

No. 752,932.

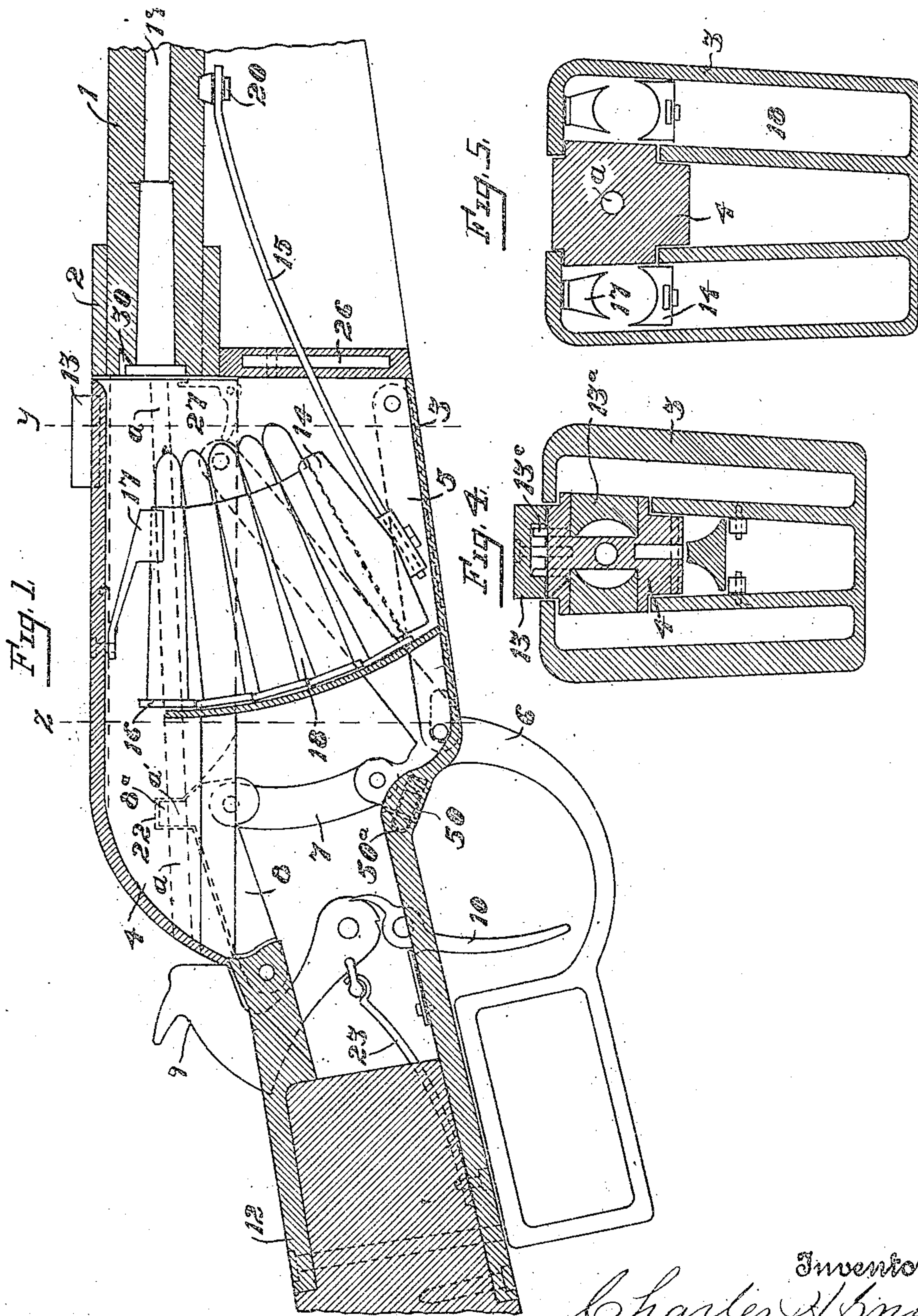
PATENTED FEB. 23, 1904.

O. H. SNOW.  
MAGAZINE GUN.

APPLICATION FILED FEB. 7, 1903.

NO MODEL.

3 SHEETS—SHEET 1.



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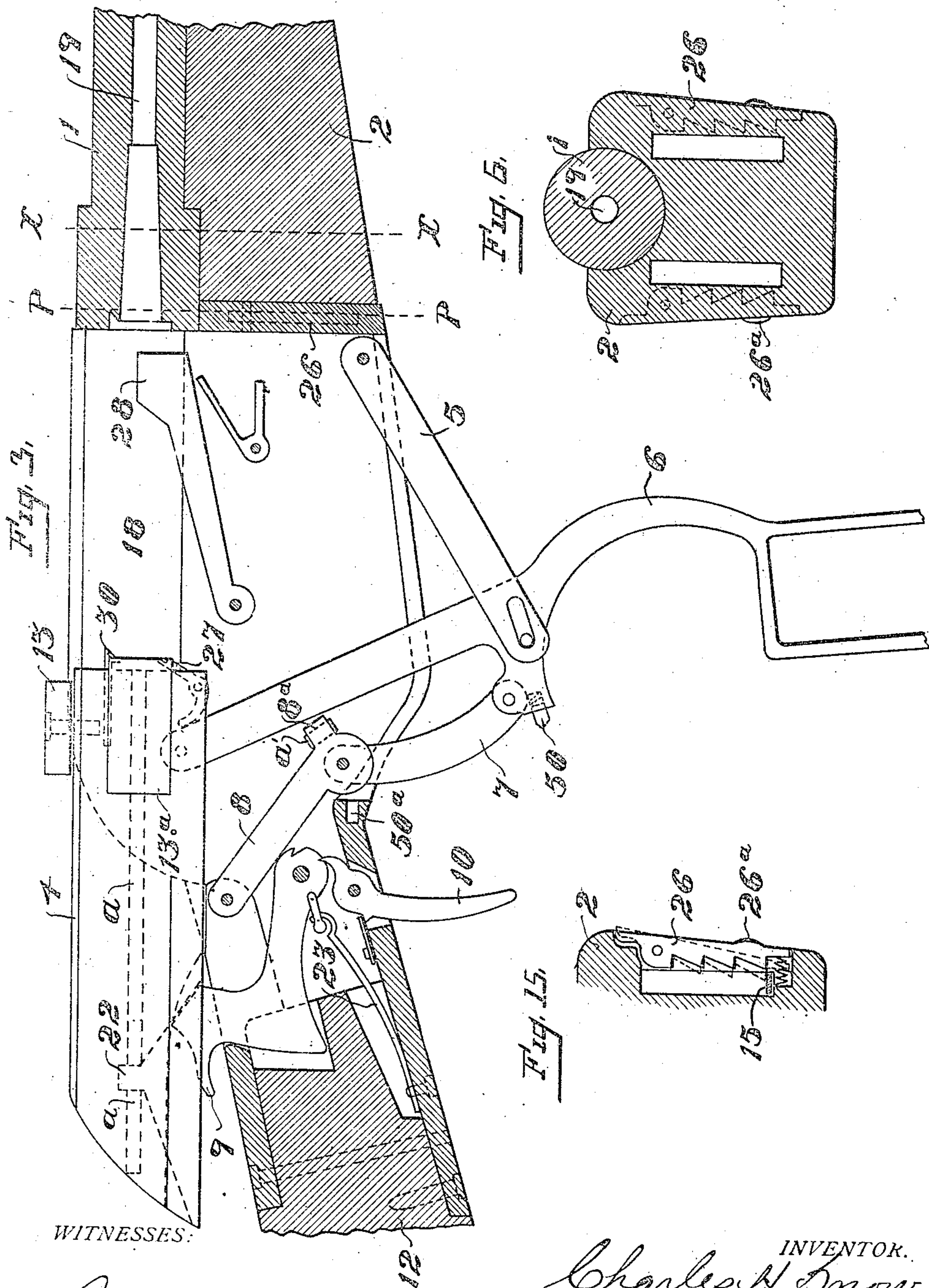
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3 SHEETS—SHEET 3.





## UNITED STATES PATENT OFFICE.

CHARLES H. SNOW, OF STOCKTON, CALIFORNIA.

## MAGAZINE-GUN.

SPECIFICATION forming part of Letters Patent No. 752,932, dated February 23, 1904.

Application filed February 7, 1903. Serial No. 142,254. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES H. SNOW, a citizen of the United States, residing at Stockton, county of San Joaquin, State of California, have invented an Improvement in Magazine-Guns; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to improvements in magazine-firearms.

It consists in a novel arrangement of a plurality of magazines for containing cartridges at the rear of the barrel of the gun, mechanism for reciprocating the breech-bolt, transferring the cartridges from the magazine to the barrel, and closing and locking the breech-bolt after said transfer.

It also comprises a device for cutting off the supply of cartridges from either or both magazines, means for charging the magazines, and details of construction, which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a longitudinal section on the line *r r* of Fig. 2, showing the breech connection closed and the cartridge in the right magazine. Fig. 2 is plan view, partly in horizontal section. Fig. 3 is a longitudinal section on the line *s s* of Fig. 2. Fig. 4 is a transverse section on line *y y* of Fig. 1, showing the breech-bolt between two magazines. Fig. 5 is a transverse section on line *z z* of Fig. 1. Fig. 6 is a transverse section on line *w w* of Fig. 3. Fig. 7 is a side elevation of breech-bolt. Fig. 8 is a top view of same. Fig. 9 is a side elevation of injector-plate. Fig. 10 is an end view of same. Fig. 11 is a bottom view of cam. Fig. 12 is a top view of same. Fig. 13 is a section of same. Fig. 14 is a side elevation of same. Fig. 15 is a sectional detail showing the movable rack 26.

As shown in the accompanying drawings, 1 is the barrel of the gun; 2, the "fore end," so called; 3, the magazine into which the cartridges 16 are placed, and 12 is the stock of the gun.

The magazine 3 is made with two side chambers and a central channel, above the upper part of which channel breech-bolt 4 is slidable, and within the lower part and behind the car-

tridge-chamber 18 the guard and operating-lever 6 is movable. The upper end of the lever 6 is pivoted to the breech-bolt 4 near its front, and an equalizing-link 5 is pivoted to the front lower part of the magazine, and the opposite end, which is slotted, as shown, is pivoted to the lever 6 at a point intermediate between its ends.

8 is a safety locking-bolt having its rear end strongly pivoted to the rear portion of the frame, and the front end is connected by a link 7 with the lever 6 just opposite to the connection with the pivot-pin of the link 5, as shown. The locking-bolt 8 has a projection 8", which when the breech is closed enters a slot or channel 22, made in the rear end portion of the breech-bolt 4, and this prevents the breech-bolt from being blown backwardly by any explosion or pressure from the front.

The slotted connection between the link 5 and the lever 6 allows the lever 6 when first moved to open the breech to pull down upon the link 7 and locking-bolt 8, so as to disengage the locking-bolt from the breech-block before the lever 6 commences to retract the breech-block. The pin which connects the lever 6 with the link 5 slides in the slot in the link during the first portion of the downward movement of the lever and until the locking-bolt is disengaged from the breech-bolt. After that, the pin in the lever 6 having moved to the front end of the slot in the link 5, the latter serves as a fulcrum about which the remainder of the downward movement of the lever is effected and the breech-bolt is retracted.

9 is the hammer of the gun, which is forced back against the tension of the mainspring 23 by the rearward movement of the breech-bolt 4, the lower part of which engages the head of the hammer, as shown, and when fully retracted it is engaged by the sear of the trigger 10.

The firing-pin is made in sections *a*, extending longitudinally through the breech-bolt 4 from the rear to the front end, and the rear end of this firing-pin is in line to be struck by the hammer when it falls, the front end being in such position as to strike and explode the fulminate of the cartridge when the latter is in



the barrel of the gun. The firing-pin channel is so located that it crosses the locking-recess 22 in the lower part of the breech-bolt, and when the safety-lock 8 is withdrawn from the breech-bolt by the opening of the breech mechanism there is no connection between the rear and front portions of the firing-pin, which are permanently located in the breech-bolt, thus presenting no danger of explosion by accidentally striking the rear end of the firing-pin. When the breech mechanism is closed and the locking-lug 8<sup>a</sup> of the lock-bolt 8 enters the slot or channel 22, it fills this channel, and the section *a'* of the firing-pin which passes through this locking-lug is then brought into line with the parts *a* of the firing-pin which are in the breech-bolt. Under these conditions the sections of the firing-pin are in line with each other, and when the hammer falls upon the rear end the effect of the blow is communicated through the sections to explode the cartridge.

The magazine is made, as previously described, with two cartridge-chambers 18, located upon opposite sides of the central channel, within which channel the lever 6 is adapted to swing, so that the cartridges are out of line with the axis of the barrel when in place.

At the bottom of each chamber is a carrier 14 and spring 15, upon which the cartridges are adapted to rest, and the tendency of this spring is to raise them upwardly, so that as fast as the upper one is removed from either chamber the remainder of the cartridges are raised, so that the upper one is constantly in position to be transferred to the barrel of the gun by the movement of the breech-action, and when thus transferred the cartridge-shell lies in a position with the projectile within the bore 19 of the gun. The spring 15 is secured at the front end by a bolt, as shown at 20, and upon its rear end is a cartridge-carrier 14, upon which the lowermost of the cartridges rest, the others standing, essentially, in a vertical plane above the same. The springs 15 are movable in vertical slots, as shown in transverse section. Upon the outer sides of these slots are movable racks 26, having teeth on their inner faces, and these are actuated by buttons 26<sup>a</sup>, which project slightly upon each side of the magazine, so that they may be pressed inwardly by the thumb and finger of the operator. This movement forces the toothed inner faces of the catches into line with the carrier-springs, so that as the cartridges are placed in the chambers and each one presses the next one down the carrier-springs will engage the rack-plates, and will thus be prevented from immediately forcing the cartridges out again. When the magazines are thus filled, the cartridge cut-off 13 may be turned so as to prevent any transfer of the cartridges from either of the chambers of the magazine to the barrel of the gun. Under these conditions single cartridges may be inserted whenever the

breech-bolt is retracted and impelled into the barrel by its forward movement. The tops of the magazine-chamber are closed, as shown in transverse section, and the intermediate central portion is normally closed by the closing of the breech-bolt. When the breech-bolt is retracted and the cut-off is turned so as to release the cartridges from one side of the magazine, they will be transferred into the barrel by each reciprocation of the breech-bolt. The cut-off consists of a turnable milled head or thumb-piece, and this carries an irregularly-shaped cam 13.

13<sup>a</sup> represents plates pivoted to the front of the breech-bolt and pressed outwardly by springs, as at 13<sup>b</sup>. Pins 13<sup>c</sup> project upwardly from the plates 13<sup>a</sup> and enter the groove of the cam. This groove is so shaped that by turning the cam to a certain position both plates 13<sup>a</sup> will be drawn inward, so as not to project from the sides of the breech-bolt, and when thus retained the bolt may be reciprocated without moving the cartridges from their respective magazine-chambers. By turning the cam a part of a revolution the pin 13<sup>c</sup> of one of the plates 13<sup>a</sup> moves into the wider curve of the cam-groove and the plate may be pressed outward by its spring 13<sup>b</sup>, so that the forward end of the plate will be projected into the corresponding magazine-chamber behind a cartridge when the breech-bolt is withdrawn, and when the bolt is moved forward the plate will engage the uppermost cartridge in the chamber and advance and transfer it to the barrel, no action taking place in the other magazine. When one receiver is exhausted, the cam may be turned a half-revolution, and this will release the plate 13<sup>a</sup> upon the side of the full magazine and retract the opposite one.

To load the arm, the cut-off 13 is set, as shown, to release 13<sup>a</sup>, (right.) 13<sup>a</sup> is spring-pressed, as shown, and as the breech-bolt is withdrawn 13<sup>a</sup> springs inward until the head of top cartridge is passed. Then it springs outward and engages in rear of head of cartridge and pushes it into the chamber in barrel. This can be released until the right magazine is empty. Then by turning 13 half-round 13<sup>a</sup> (left) is released and 13<sup>a</sup> (right) is closed, and by turning one quarter-round 13<sup>a</sup> (right) and 13<sup>a</sup> (left) are closed and the gun can be used as a single loader. To fill the magazine, the breech-bolt is withdrawn and the carrier 14 pushed down by the finger, the other hand pressing in one or both knobs on the toothed racks at the front of the receiver. These racks engage the carrier-springs and keep them from pushing upward while filling the magazine. A slight pressure on each cartridge will depress these springs, and they can be released when the magazines are full by withdrawing pressure from the knobs of the toothed racks. The tops of the magazines are closed, and the cartridges are prevented from rolling out into the magazine by the curved spring 17, which



fits over the top cartridge and which is raised as the cartridge is pressed from the magazine into the barrel.

The pieces 13<sup>a</sup> have a slight projection or bevel outward at *d* in front of the breech-bolt. They fit in suitable slots on each side of the rear of the cartridge-chamber. These projections are so beveled that when the parts 13<sup>a</sup> are projected outward they will stand straight across and properly engage the cartridges to move them forward.

At the rear of each magazine is a suitably-curved end against which the cartridges slide, and to keep them in line with the arc described by the carrier-spring the cartridge-heads slide in suitable grooves in the side walls of the magazines. This keeps them in line and prevents any jamming or wedging.

The extractor 30 is shaped approximately as shown in the drawings, and the front end is hook-shaped and adapted to engage the flange of the cartridge-head when the latter has been forced into the cartridge-chamber, and when the breech-bolt is again withdrawn this extractor acts to draw the cartridge out of the chamber.

The ejector is shown at 27 and is a spring. It is of bell-crank shape pivoted at the angle, with one arm extending under the lower edge of the cartridge-head, so that while the other is caught by the lever when opening the gun a tension is placed upon the spring, and this, in conjunction with the extractor, acts to throw the cartridge-shell upward and backward and out of the chamber.

The cartridges are guided from their chambers at each side by the convergently-curved front ends of the outer sides of the magazine, as at 3<sup>b</sup>, and by means of a centrally-pivoted spring-guide, as at 28, having an upwardly-projecting fin, the cartridges from either magazine are prevented from being forced too far toward the opposite side to enter the cartridge-chamber on that side of the gun.

The lever is held in place and prevented from falling downward when the gun is closed by the spring-pressed catch at 50, which fits in a suitable opening at 50<sup>a</sup>.

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

1. The combination with the barrel of a gun, of a plurality of vertically-disposed cartridge-magazines located upon opposite sides of the rear opening of the barrel, carrier-springs by which cartridges contained in said magazines are impelled upwardly, guides by which cartridges from either magazine are directed into the line of the barrel, a reciprocating breech-block, and actuating mechanism including plates pivoted upon the front of the breech-block and adapted to engage the uppermost cartridge whereby the cartridges are successively introduced into the barrel.

2. The combination with the barrel of a gun,

of a plurality of vertically-disposed cartridge-containing magazines upon opposite sides of the central slot, a guard-lever fulcrumed and movable within said slot, a breech-bolt reciprocating above the upper portion of said slot, and connections between it and the guard-lever whereby it is actuated, and laterally-movable plates pivotally mounted on the front of the breech-bolt, and means for projecting the plates beyond the plane of the sides of the bolt and into the path of the uppermost cartridges whereby the cartridges are successively engaged by the plates to be impelled into the barrel when the breech-bolt is actuated.

3. The combination with the barrel of a gun of a plurality of vertically-disposed cartridge-magazines located in rear of said barrel, carriers and springs by which the cartridges are impelled upwardly, a breech-bolt and spring-pressed plates carried at each side of the front end thereof, and guides by which the cartridges are successively directed into line with the barrel, a vertical channel through the central portion of the magazine, the breech-bolt slidable above said channel in line with the barrel, a guard-lever having its upper end pivoted to the breech-bolt, a link pivoted in the forward part of the channel and having its rear end loosely connected with the guard-lever whereby the movement of the latter reciprocates the breech-bolt.

4. The combination with the barrel of a gun, of a plurality of vertically-disposed cartridge-magazines upon opposite sides of the axis of the barrel, carrier-springs, and guides whereby the cartridges are directed into the barrel, a vertical channel between the cartridge-magazines and a breech-block slidable in line with the barrel above the magazine, and means including a pivoted plate upon the front end of the breech-bolt and means for projecting said plate outwardly in the path of the uppermost cartridge whereby said cartridge is forced into the barrel, a guard-lever having the upper end pivoted to the breech-block, a link pivoted in the front end of the channel and loosely connected with the guard-lever, a safety locking-bolt having one end pivoted to the frame and a link connecting the opposite end with the guard-lever, said locking-bolt having a projection and a corresponding recess in the breech-bolt with which said projection engages when the breech mechanism is closed.

5. A longitudinally-reciprocating breech-bolt axially in line with the barrel, a plurality of cartridge-magazines upon opposite sides, and at the rear of the barrel, a vertical channel between said magazines, a guard-lever having the upper end connected with the breech-bolt, a safety locking-bolt having the rear end pivoted to the frame, and a spur or projection at the front end, a recess in the breech-bolt with which said spur engages when the breech is closed, a link connecting the swinging end of the locking-bolt with the guard-lever at a



point intermediate between its ends and a link having the front end pivoted within the magazine-channel and the rear end slotted with a pin connecting it with the guard-lever whereby the first downward movement of the guard-lever disengages the safety-lock, and the continuation of said movement acts to retract the breech-bolt.

6. In a magazine-gun, a plurality of vertically-disposed essentially parallel cartridge-magazines located upon opposite sides of the axis of the barrel, carriers and springs by which the cartridges are impelled upward, plates exterior to the magazines having teeth adapted to engage with the spring-impelled carriers and compression-knobs upon each side whereby the toothed plates may be forced into line with the carriers to engage and hold them down while the cartridges are being introduced.

7. In a magazine-gun, a plurality of vertically-disposed cartridge-magazines located upon opposite sides of the axial line of the barrel, spring-pressed carriers by which the cartridges are raised within the magazines, a reciprocable breech-bolt and plates carried thereby and projecting into the magazines, a cut-off mechanism and operating device whereby either or both the plates may be retracted and the cartridges may be retained in both magazines, or either of them released and loaded into the barrel.

8. The combination in a magazine-gun of a barrel, a plurality of vertically-disposed cartridge-magazines having spring-pressed carriers and located upon opposite sides of the axis of the barrel, a reciprocating breech-bolt, a vertical central channel in the magazine and guard-lever and mechanism operating therein whereby the breech-bolt is reciprocated, spring-pressed plates on the breech-bolt and guides whereby the cartridges are transmitted from the magazines to a position in rear of the barrel, and a centrally-located guiding and spring-actuated fin or guide.

9. In a gun, magazines adapted to contain cartridges, a breech-bolt slidable longitudinally in line with the barrel and a laterally-movable plate on the front end thereof with mechanism for projecting the same into the path of the uppermost cartridge said plate adapted to transmit cartridges from the magazine to the barrel, a guard-lever and connections whereby the breech-bolt is reciprocated, a locking device actuated by the movement of the guard-lever and adapted to lock the breech-bolt when closed, and a sectional firing-pin, part of which is located in the breech-bolt and the other part in the locking-spur.

10. In a magazine-gun, a plurality of magazines located upon opposite sides of the axis of the barrel, a breech-bolt longitudinally slidable in line with the barrel, spring pressed plates pivoted upon each side of the front of the breech-bolt, means by which either of said

plates may be released and projected so as to engage the rear of a cartridge when the breech-bolt has been withdrawn, and to impel the cartridge forward when the breech-bolt is returned.

11. In a magazine-gun, a plurality of cartridge-magazines located upon opposite sides of the axis of the barrel, a breech-bolt longitudinally slidable in line with the barrel and above the cartridge-magazines, spring-pressed plates pivoted to the front of the breech-bolt, a turnable cam carried by the breech-bolt by which said plates may be retracted flush with the sides of the breech-bolt, or either of them allowed to project to engage and advance cartridges from either magazine.

12. The combination with the reciprocating breech-bolt of a magazine-gun, of plates pivoted upon each side at the front of the breech-bolt, springs by which said plates are normally projected so as to engage cartridges in magazines upon either side of the breech-bolt, a cam turnably mounted upon the breech-bolt, projections from the plates into the groove of said cam, whereby the turning of the cam to one position will retract both of said plates, turning it to another position will allow the plate upon one side to be projected so as to engage and load cartridges upon that side, and the turning of it to a third position will retract the first-named plate and project the opposite one to engage cartridges upon the opposite side.

13. In a magazine-gun, a plurality of magazines located upon opposite sides of the axis and in rear of the barrel, said magazines being closed at the top, a centrally-located reciprocating breech-bolt between the upper part of said magazines and openings whereby cartridges may be delivered from either magazine into the line of the breech-bolt and barrel, concaved spring-plates located in the upper part of each magazine and fitting the top of the uppermost cartridge therein to prevent displacement.

14. A gun having a plurality of cartridge-holding magazines located upon opposite sides of the axis of the barrel, a reciprocating breech-bolt movable between said magazines, means by which cartridges may be transferred from either magazine to the front of the breech-bolt and in line with the barrel, an extractor carried by the breech-bolt and adapted to engage the upper part of the cartridge-flange, an elastic ejector in the lower part of the breech-block, and a lever by which the breech-block is reciprocated, said lever being adapted to contact with the ejector when the breech-block is retracted whereby it acts in unison with the extractor to eject the shell.

15. In a gun, a plurality of magazines located upon opposite sides and below the plane of the barrel-axis, means for elevating the cartridges, means including a breech-bolt having laterally-movable wings pivotally mounted



at the front portion for forcing the cartridges  
from the magazines into the barrel, said mag-  
azines having the rear ends formed in seg-  
ments of circles and with grooves upon each  
5 side within which the flanges of the cartridges  
are movable whereby the difference in diame-  
ter of the front and rear contact-points will  
be compensated and the cartridges raised in

the magazines about a point located in front  
of the magazines. 10

In witness whereof I have hereunto set my  
hand.

CHARLES H. SNOW.

Witnesses:

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JESSIE C. BRODIE.