is pivoted at its forward end beneath the barrel of the gun, and provided at its rear end with means whereby said end is adapted to be locked with relation to the frame of the gun either in position to receive a supply of cartridges or in normal position, in which the cartridges are adapted to be fed to the carrier, or in an intermediate position, in which the cartridges will be prevented from escaping from the magazine and entering the carrier or getting into the main body or frame of the gun, under which adjustment the gun may be exhibited and the operation thereof demonstrated with perfect safety.

In order to accomplish the objects above enumerated, the invention consists in certain novel features and details of construction and arrangement of parts, as hereinafter fully described, illustrated in the drawings, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a vertical longitudinal section taken through the frame of the gun, showing the breech-bolt and the mechanism in one lateral half of the gun, showing also the adjacent end of the magazine, together with the means for adjusting and locking the magazine in its several positions, the parts being in the position in which the bolt is drawn back just ready to feed a cartridge into the firing-chamber and with the cartridge-stop thrown up into engagement with a cartridge at the mouth of the magazine. Fig. 2 is a similar view, but with the breech-bolt and a portion of the firing-pin in longitudinal section and with the parts in the other extreme. Fig. 3 is a view similar to Fig. 1, but with the breech-bolt omitted and showing the mechanism in the other lateral half of the gun. Fig. 4 is a similar view with the magazine omitted, showing the cartridge-stop thrown down out of the way of the mouth of the magazine, and showing also in dotted lines the positions the trig-

ger and sear occupy just after the firing-pin is released. Fig. 5 is a side elevation of the gun, partly broken out and in section, illustrating the manner in which the magazine is pivoted beneath the barrel, said magazine being shown partly in section. Fig. 6 is a vertical transverse section on the line xx of Fig. 2. Fig. 7 is a detail perspective view of the vertically-reciprocating cartridge-carrier. Fig. 8 is a similar view showing the form of the sear, the actuating-catch jointed thereto, and the switch-lever. Fig. 9 is a side elevation of the gun with a portion of the adjacent side plate or frame of the gun broken away and removed to show the internal mechanism. Fig. 10 is a horizontal longitudinal section taken on the line yy of Fig. 2.

Similar numerals of reference designate corresponding parts in the several figures of the drawings.

Referring to the drawings, the frame of the gun is made in halves in the usual manner, being held together by screws at convenient points. The two halves of the frame of the gun are provided at or near the top with longitudinally-extending grooves or pockets, which are approximately semicircular, providing for the reception of a reciprocating bolt (indicated at 1) which is adapted to move back and forth in direct line with the barrel of the gun. The bolt 1 is formed with a cylindrical bore or chamber 2, which is reduced in diameter at the forward end of said bolt to form a shoulder 3 for limiting the forward thrust of the firing-pin. Said bolt is also reduced in external diameter at such forward end to form a seat upon which is secured a spring-catch 4, said catch being provided at its forward end with a depending lip 5, which is adapted to spring over and engage the flange of the cartridge-shell, as indicated in Fig. 2, and by means of which the shells are adapted to be withdrawn from the firing-chamber. The front end of the bolt is closed, with the exception of a small central perforation 6, through which the point of the firing-pin passes in the act of exploding a cartridge. The firing-pin (indicated at 7) is cylindrical in form and is recessed or provided with a socket 8 in its rear end for the reception of an actuating-spring 9, the forward end of which bears against the inner portion of a laterally-projecting finger 10 of the firing-pin 7 and the rear end of which is supported against a pin or stop 11, located within and carried by the reciprocating bolt 1. The firing-pin 7 is shouldered, as indicated at 12, and said shoulder is adapted in the forward thrust of said firing-pin to strike against the internal shoulder 3 of the bolt for stopping the forward progress of said pin. The firing-pin is extended forwardly beyond said shoulder sufficiently to enable the point 13 thereof to pass through the perforation 6 in the front end of the bolt sufficiently to explode a cartridge located in the firing-chamber. The firing-pin is cut away at its under side to form a shoulder 14, which

is adapted to be acted upon by an upwardly-extending lug on the forward end of the locking-block, the purpose of which, as will hereinafter appear, is to withdraw the point of the pin from engagement with the cartridge after the latter has been withdrawn from the firing-chamber and preparatory to its ejection from the gun. The firing-pin 7 projects through a longitudinal slot 14^a in the side wall of the bolt and is adapted to travel in a groove 15 in the adjacent side wall of the frame of the gun. The opposite inner wall of the frame is grooved in a similar manner, and within these longitudinally-extending oppositely-disposed grooves the pin 11, which passes horizontally through the rear end of the bolt, is adapted to reciprocate for the purpose of supporting and guiding the bolt in its movements back and forth. As above stated, the pin 11 also serves to support the rear end of the actuating-spring of the firing-pin.

16 designates a locking-block, which is pivoted at its forward end between a pair of lugs 16^a, pendent from the lower face or side of the reciprocating bolt, said locking-block being provided at its front end with an upwardly-projecting lug 17, extending through an aperture or slot 18 in the lower wall of the bolt and adjacent to or slightly removed from the internal shoulder 3 of the bolt, above described, said upwardly-projecting lug being adapted to operate against the shoulder 14 of the firing-pin for withdrawing the point of said pin from its engagement with the cartridge-shell. At the rear end the locking-block 16 is provided with an upward extension 19, which is adapted to lie behind the bolt when a cartridge is exploded. In rear of the extension 19 the locking-block is extended backwardly to form a support 20, the rear end of which is adapted to rest against the rear vertical wall 21 of the frame of the gun for the purpose of enabling the bolt and the locking-block to withstand the recoil caused by the explosion of a cartridge. The locking-block is further provided on its under face with a pair of pendent lugs 22, between which is pivoted one end of a link 23, the opposite end of which is pivotally connected with the upper end of the trigger, as shown at 24. The locking-block 16 is provided at or near its rear end with a recess 25 for the reception of the upper end of a locking-brace 26, between which and the locking-block and within said recess 25 is located a spiral spring 27, one end of which is secured to the locking-block and the other end connected with the locking-brace, the arrangement being such that said locking-brace is normally held forward in engagement with the rear section of the trigger, as shown in Fig. 2.

28 represents a link which is pivotally connected with the frame of the gun at the rear end thereof, the opposite or free end of said link being pivotally connected with the locking-block at the same point as the pivoted locking-brace. This link 28 serves to regu-

late the movements of the rear end of the locking-block and to direct the rear end of said locking-block into its proper position behind the reciprocating bolt for supporting the latter against recoil.

The trigger is made in two sections, the forward section 29 of which is pivoted to the lower end of the link 23 and journaled on a fixed stud or pivot 30, secured to the frame of the gun and extending across the lower aperture 31 of the frame of the gun, through which the trigger operates. The rear or lower section of the trigger, which carries the finger-grip and is designated at 32, is connected with the other section of the trigger by means of a knuckle-joint, as shown at 33, the section 32 of the trigger being provided with an upwardly-extending arm 34, which is adapted to abut against the upper forward section 29 of the trigger, and is notched at the upper extremity of said arm to receive and engage the pointed lower end of the locking-brace 26, as shown in Fig. 2, when the reciprocating bolt is thrown forward. The lower or rear section 32 of the trigger is normally held away from the opposing section by means of a spiral spring 35, interposed between the upper portions of the trigger-sections or above the joint of said sections, the opposite ends of said spring resting in recesses or pockets in the inner adjacent faces of said trigger-sections. The forward movement of the upwardly-extending arm 34 of the rear section of the trigger is limited by the section 29, and the reverse movement of the section 32 is limited by means of a stop 36 thereon coming in contact with a shoulder 37 on the section 29.

38 designates the restoring-spring, which is mounted at one end in a recess in the frame of the gun in any usual or preferred manner and is connected at its free end with the upper forward section of the trigger by means of an interposed link 39, pivoted at one end to the trigger and at its opposite end to said spring. The point upon the trigger at which said link is pivoted is located in such position that after said trigger has been vibrated to a certain point the spring will act by its tension to assist said trigger in its forward movement and also to retain the upper forward section of the trigger in its advanced position. In the backward movement of the reciprocating bolt the spring 38 acts with considerable force upon the trigger and serves, through devices hereinafter described, to accelerate the withdrawal of the bolt and the upward movement of the cartridge-carrier and the ejection of the shells. The breech-bolt is reciprocated for opening and closing the breech by means of the locking recoil-block, which is pivotally connected thereto, as described, and is itself actuated by the forward trigger-section 29 and the link 23, pivotally connected at one end to said trigger-section and at its opposite end to the locking-block. Thus as the trigger is pulled

the breech-bolt is thrust forward, as shown in Fig. 2, and upon the reverse movement of the trigger, assisted by the restoring-spring 38, the breech-bolt is drawn back, as shown in Fig. 1, to allow a cartridge to be raised into the plane of the barrel.

The frame of the gun, at or near its forward end, is formed with a vertically-extending well 40, arranged just in rear of the mouth of the magazine and between the firing-chamber and the longitudinally-extending recess in which the bolt reciprocates. This well is formed by providing the opposite inner walls of the gun-frame with inwardly-projecting vertically-extending shoulders 41 at the front of the well and a wall 41^a at the rear, and within said well a vertically-reciprocating cartridge-carrier 42 is mounted. The carrier is of the ordinary construction, comprising a longitudinal bore 43, above which the side walls 44 are extended and contracted, as indicated at 45, the carrier being provided in or near its base with an elongated slot 46. The slot 46 is adapted to receive and be engaged by the inwardly-projecting end of an operating-lever 47, which is pivoted at or near its opposite end to the inner wall of the gun, about centrally thereof, by means of a screw 48. The operating-lever 47 is held either in its upward or its downward position by means of a serpent-spring 49, secured at one end to the casing and at its opposite end to the operating-lever 47 in rear of its pivot. The operating-lever 47 is provided at a point located above its pivot and slightly in rear thereof with an inwardly-projecting spur or lug 50, which in the backward movement of the bolt is acted upon by a downwardly-projecting hook or lug 51 on the front end of the locking-block 16 for vibrating said lever and causing it to elevate the cartridge-carrier. In the forward movement of the bolt the spur or lug 50 of the lever 47 is operated upon by a downwardly-projecting lug 52 on the forward upper end of the pivoted link 23, hinged to the locking-block, as indicated in Fig. 2, for the purpose of lowering the cartridge-carrier into the position indicated in said figure.

53 designates the sear, which is pivoted to the frame of the gun upon the inner wall thereof, as indicated at 54, the upper end of said sear being adapted to project upwardly within the path of the laterally-projecting finger 10 of the firing-pin, where it is provided with an inclined shoulder 55 for enabling said finger to pass by said sear in its backward movement, said sear also having a vertical shoulder 56, which is adapted to engage the finger 10 of the firing-pin, as indicated in Figs. 3 and 4, for holding back said pin while the bolt is being advanced to push a cartridge into the firing-chamber. The sear is operated for releasing the firing-pin and firing a cartridge by means of a catch 57, which is connected by a universal joint to the lower end of the sear and extends backwardly, where it rests between a pair of par-

allel ears or lugs 58, carried by a short crank-arm 59, mounted upon the inner end of a short pin or shaft 60, which extends through the wall of the gun and has secured rigidly to its outer end a switch-lever 61, said switch-lever being provided at its swinging end with an inwardly-projecting pin 62, which is adapted to engage one or the other of a pair of indentations 63. By adjusting the switch-lever to the upper position, as shown in Fig. 5, the trigger is adapted to act as an ordinary trigger, whereas by adjusting said switch-lever to the lower position (indicated in dotted lines in the same figure) the parts are thrown into a relation which will adapt the trigger to act as a repeater. 64 indicates a leaf-spring located beneath the catch 57 and adapted to force the catch-lip 65 thereof into engagement with the trigger. When the catch 57 is adjusted to its lower position, upon operating the trigger the forward section of the latter, by reason of a groove therein, passes by the catch-lip 65 until the shoulder 66 of a depression in the rear or lower section of the trigger comes into contact with said catch, when the latter is thrust forward, thereby rocking the sear upon its pivot and withdrawing the vertical shoulder thereof from its engagement with the firing-pin, thus releasing the latter and exploding a cartridge. When the catch 57 is adjusted to its upper position, as indicated in Figs. 3 and 4, upon operating the trigger the catch will be deflected laterally by the forward section of the trigger and will rest upon the upper end 67 of the rear section of the trigger until said rear section is released and acted upon by the spring 35, when the catch-lip 65 will drop in between the two trigger-sections, and when the trigger is again operated the rear section thereof will engage the catch 57 and force the same forward for withdrawing the sear from its engagement with the firing-pin. The latter arrangement is where the trigger is used as an ordinary trigger.

Under either of the adjustments last above described it will be observed that as the trigger is operated and the reciprocating bolt thrust forward the rear section of the trigger, or, more accurately speaking, the upwardly-extending arm of said section and the downwardly-extending spring-actuated locking-brace, will by their peculiar arrangement and the relative location of their pivots and their common point of contact beyond the dead-center or engagement form an arch or throw their point of contact in advance of a line drawn through their pivots, thus forming a thorough and effective brace for upholding the rear end of the locking-block and rendering it impossible to throw said locking-block downward by the concussion from an exploding cartridge.

68 designates the cartridge-stop, which consists of a forwardly-extending arm located in the base of the frame of the gun and provided with an enlarged rear end having an

inclined slot 69 and also a longitudinally-extending slot 70, a fixed securing-screw 71 being passed through the slot 70 and also through the lower end of an actuating-lever 72, and thence into the frame of the gun. The actuating-lever 72 is provided with a pin 73, which engages the inclined slot 69 in the cartridge-stop for the purpose of moving said stop in a forward and backward direction, the object being to thrust the adjacent cartridge at the mouth of the magazine slightly within the magazine and out of the path of the vertically-moving cartridge-carrier, thereby relieving said carrier from the pressure of the cartridges and enabling the same to move freely up and down within the well. As the cartridge-stop is drawn backward by the operation of the lever 72 the pin 73 on said lever operates against the base of said inclined slot 69, and thereby serves to depress the cartridge-stop against the action of a flat spring 74 or into the position indicated in Fig. 4. The upward movement of the cartridge-stop is limited by means of a pin or stop 75, projecting inwardly from the frame. The cartridge-stop 68 is further provided with an elbow 76, which, when said cartridge-stop is thrown forward into the position indicated in Fig. 3, rests upon a shoulder 77, formed by notching or slotting the safety-lug 78, as best illustrated in Fig. 4. By means of this construction, when the cartridge-stop is thrown upward and forward, as described, the cartridge at the mouth of the magazine will be forced out of the path of the carrier, and by reason of the elbow 76 resting upon the shoulder 77 the accidental displacement or throwing down of the cartridge-stop will be effectually prevented. The upper end of the lever for actuating the cartridge-stop is formed with a vertical shoulder 79 and with an inclined shoulder 80 and also with a rounded edge or portion 81, adapting said actuating-lever to be operated upon by one of the pendent lugs projecting from the bottom of the reciprocating bolt. The inclined edge 82 of said lug operates against the inclined edge or portion 80 of the lever 72 for the purpose of thrusting the cartridge-stop upward and forward, and while the cartridge-stop is acting to hold the cartridge, as above explained, the lower edge 83 of said lug rides upon the rounded edge or face of the lever 72. As the bolt 1 is thrust forward the vertical edge 84 of its lug operates against the vertical edge or lip 79 of the lever 72, thereby withdrawing and depressing the cartridge-stop and permitting a cartridge to escape into the carrier, which is moved into position to receive said cartridge at the same moment.

85 represents a stop, which is preferably in the form of a fixed pin attached to the frame of the gun and provided with a roller surrounding the same, against which the downwardly-extending lug 51 at the front end of the locking-block 16 is adapted to operate for the purpose of starting the shell from the

firing-chamber by drawing slightly upon the reciprocating bolt in a backward direction, said bolt being engaged with the shell by means of the spring-catch 4, above described.

5 The flange of the shell being engaged between the said spring-catch 4 at the top and a lip or projection on the bolt at the bottom, when the shell is withdrawn from the firing-chamber and the point of the firing-pin withdrawn from engagement with said shell the latter is held in such position with relation to the bolt that it is adapted to be acted upon by the upward movement of the carrier for the purpose of ejecting the same from the gun.

15 The magazine (indicated at 86) is of the usual tubular form and is pivoted at its front end in any convenient manner beneath the barrel of the gun, as indicated at 87. The rear end of the magazine is thus left free and is adapted to be engaged with the frame of the gun and adjusted to either one of several positions. The rear end of the magazine moves vertically within a recess or socket between the halves of the frame of the gun and is provided with a longitudinally-movable bolt 88, mounted in a socket therein and adapted to engage one of several perforations or sockets 89 in the adjacent end of the gun-frame. The bolt 88 is actuated by means of a spring 89^a, but may be operated against the tension of said spring by means of a thumb-slide 90, working in a longitudinal recess 91 at the under side of the magazine. When the bolt 88 is engaged with the upper one of the perforations 89, the magazine is in position for delivering the cartridges to the carrier. When the bolt 88 is in engagement with the lower perforation 89, the magazine is in such position that the cartridges rest against the safety-lug 78, under which adjustment the gun may be handled and exhibited and the operation thereof demonstrated with perfect safety. In order to charge the magazine, the latter is moved into the position shown in Fig. 5, in which position it is supported by means of the pin 92, attached to the rear end of the magazine and projecting therefrom into a vertically-extending slot 93 in the adjacent end of the frame of the gun, where it rests upon a suitable supporting-spring 94, as shown. The base of the frame of the gun is hollowed out, as indicated at 95, for permitting the cartridges to be inserted one by one into the mouth of the magazine, the pin 92 and spring 94 operating as each cartridge is inserted to elevate the rear end of the magazine sufficiently for the last cartridge inserted to be engaged by the adjacent lower edge of the gun and prevented thereby from escaping. In this way the magazine is filled, after which it may be moved to its normal position. (Indicated in Figs. 1, 2, and 3.)

By the construction above described the gun is adapted to be used either with an ordinary trigger or as a repeater. The mechanism is perfectly reliable and positive in action, thus making the gun especially valuable

for very rapid firing. By reason of the novel and superior manner in which the reciprocating bolt is locked and braced the gun is peculiarly adapted to the use of dynamite cartridges.

It will be apparent that various changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. In a firearm, a trigger comprising two sections connected by a knuckle-joint and fulcrumed on a common pivot, said sections each having a rigid arm or extension working within the frame of the gun and provided with suitable stops and shoulders which render one section capable of movement relatively to the other section and at the same time capable of operating said other section, one of said sections being connected with and adapted to operate the locking-block, and the remaining section being adapted to actuate the firing mechanism, for the purpose and substantially as described.

2. In a firearm, a trigger comprising two separate sections connected by a knuckle-joint and fulcrumed on a common pivot within the frame of the gun so as to be capable of independent movement, suitable stops and shoulders upon each of said sections adapted to coöperate for enabling one section to control the other section, and a spring interposed between said sections for holding the same apart upon one side of their pivotal connection, said spring being seated in pockets in the adjacent faces of said sections, one of said sections being connected with and adapted to operate the locking-block, and the remaining section being adapted to actuate the firing mechanism, substantially as and for the purpose described.

3. In a firearm, the combination with the sear and its catch, of a trigger comprising two independently-movable sections having a common pivotal connection and provided with suitable stops, by means of which one of said sections may be controlled and operated by the other section, arms extending upwardly from said trigger-sections and provided with depressions or recesses at one side adapted to receive the catch on the sear, and a shoulder on the rear trigger-section for engaging the catch of the sear for the purpose of withdrawing said sear from its engagement with the plunger-pin, substantially as described.

4. In a firearm, the combination with the sear and its catch, of a trigger comprising two independently-movable sections having a common pivotal connection with each other and with the frame of the gun and provided with stops which coöperate to enable one of said sections to control and operate the other section, an upwardly-extending arm on the forward trigger-section having a rounded face

for adapting the catch on the sear to ride over said arm, and a corresponding arm on the rear trigger-section having a shoulder for engaging the catch of the sear, substantially in the manner and for the purpose described.

5. In a firearm, a trigger comprising two sections having a common pivotal connection and independently movable and also provided with upwardly-extending arms, in combination with the recoil locking-block, a link interposed between one of said trigger-sections and the locking-block, and a locking-brace interposed between the other trigger-section and said locking-block, in such manner as to form an arch to prevent the locking-block from being thrown down by the recoil, substantially as specified.

6. In a firearm, a trigger made in two sections having a common pivotal connection with each other and with the frame of the gun and capable of movement independently of each other, inwardly-projecting arms on said trigger-section, and a spring interposed between said arms for holding the same normally apart, in combination with the recoil locking-block, a link interposed between one of the trigger-arms and the locking-block, a locking-brace interposed between said locking-block and the arm of the rear trigger-section, and means for holding said locking-brace normally in engagement with said arm, for the purpose of forming an arch to guard against the depression of the locking-block, substantially as specified.

7. In a firearm, a trigger comprising two independently-movable sections having a common pivotal connection with each other and with the frame of the gun and provided with inwardly-extending arms, stops for limiting the movements of the trigger-sections relatively to each other, and a spring for holding the inwardly-projecting arms thereof normally apart, in combination with the locking-block, a link interposed between one of the trigger-sections and the locking-block, and a spring-actuated locking-brace interposed between said locking-block and the other trigger-section, the pivots of the trigger and the locking-brace and the point of engagement between said trigger and locking-brace being arranged in a manner adapting said parts to form an arch beneath the locking-block whereby the latter will be prevented from being thrown down by concussion, substantially as described.

8. In a firearm, a trigger comprising two sections independently movable and having a common pivotal connection, in combination with the locking-block, a link interposed between the forward trigger-section and said locking-block, a restoring-spring, a pivoted link interposed between said spring and the forward trigger-section, the pivots of said trigger-section and at each end of the link being arranged in such relation that when the forward trigger-section passes beyond a certain point in its forward movement said spring

will serve to assist the same in such movement, for the purpose specified.

9. In a firearm, the combination with the reciprocating bolt provided with an internally-arranged shoulder, of a shouldered plunger mounted within said bolt and movable longitudinally and also provided with a recess in its rear end, the plunger-pin passing through the base of said recess and also operating through a longitudinal slot in the bolt, in combination with an actuating-spring interposed between said plunger-pin and a pin or stop secured in the rear end of the bolt, substantially as described.

10. In a firearm, a longitudinally-reciprocating bolt reduced in diameter at its front end to form an internal shoulder and provided with a guiding-pin at its rear end working in oppositely-disposed grooves in the frame of the gun, in combination with a firing-pin mounted to reciprocate within said bolt and provided with a socket or recess in its rear end, an actuating-spring arranged within said socket or recess and supported at its rear end by the guiding-pin of the reciprocating bolt, and the plunger-pin operating through a slot in said bolt, substantially as specified.

11. In a firearm, a reciprocating bolt provided with an aperture in the bottom wall thereof, and a spring-actuated firing-pin mounted to reciprocate therein and provided with a shoulder on its under side, in combination with the locking-block pivotally connected with said reciprocating bolt and provided with a lug extending through the aperture in the bottom of said reciprocating bolt, said lug being adapted to engage the shoulder of the firing-pin for the purpose of withdrawing the point of the latter out of engagement with a cartridge-shell preparatory to the ejection of said shell from the gun a depending lug on the locking-block and a fixed pin on the gun-frame for assisting in the withdrawal of the firing-pin, substantially as described.

12. In a firearm, a reciprocating bolt provided with means for engaging the flange of a cartridge-shell and having also the usual spring-actuated plunger or firing-pin, and provided with an aperture or opening in its under side, in combination with the locking-block pivotally connected with said bolt and provided with a downwardly-extending lug or projection, and a fixed stop or roller in connection with which said lug or projection on the locking-block is adapted to operate for the purpose of starting a cartridge-shell from the firing-chamber, substantially as described.

13. In a firearm, the combination with the trigger and with the firing-pin, of the sear, a catch jointed thereto and arranged in the path of the trigger, a crank-arm for adjusting the position of said catch, and a switch-lever arranged upon the exterior of the frame of the gun for operating said crank-arm, substantially as described.

14. In a firearm, the combination with the trigger and firing-pin, of the sear, a catch

jointed thereto, a crank-arm having a bifurcated or forked end between which said catches, a transverse shaft upon which said arm is mounted extending through the side wall of the gun-frame, and a switch-lever mounted upon said shaft and located upon the exterior of the gun-frame, substantially as specified.

15. In a firearm, the combination with the trigger and firing-pin, of the sear, a catch jointed thereto, a crank-arm connected with said catch for operating the same, a spring for throwing said catch into engagement with the trigger, and a switch-lever for operating said crank-arm and adjusting the position of the catch for the purpose and substantially as described.

16. In a firearm, a longitudinally-movable and depressible cartridge-stop located in the base of the carrier-well and adapted to be moved into and out of the path of the cartridges in the magazine, and to force the column of cartridges forward in combination with an actuating-lever connected therewith for operating said cartridge-stop, and a lug on the reciprocating bolt for operating said actuating-lever, substantially in the manner described.

17. In a firearm, a cartridge-stop provided at its front end with an upwardly-extending finger for engaging the adjacent cartridge in the magazine and with an elbow adapted to rest upon a horizontal shoulder in the safety-lug, in combination with an actuating-lever provided with a pin operating in a slot in said cartridge-stop, whereby the latter is thrown upward at its forward end into engagement with the cartridge and the horizontal shoulder and securely locked against displacement until withdrawn by its actuating-lever, substantially as described.

18. In a firearm, a cartridge-stop having an upward and a longitudinal movement adapting it to engage a cartridge at the mouth of the magazine and to force the same inward out of the path of the carrier, said cartridge-stop having its rear end enlarged and slotted, a stationary pin passing through one of the slots in the cartridge-stop and into the frame of the gun, and an actuating-lever provided with a pin operating in an inclined slot in the cartridge-stop for imparting the movement above described thereto, all arranged and adapted to operate as specified.

19. In a firearm, a cartridge-stop capable of both vertical and longitudinal movement and adapted to be moved into engagement with a cartridge in the magazine for the purpose of removing said cartridge out of the path of the cartridge-carrier, in combination with an actuating-lever connected with said cartridge-stop and provided with oppositely-disposed shoulders adapted to be operated upon by a

downwardly-projecting lug on the reciprocating bolt, said lug being correspondingly shouldered and adapted to vibrate the cartridge-stop-actuating lever in its movements back and forth, substantially as described.

20. A cartridge-stop capable of both vertical and longitudinal movement and adapted to remove a cartridge from the mouth of the magazine for the purpose of carrying the same out of the path in which the cartridge-carrier travels, in combination with an actuating-lever for said cartridge-stop, said actuating-lever being provided with shoulders against which a correspondingly-shouldered lug on the reciprocating bolt is adapted to operate and also provided with an additional shoulder or rounded portion upon which said lug is adapted to ride in its reciprocating movement for the purpose of holding the cartridge-stop in engagement with the cartridge at the mouth of the magazine, and a spring located beneath the cartridge-stop and bearing thereunder for the purpose of assisting the upward movement of said cartridge-stop, substantially as described.

21. In a firearm, a magazine pivoted at its forward end beneath the barrel and adapted to swing downward and be charged at the rear swinging end thereof, in combination with a sliding catch or bolt for engaging the rear swinging end of the magazine with the frame of the firearm, and a spring arranged within a vertical recess in the gun-frame for supporting the rear end of the magazine with relation to the frame of the firearm while said magazine is being charged with cartridges, said spring serving to support the mouth of the magazine partially over or in line with the forward lower corner or edge of the frame and adapting the latter to serve as a stop for preventing the escape of the cartridges as they are inserted into the mouth of the magazine, substantially as described.

22. In a firearm, a magazine pivoted at its forward end to the barrel and adapted to be charged at its rear swinging end, means for supporting the rear swinging end of the magazine with relation to the frame of the firearm, a sliding catch or bolt carried by said magazine, and two or more sockets in said frame adapted to receive said catch or bolt, whereby the magazine may be adjusted into any one of several positions, substantially as and for the purpose specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ROBERT DINSMORE.

Witnesses:

JOHN H. SIGGERS,
HAROLD H. SIMMS.