

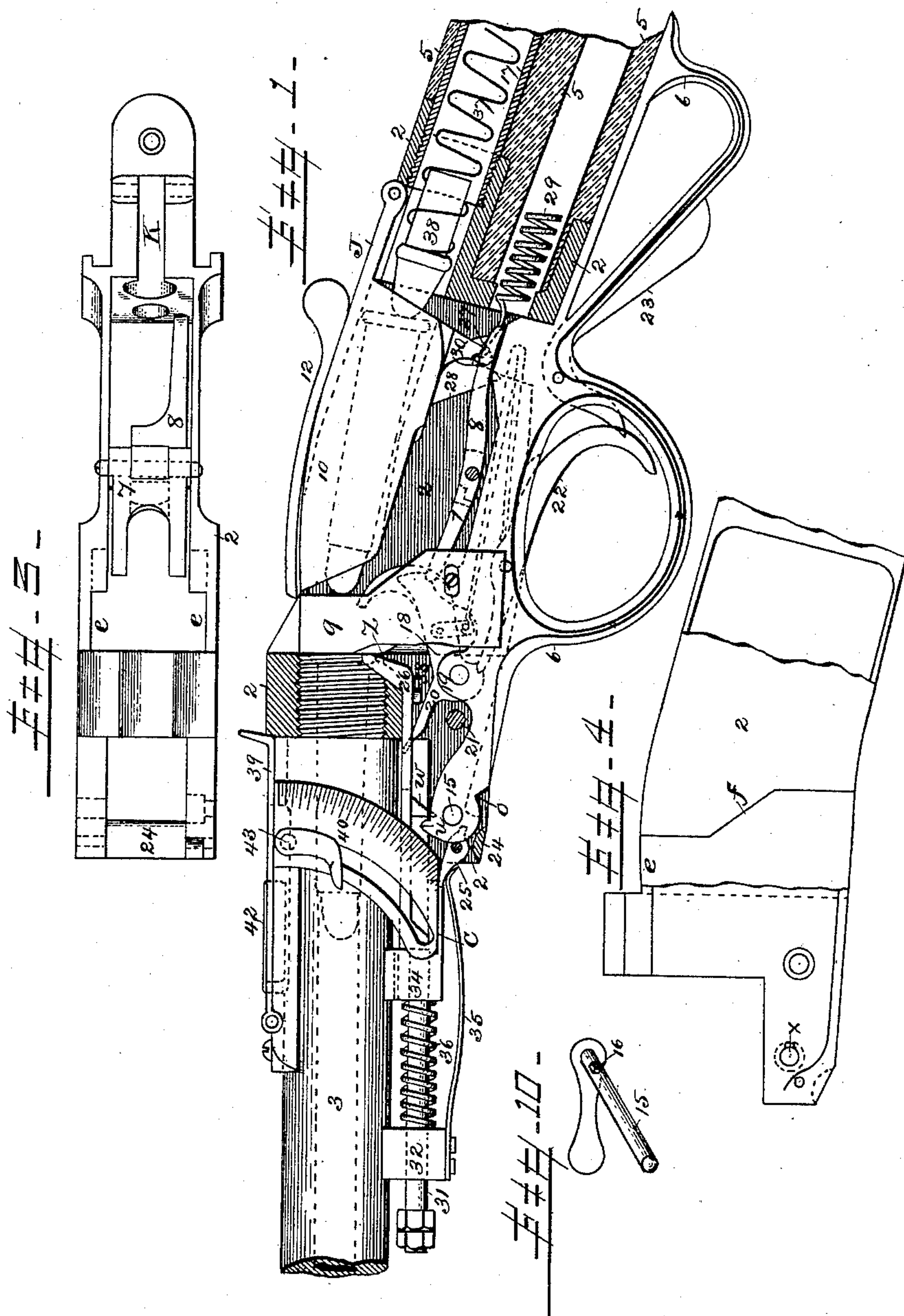
(No Model.)

2 Sheets—Sheet 1.

J. H. BROWN.
MAGAZINE FIRE ARM.

No. 430,061.

Patented June 10, 1890.



Witnesses
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Albert B. Blackwood

Inventor
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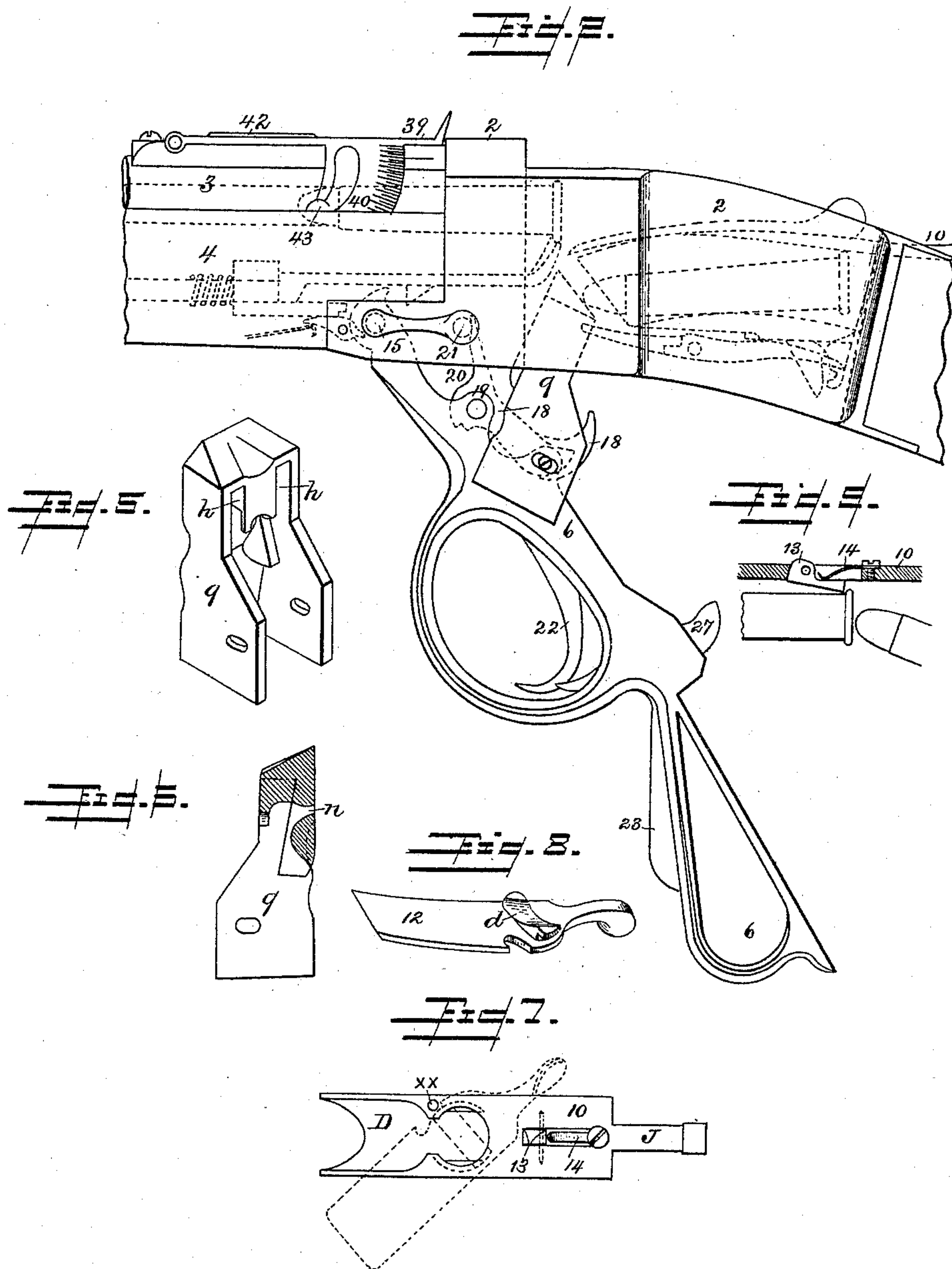
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UNITED STATES PATENT OFFICE.

JOHN H. BROWN, OF NEW YORK, N. Y.

MAGAZINE FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 430,061, dated June 10, 1890.

Application filed March 3, 1890. Serial No. 342,399. (No model.) Patented in France January 2, 1888, No. 187,946; in England January 4, 1888, No. 141; in Belgium January 4, 1888, No. 80,174; in Austria-Hungary May 27, 1888, No. 1,555 and No. 38, and in Italy June 13, 1888, XLVI, 383.

To all whom it may concern:

Be it known that I, JOHN H. BROWN, a citizen of the United States, residing at the city, county, and State of New York, have invented
5 a new and useful Improvement in Magazine Fire-Arms, (for which I have obtained a patent in Great Britain, dated January 4, 1888, No. 141; in France January 2, 1888, No. 187,946; in Belgium January 4, 1888, No. 80,174; in Austria-Hungary May 27, 1888, No. 1,555 and No. 38, and in Italy June 13, 1888, No. 383, Vol. XLVI,) of which the following is a full, clear, and exact description.

This invention relates to magazine fire-
15 arms, and pertains to arms of that class which are constructed to be used as single loaders or as repeating-arms at pleasure; and the invention consists in the peculiar construction and arrangement of various parts of the arm,
20 all as hereinafter fully described, and pointed out in the claims.

In the drawings forming part of this specification, Figure 1 is a side elevation, partly in section, of the frame of a magazine fire-arm
25 and portions of the barrel and stock thereof embodying my invention, the operative mechanism of the arm in said figure being represented in the position occupied thereby when the gun is closed and loaded and the hammer
30 cocked. Fig. 2 is also a side elevation of the frame and portions of the barrel and stock of the arm, but showing the guard-lever swung away from the latter to open the arm sufficiently to eject an empty shell and bring the
35 parts to position to receive cartridges from the hand, as in single loading, said figure showing the positions of various parts in dotted lines, all of which are hereinafter fully described. Fig. 3 is a plan view of the frame
40 of the arm and of two levers, constituting connections between the breech-block and cartridge-carrier, which are hung on a common pivot in said frame. Fig. 4 is a side elevation of the front end and the central part of
45 said frame, one side thereof being broken away, disclosing one of the inner walls thereof, the rear end of the frame being shown broken off. Fig. 5 is a perspective view of the breech-block, and Fig. 6 is a central

vertical section of the same. Fig. 7 is a 50 plan view of the cartridge-carrier, showing thereon in dotted lines the position of the cover thereof when the carrier is open to permit cartridges to be inserted therein and pushed through it in order to load the maga- 55 zine. Fig. 8 is a perspective view of the cover of the cartridge-carrier, its under side being shown uppermost. Fig. 9 is a longitudinal section of a portion of the upper side of the cartridge-carrier, showing in side eleva- 60 tion a pivoted cartridge-stop and its spring. Fig. 10 is a perspective view of the pivot-pin of the guard-lever.

In the drawings, 2 is the frame of the arm, into the front end of which the rear end of 65 the barrel 3 is screwed in the usual way. The fore-arm 4 of the stock is secured under the barrel by the engagement of its rear end with the adjoining end of the frame, and by any well-known fastening devices. The butt 70 5 is secured to the rear end of the frame by the usual strap on the latter and a screw or screws passing through the strap into the butt. An additional means for securing the butt to the frame is afforded by the magazine-tube 75 17, one end of which is screwed or otherwise secured to the rear end of the frame, said tube extending rearwardly nearly to the butt-plate and having a nut thereon (not shown in the drawings) within the butt which engages with 80 the latter and draws it endwise toward or against the end of the frame.

The construction, generally, of the within-described arm embodies a magazine-tube in the butt of the arm to receive a certain num- 85 ber of cartridges, a cartridge-ejecting spring within said tube having a pusher connected to one end to move the cartridges into the cartridge-carrier and through the latter into the barrel, a pivoted cartridge-carrier located in 90 the frame between the end of the magazine-tube and the rear end of the barrel, a guard-lever pivoted by one end under the frame of the arm and having attached thereto the entire lock mechanism, a breech-block having 95 a pivotal connection with the guard-lever and operating between the cartridge-carrier and the rear end of the barrel, and a cartridge-

shell ejector secured to the under side of the barrel. The said arm constructed as below described, owing to the direct action of the mechanism which conveys the cartridges from the magazine to the cartridge-carrier, and to the action of the breech-block as the cartridge-stop when firing the same as a repeater, is capable of using cartridges of varying lengths.

The guard-lever 6 is pivoted to the under side of the frame 2 of the arm by a pin 15, (see Fig. 10,) which passes through the lower part of the forward end of the frame, and has a stud 16 thereon, which passes through a slot x at one side of the pin-hole in the frame (see Fig. 4) and engages with the innerside of the frame at that point when the pin is turned by the handle thereof after being put into the frame, and thereby the pin is locked in the frame. By turning the pin back so that said stud thereon corresponds in position with said slot x in the frame the pin may be withdrawn, thereby conveniently disconnecting the guard-lever and the lock mechanism from the frame. This feature of construction enables one in case of emergency to quickly disable the arm without the use of tools.

The hammer 18 is hung between two cheek-pieces 19 on the inner side of the guard-lever on a pivot-pin passing through said cheek-pieces and the lower end of the hammer, the latter having thereon an arm 20, which extends toward the forward end of the frame and over a bar 21, which extends transversely between the sides of the frame under the barrel.

The sear-notch is formed in the hub of the hammer, as shown in dotted lines in Figs. 1 and 2, and the nose of the hammer is constructed to form of itself the firing-pin.

The mainspring, whose position on the inner side of the guard-lever is indicated in dotted lines in Fig. 1, has its short arm bearing on the upper side of the trigger 22, and its long arm is connected to the rear side of the hammer by the usual stirrup-connection. By the above-described arrangement the mainspring serves both as such and as a trigger-spring.

A safety trigger-lever 23 is pivoted in the guard-lever 6 at the rear of the trigger, having one end engaging in a notch in the latter, whereby the trigger is retained in engagement with the sear-notch in the hammer when the latter is in a cocked position, as shown in Fig. 1. The said safety-lever 23 serves to prevent the accidental operation of the hammer and the discharge of the arm until it is properly taken in hand for that purpose, under which conditions certain of the fingers of the hand are brought against the long arm of the lever 23 at the same time that the finger engages with the trigger 22, and thereby said lever 23 is at the proper time disengaged from the trigger to allow the arm to be fired.

The guard-lever 6 has a notch o transversely across the under side thereof just back of its

pivot 15, which engages with the edge of a bar 24, across the forward end of the frame 2, when said lever is swung downward to its greatest limit, for the purpose of operating the repeating mechanism of the arm, as below described, said bar thereby serving as a stop for the guard-lever. The guard-lever has a slot in its pivoted end in a plane with the adjoining sides of the frame 2, in which slot an arm on the rear end of the ejector-trigger 25 extends, as shown in Fig. 1. A projection v on the end of the guard-lever projects toward the under side of the barrel 3, and is adapted to engage with a downhanging arm w on the under side of the ejector 26, to aid in operating the ejector, as hereinbelow described. An arm 27 on the guard-lever 6 is adapted to engage with a downhanging arm 28 on the under side of the cartridge-carrier 10, as shown in Fig. 1, the engagement of said arm 27 with the arm 28 serving to retain the guard-lever in the position under the arm shown in said figure, and the engagement of said two arms one with the other also serves to cause the cartridge-carrier 10 to be held up to the position shown in Fig. 1, against the action of the spring 29, located in a chamber in the butt, one end of which is attached to the latter, its opposite end being connected to an arm 30 on the under side of the cartridge-carrier. Only a portion of said spring is shown in the drawings.

The ejector 26 consists of a flat metallic bar, on the under side of which is the aforesaid arm w , and it has a cylindrical tail-piece 31, extending toward the muzzle of the barrel and passing through a stud 32, which is rigidly fixed to the under side of the barrel 3, a nut or nuts being placed on the end of said tail-piece, which engage with said stud when the ejector moves rearward, thereby governing said movement of the latter. The rear end of the ejector passes under that part of the frame 2 into which the barrel is screwed, and the nose z of the ejector extends upwardly, as shown, and is let into a part of the frame and under the side of the barrel, as in Fig. 1, so that when it is retired against the barrel the outer side of said nose is in a plane with the end of the latter. An inwardly-projecting stud 33 is fixed on each of the inner opposite sides of the frame and projects under the end of the ejector, the latter resting and moving on said stud, and being thereby held up to its position relative to the under side of the barrel, thereby being prevented from springing out of place when forced against the rim of the cartridge to eject it from the barrel. An ejector-hammer 34 is placed on the cylindrical tail-piece 31 of the ejector at the junction of said tail-piece and the aforesaid flat portion of the ejector, said hammer being free to be moved longitudinally on said tail-piece away from and toward the abutment which is furnished by the end of the aforesaid flat-bar portion of the ejector. A lip c on said ejector-hammer extends to-

ward the adjoining end of the frame 2 of the arm, and the end of said lip is adapted to be engaged by the edge of the aforesaid ejector-trigger 25. The said ejector-trigger 25 is pivoted between the sides of the front end of the frame 2, just forward of the end of the guard-lever 6, as shown. A spring 35 is secured by one end to said stud 32 under the barrel, and its opposite end engages with the under side of said ejector-trigger, holding the outer end of the latter in engagement with the end of said hammer 34. A spring 36 is placed on the said tail-piece of the ejector between the stud 32 and the hammer 34. The end of the lip *c* on said hammer 34, with which said trigger 25 engages, has a notch therein running transversely across the end of said lip to receive the end or edge of said trigger, said notch being more clearly shown in the dotted-line representation of said hammer in Fig. 2, where it is shown disengaged from the trigger.

The operation of the above-described ejector mechanism, in conjunction with the guard-lever 6 and the breech-block 9, is as follows: Fig. 1 shows in dotted lines the position of a cartridge in the barrel 3 after the arm is loaded, the rim of said cartridge engaging with the nose *z* of the ejector and the ejector parts all in the positions which they occupy when the arm is discharged. After firing the arm the guard-lever 6 is swung downward to the position shown in Fig. 2, and in swinging said lever to that position the breech-block 9 follows the guard-lever, as shown in Fig. 2, clearing the end of the barrel and taking such a position that the ejector is free to act. In swinging the guard-lever downward, as aforesaid, the arm *v* thereon first encounters or engages with the arm *w* on the under side of the ejector, thereby causing the latter to move away from the end of the barrel and by a powerful lever action to start the cartridge from its chamber in the latter. A continued movement of the guard-lever brings the said arm on the trigger 25 into engagement with the base of the slot in the end of said lever in which said arm projects, and thereby said trigger is given a vibratory motion, whereby the edge thereof, which is engaged with the end of the lip *c* on the hammer 34, is disengaged from the end of said lip and caused to swing under the latter, leaving said hammer free to be thrown suddenly by the action of the spring 36 against said abutment end of the flat portion of the ejector, thereby driving the latter suddenly rearward to the position shown in dotted lines in Fig. 2, and causing the cartridge-shell to be thrown rearward against the top of the inclined cartridge-carrier and be thereby directed out of and away from the frame of the arm. The cartridge-shell when ejected forcibly from the barrel, as aforesaid, in its rearward flight inclines to strike one side of the upwardly-projecting finger-piece on the end of the cartridge-carrier cover 12, and is thereby so di-

rected laterally as to throw it away from the person holding the arm. A cartridge being again placed in the barrel, the guard-lever 6 is brought gradually to the position shown in Fig. 1, thereby moving the breech-block 9 up behind the end of the ejector and causing the latter to move back under the barrel to the position shown in Fig. 1, and in so doing the hammer 34 is caused to move in the same direction, compressing the spring 36 meanwhile between it and the stud 32, and bringing the end of the lip *c* on the hammer to such position that the trigger 25 will re-engage therewith, as shown in said Fig. 1. The breech-block 9 (illustrated in perspective and in sectional views in Figs. 5 and 6) is pivotally connected to the guard-lever 6 by screws passing through slots in its side, as shown, (the hammer occupying a position within or between the sides of said block, as shown,) whereby the breech-block is given or permitted a free oscillating motion on said lever, and whereby said block is given a reciprocating movement between the sides of the frame 2, directly back of the end of the barrel, when said lever is operated, as above described. Said breech-block is adapted to form, in conjunction with the frame in which it operates, as aforesaid, a solid unyielding breech at the rear of the barrel and of the cartridge contained therein, said block having during the latter part of its upward movement back of the barrel to close the same a motion at right angles to the end of the barrel, and it at that time moves within grooves *e* in the inner opposite sides of the frame 2, (see Figs. 3 and 4,) and the edges of said grooves are so engaged with the rear side of the breech-block that the latter cannot yield in any degree to the force of the charge so long as the frame remains intact. The rear edges of said grooves *e* in the frame are inclined rearwardly at *f*, (see Fig. 4,) whereby said grooves are given a wider form near the lower edge of the frame to accommodate said groove to the form of the sides of the breech-block, as shown in Figs. 5 and 6, the sides of said breech-block, when the latter is in the position shown in Fig. 1, substantially filling said grooves, and thereby the aforesaid rigid support is given to the breech-block when the parts are in firing position in the arm. The upper end of the breech-block is inclined rearwardly, or toward the end of the cartridge-carrier 10, to facilitate its action when lifted up against the end of said carrier to bring the latter to the position shown in Fig. 1. The breech-block is provided with the central perforation *n*, through which the nose of the hammer passes to strike the primer in the end of the cartridge when the arm is fired. Two slots *h* in the rear side of the breech-block, in which the two arms of the bifurcated lever 7 engage when the breech-block is carried to its extreme downward limit to operate the cartridge carrier, as below described, are formed

in said block, as shown in Fig. 5. The said lever 7 and the aforesaid lever 8 have a mutual engagement when the breech-block is moved downward, as just described, whereby the free end of lever 8 is caused to swing against the under side of the cartridge-carrier 10 and swing the latter upward to bring a cartridge which it may contain into line with the bore of the barrel. This action of the levers 7 and 8 takes place when the arm is used as a repeating fire-arm. Fig. 2 shows in dotted lines the positions of the breech-block when it is about to engage with and swing said levers 7 and 8 and the position of the cartridge-carrier when about to be acted on by said levers, as above described. The requisite extent of the vibratory movement, as shown in Fig. 2, of the guard-lever to load the arm for firing singly is indicated to the operator by the resistance caused by the engagement of lever 7 with the breech-block at the extent of said movement, said lever acting against the tension of spring 29. After the arm has been discharged the nose of the hammer is in a position behind the breech-block or within the same, to which it is carried by the action of the mainspring when the trigger is pulled, and when the hammer occupies said position the under side of the arm 20 thereon is brought near to the upper side of the fixed pin 21 in the frame of the arm, and the hammer becomes cocked again when the guard-lever 6 is next swung downward by the engagement of said arm 20 with the pin 21, whereby the hammer is swung to a cocked position, so that the trigger can re-engage in its sear-notch, as before. When the hammer occupies a cocked position, as shown in Fig. 1, the extremity of arm 20 is carried a little higher than the underside of the ejector, and to accommodate said movement of the hammer a perforation is made in the ejector, into which the end of said arm may enter when said hammer is cocked. The said cartridge-carrier 10 consists of a hollow block or cartridge-receptacle of the form shown in Fig. 1 fitted between the inner sides of the frame 2, and having a strap J, extending rearwardly on the top of said frame, the extreme end of which is pivotally connected with the frame, a slot K being formed in the top of the latter under said strap to permit the cartridge-carrier to swing on its pivot downward to the position shown in Fig. 2, or slightly lower, in operating the arm. As above described, the spring 29 serves to swing the free end of the cartridge-carrier downward; but when the arm is loaded said free end is held in an upward position by its engagement with the breech-block. Fig. 7 illustrates in plan view the outer side of the cartridge-carrier, an opening D being made therein to permit of the insertion of cartridges for loading the magazine. At the rear end of said opening D is a circular perforation in the top of the carrier having one side communicating with said opening, a screw-hole $x x$ being formed

near said circular opening. A cover 12 for said cartridge-carrier has a boss d on its under side, as shown in Fig. 8, on the ends of which are overhanging lips, as shown, which engage under the upper side of the cartridge-carrier and retain the cover thereon, said boss constituting a pivot-connection between said cover and the carrier. The said boss is concave, in order that it may present no obstacle to the movement of cartridges within the carrier. A screw is placed in the screw-hole $x x$ in the carrier at the border of said cover 12, as indicated in Fig. 7. When said cover is swung to the position shown in dotted lines in Fig. 7, it is stopped from further swinging movement by said screw, and when the cover is swung back into line with the carrier the end of the slot in the edge of said cover engages with said screw and stops the cover at a proper position. By removing said screw from the top of the cartridge-carrier the cover 12 may be swung sufficiently around thereon to bring the said boss d into a line with the opening on the top of the carrier, and then the cover may be removed therefrom. A cartridge-stop 13 is pivoted in a slot in the upper side of the cartridge-carrier, one end of which is capable of swinging downward by the action of a spring 14 and engaging with the rim of the cartridges when the cover 12 is swung open to insert cartridges in the magazine against the action of spring 37. Thus each cartridge as it is pushed into the carrier 10 and through the latter into the magazine has its rim caught by said stop and the cartridge is thus retained. When the cover 12 is shut over the opening D in the carrier, it swings against the upwardly-projecting end of the stop 13, thereby swinging the latter to a line with the inner side of the carrier and removing any obstacle to the free movement of the cartridges through the carrier, except the breech-block 9. Fig. 9 illustrates parts of two cartridges in said operative relation to the stop 13. The said slot K in the upper side of the frame 2 opens into a cylindrical passage in the frame, which communicates with said magazine-tube 17, and through which the cartridges pass when put into or ejected from the magazine. An ejecting-spring 37 is placed in said magazine-tube 17, to one end of which is attached a cartridge-pusher 38. Fig. 9 shows the rim of one cartridge engaged with the end of stop 13 in the manner described, and the end of another cartridge following the first one from the magazine. The sight 39 is of ordinary construction, excepting that it is pivoted by one end to its bed and has a bubble-glass or spirit-level 42 fixed therein and a quadrant or segment-shaped arm 40, having graduation-marks thereon, as shown in Fig. 1, said arm being slotted, and a binding-screw 43, having a finger-piece thereon for turning it, passes through said slot and screws into the side of said base. The construction and arrangement of said sight on the arm afford unusual advantages for firing the gun at excessive

elevations for the purpose of dropping the balls upon the enemy in warfare. By elevating the rear end of the sight to, say, one thousand yards, more or less, as may be indicated by said graduation-marks, and setting or holding the gun by the level it may be fired from the hip, or by resting the butt thereof on the ground, with the result above mentioned. The upturned rear end of the sight 39 is provided with the usual peek hole or notch common in rear sights.

The operation of my improvements in firing said arm as a single loader, whether the magazine be charged with cartridges or not, is as follows: It being understood that the parts occupy the positions shown in Fig. 1 before beginning to fire, excepting that the hammer is not cocked, in swinging the guard-lever downward the arm 27 thereon is disengaged from the arm 28 on the cartridge-carrier, the hammer becomes cocked by the engagement of its arm 20 on the cross bar or pin 21, the breech-block is moved downward, letting the forward end of the cartridge-carrier drop, thus exposing the rear end of the barrel, and the cartridge-ejecting mechanism is operated, as above described. The parts then occupy the positions indicated in full and in dotted lines in Fig. 2. A cartridge is then put into the barrel in the position shown in said last-named figure, with its rim engaged in the nose of the ejector. The guard-lever is then swung up, and the breech-block, following the guide of said grooves *e* in the frame, carries the forward end of the carrier 10 upward, engages with the end of the ejector and the cartridge, sliding the ejector to its place under the barrel, and forcing the cartridge to its place in its chamber, and setting the ejector mechanism, as above described, and re-engaging the said arms 27 and 28, when the lever is brought against the under side of the arm. The trigger is then pulled and the arm is fired, and the empty shell is ejected, as above described.

To fire the arm as a repeater, the magazine being charged, let it be supposed that the parts have been swung to the positions shown in Fig. 2 and that there is no cartridge in the barrel. The guard-lever is swung still farther downward, causing the breech-block to engage, as described, with the lever 7, thereby oscillating the latter and lever 8, and swinging the cartridge-carrier up into line with the bore of the barrel. The cartridge then in the carrier is driven into the barrel by the action of spring 37, the ball of the following cartridge resting against the head of the preceding one. The guard-lever is then swung up as before, and the breech-block and other operative parts of the gun are brought to the positions shown in Fig. 1, ready, after firing the arm, to have said operation repeated.

It is obvious that the above-described mechanism, which pertains to the magazine and

repeating features of this arm, has no necessary connection with the mechanism thereof which pertains to the single-loading features of the gun, and therefore the latter-named features of construction may be embodied in a fire-arm entirely independent of any repeating mechanism with the same advantages as they possess in the construction herein shown and described.

What I claim as my invention is—

1. The breech-block having slots through its sides transversely to its length, the guard-lever extending between the sides of the breech-block and having a pivotal connection with said block by screws passing through said slots, and the hammer pivoted to the guard-lever between the breech-block and the pivoted end of said lever and having its free end extending rearwardly between the sides of said block, combined and operating substantially as set forth.

2. The frame of the arm, the guard-lever pivotally hung to said frame, the hammer pivoted on said lever and having an arm thereon extending from its hub and capable of engaging with a bar 21, fixed in said frame in the path of the forward arm of the hammer, whereby the swinging of the guard-lever causes the hammer to turn on its pivot, the trigger also pivoted on said lever, and a main-spring engaging with said hammer, combined and operating substantially as set forth.

3. The guard-lever, the hammer pivoted on said lever, the trigger also pivoted on the guard-lever and having a sear engagement with the hammer, a main spring having an engagement with said hammer and trigger, thereby acting as a spring for both, and a safety-lever pivoted in said guard-lever at the rear of the trigger and having one end engaging in a notch at the rear end thereof, combined and operating substantially as set forth.

4. The ejector having a nose for engagement with the rim of a cartridge, and a cylindrical tail-piece 31, extending in a line with and through a fixed stud on said barrel, a hammer 34, capable of a longitudinal motion on said tail-piece, having a lip thereon extending rearwardly, and a spring on said tail-piece between said stud and hammer, combined with a trigger hung in the frame of the arm capable of engaging with said lip and with the end of the guard-lever, a spring to swing said trigger against said lip, and the guard-lever engaging with said ejector to move it longitudinally and with said trigger to vibrate it, substantially as set forth.

5. In combination, the ejector capable of a sliding movement under the barrel, the hammer 34, capable of moving longitudinally on the ejector, the spring 36, acting against said hammer, the trigger 25, having an arm thereon extending toward the guard-lever having an engagement with said hammer, the spring 35, having one end engaging with said trigger,

and the guard-lever having an engagement with the arm on said trigger, substantially as set forth.

6. The frame of the arm, the longitudinally-perforated cartridge-carrier pivotally connected by its rear end to said frame and capable of a vibratory motion between the sides of the frame, a spring connected to the under side of said carrier to swing its free end downward, combined with the guard-lever pivoted to said frame and the breech-block pivotally connected to said lever, whereby it is given a movement at right angles to the end of the barrel of the arm and engaging during its upward movement with the free end of the cartridge-carrier, substantially as set forth.

7. The cartridge-carrier pivoted by one end in the frame of the arm having the downhanging arm 28 thereon, the spring 29, connected to said carrier, and the guard-lever having the arm 27 thereon capable of engaging with the arm on said carrier when swung against said frame, substantially as set forth.

8. The frame of the arm, the cartridge-carrier pivotally connected by one end to said frame and capable of vibratory motion between the sides of the frame, the guard-lever having a pivotal connection with said frame, the breech-block pivotally connected to said lever and capable of a reciprocating movement in the frame, and two interengaging levers, as described, pivoted in said frame under said carrier, one of which engages with said block in its downward movement, thereby causing the second of said levers to swing in the reverse direction against said carrier to elevate the same, combined and operating substantially as set forth.

9. The frame of the arm, the cartridge-carrier pivotally connected by one end to said frame, two levers 7 and 8, having a common pivot-point between the sides of said frame and capable of engaging with each other in one direction, the breech-block having an engagement in its downward movement with said lever 7, whereby the end of lever 8 is swung in a reverse direction and against said carrier to operate the same, combined with the guard-lever having a pivotal connection with said frame and breech-block, substantially as set forth.

10. The cartridge-carrier having an opening through its upper side for the insertion of cartridges, combined with a stop 13, pivoted in said carrier, a spring to actuate said stop, and a cover for said carrier having a pivotal attachment therewith, as described, capable of a vibratory motion thereon, whereby said opening is opened and shut, and of engaging with one end of said stop when shut to throw the same out of action, substantially as set forth.

11. The cartridge-carrier having an opening D in its upper side and a circular opening therein communicating with said opening D, combined with the cover 12, having the boss *d* thereon, on the ends of which are lips capable of engaging with the borders of said circular opening in the carrier, substantially as set forth.

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