

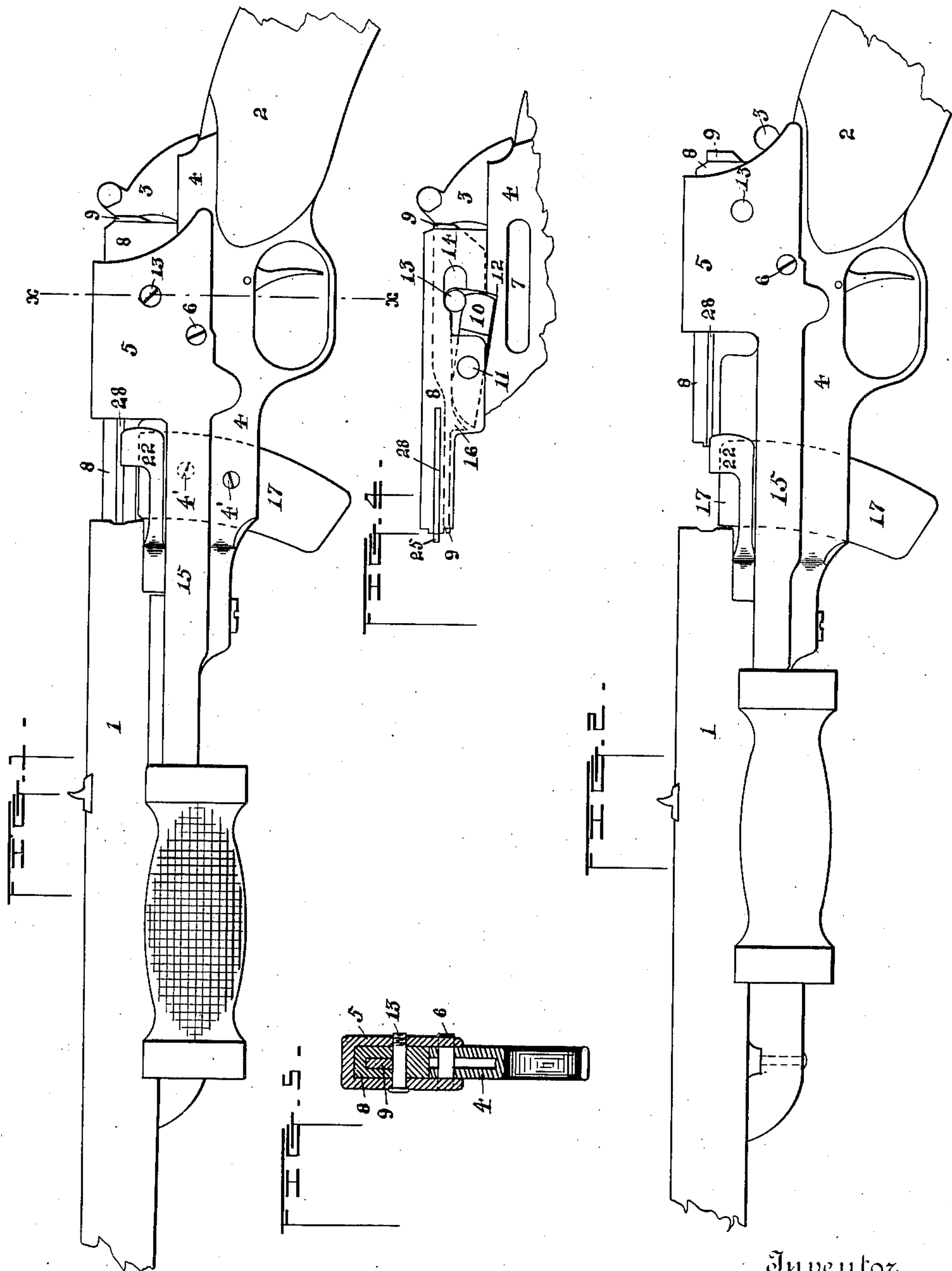
(No Model.)

2 Sheets—Sheet 1.

H. A. PITCHER.
MAGAZINE GUN.

No. 452,192.

Patented May 12, 1891.



Witnesses
Arch. M. Catlin.
Edward Davids.

Inventor
Henry A. Pitcher
by
Ruf. R. Catlin
Attorney

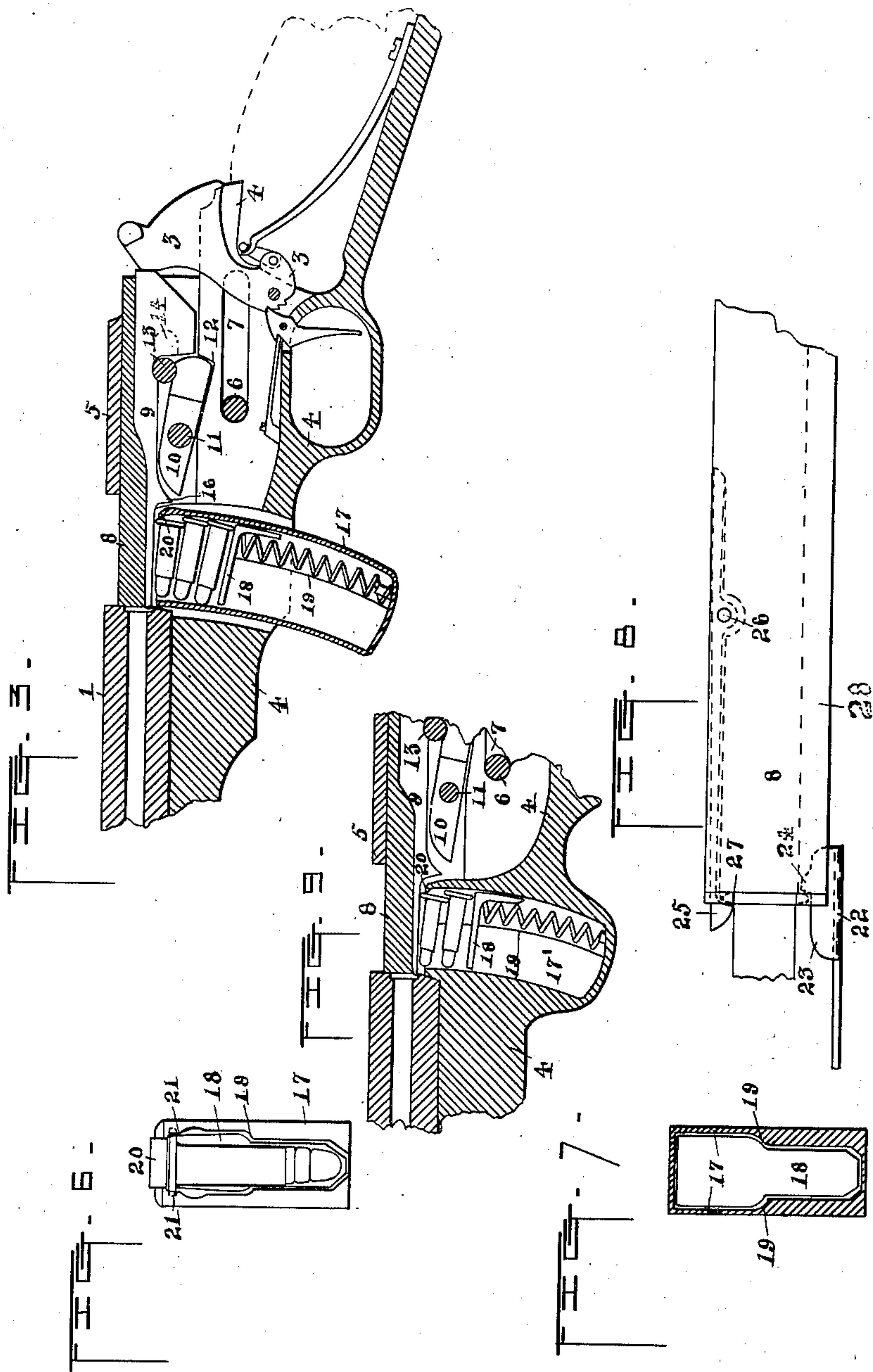
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UNITED STATES PATENT OFFICE.

HENRY AUGUSTUS PITCHER, OF NEILLSVILLE, WISCONSIN.

MAGAZINE-GUN.

SPECIFICATION forming part of Letters Patent No. 452,192, dated May 12, 1891.

Application filed December 5, 1890. Serial No. 373,647. (No model.)

To all whom it may concern:

Be it known that I, HENRY AUGUSTUS PITCHER, a resident of Neillsville, in the county of Clark and State of Wisconsin, have
5 invented certain new and useful Improvements in Magazine-Guns; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as
10 it pertains to make and use the same.

The object of my invention is to reduce the aggregate of the frictional surfaces, lessen liability to fouling, diminish the number and weight of parts, and otherwise simplify and
15 improve the loading mechanism of a magazine breech-loading gun; and it consists in the construction hereinafter described and pointed out.

In the accompanying drawings, Figure 1 is
20 a partial side elevation of a gun with the improved mechanism. Fig. 2 is a similar view, the breech-block being withdrawn from the barrel. Fig. 3 is a longitudinal section of the same. Fig. 4 is a partial elevation showing
25 breech-block locking-pin and connected parts. Fig. 5 is a transverse section on line *x x* of Fig. 1. Fig. 6 is a plan of the carriage-holder. Fig. 7 is a like view of a modification. Fig. 8 is a partial plan showing the exterior and
30 breech-block, and Fig. 9 is a longitudinal section through a cartridge-magazine holder.

Numeral 1 indicates the barrel, 2 the stock, and 3 the hammer, of a gun.

4 denotes a receiver or frame interposed
35 between the stock and barrel and rigidly connected to both in any well-known manner.

5 is a slide or saddle form piece, the sides of which are connected by a pin or screw 6,
40 which is adapted to be moved in a slot 7 of the receiver.

8 indicates the breech-block, which is located in the slide and moved on the receiver, and 9 is the firing-pin within a recess or groove in the breech-block. 10 denotes a
45 locking-bolt or T-shaped brace pivoted at 11 to the breech-block and adapted to engage a notch 12 in the receiver to lock the block in its forward position. Adjacent to the rear end of the T-shaped brace the block is cut
50 away across its whole width to receive the

large end of the brace, which has the same width as the block.

13 is a screw or pin secured in the slide and movable with it, and 14 indicates a slot in the breech-block, which permits the slide and
55 pin 13 to move in the block until said pin strikes the end of the slot, whereupon the block moves with the slide.

The slide is connected by an arm or shank 15 to a handle, which is connected to the re-
60 ceiver in such manner that it and the slide can be moved back and forth upon the receiver. Preferably these parts are connected in one piece.

The operation of the above-described de-
65 vice is as follows: The parts are in the position indicated in Fig. 2 when a cartridge is exploded. To charge another cartridge into the barrel and cock the gun, the slide 5 is forced back by the handle. The first part
70 of the movement carries the pin 13 to the rear end of the slot 14 in the breech-block and just to the rear of the locking bolt 10, so that the latter is free to turn on its pivot, when immediately after its front end is struck
75 by the projection 16 on the firing-pin, moving rearwardly under compulsion by pin 13, attached to the slide. The impact of projection 16 upon the suitably rounded or beveled end of the locking-bolt 10 throws the rear end of
80 said bolt out of the notch 12, whereupon the breech-block and firing-pin are carried back until pin 6 strikes the rear end of slot 7. The first rearward movement of pin 13 acts upon the firing-pin to retract it from contact with
85 the priming in the cartridge, and its further movement to the rear carries the breech-block with it and cocks the gun. As the breech-block is thus moved to the rear it is withdrawn from the top of the face of the car-
90 tridge-box of magazine 17, and a cartridge is forced up by the spiral spring underneath until interrupted by the side flanges on the cartridge holder or box, and it is thus placed in alignment or nearly in alignment with the
95 barrel.

The magazine or cartridge-holder 17 (or 17') has an L-shaped follower 18, beneath which and under the base of the cartridge is arranged a spiral spring to force up the follower 100

and the superincumbent cartridges. The spring is held in place by ribs or shoulders 19, formed in any convenient manner in the cartridge-holder, as indicated in Figs. 6 and 7. These ribs and the front and rear walls of the magazine are curved, as indicated.

20 is a forwardly-turned projection on the rear of the magazine, at its upper extremity having an edge arranged to bear on the rear end of the upper cartridge above its longitudinal axis and a little above the top of the holder to prevent the front end of the cartridge from tipping upward.

21 are side flanges or projections at the top of the holder adjacent to the cartridge head or rim, which latter extends a little above said flanges. The purpose of these devices is to maintain the proper position of the cartridge in line to enter the bore of the gun and to hold said cartridge until it is pushed into the barrel by the breech-block. This is effected by the joint action of the overhanging flanges or projections 21, which bear on the cartridge-rim above its horizontal center, and of the plate 20, the edge of which bears on the rear end of the cartridge, also above its center. The spring presses the cartridge-rim against the under side of said flanges or projections 21, and they and plate 20 prevent the front end of the cartridge from tilting up, and the top cartridge is thus held in nearly horizontal position.

The rear of the upper part of the magazine chamber or recess is somewhat contracted and the flanges 21 thus formed upon each side edge prevent the cartridges from slipping forward or out of the recess until pushed forward by the breech-block. The front end of each top cartridge in the recess is permitted to rise above the front end of the recess and in position to enter the barrel at all times except as hereinafter stated. The object of the transverse projection 20 at the base of the cartridge is to prevent the front end of the top cartridge from tipping upward and backward when placed upon the follower (or cartridge previously inserted) and under flange 21, and to thus hold the point of the top cartridge in position to enter the barrel at all times when the breech-block is fully withdrawn to the rear. The L-shaped follower, guided by the curved ribs and its position in the recess, brings each successive cartridge up into proper position for insertion into the barrel when pushed forward by the breech-block.

A cartridge having been raised by the spring and properly directed, as stated, it is pushed into the barrel by a forward movement of the handle and slide, which latter carries the pin 13 against the suitably rounded or beveled rear end of the locking-bolt 10 and forces it into the notch 12, at the same time moving the breech-block which pushes forward the cartridge. During this movement the firing-pin falls behind or rests, and may subsequent-

ly be driven forward to explode the cartridge in the usual way. The details of my improved devices may be varied by mechanical skill without departure from the invention, provided substantially the same mechanical principles and mode of operation are preserved.

It will be noted that the extent of the movement of the slide is determined by the slot 7, which arrests the pin 6 in either direction; also that pin 13 drives forward the breech-block and also retracts it and the firing-pin, suitably releasing in its rearward movement the locking-bolt 10, which bolt at other times holds the breech-block in its forward position. Upon the return of pin 13 it holds the locking-bolt in engagement with the receiver and receives the recoil of the breech-block.

The magazine may be suspended in any suitable opening in the receiver, being slightly engaged at its top to prevent its dropping through, or said holder may be a fixture, as elsewhere described. A spring 22, secured to the receiver, has a portion 23, Fig. 8, over the holder when in position, if removable, to hinder its accidental displacement. This spring is provided with a projection or stop 24, adapted to engage the rim of the cartridge-shell above its horizontal diameter or center when it is extracted from the barrel, by which means the rear of the shell is held down when its body is thrown to one side.

28 indicates a groove in the block to receive the part 23 of the spring when said block is moved forward. The spring always overhangs the magazine to prevent it from being accidentally thrown up or out of the receiver, except when it is intentionally pulled to one side to permit the magazine to be removed. The groove in the side of the block is adapted to receive a stop 24.

25, Fig. 8, is the exterior, secured by a pin or screw 26 on the breech-block and having a hook 27, which catches the rim of the shell and withdraws it from the barrel when the block is moved backwardly.

Part of my improvements are applicable to guns having detachable magazines; but it is proposed ordinarily to make these magazines a permanent fixture free from liability to accidental displacement and other objections, and for this end the magazine may consist of a suitable recess or mortise formed in the receiver, substantially as indicated in Fig. 9. Preferably a suitable lining made from non-corrodible material and of greater or less extent will be fixed in such recess, such a fixed lining being permanently fastened in the receiver by screws 4'. Such a magazine will have substantially the same contour and adjuncts as the detachable magazine above described.

To fill the receptacle it will be seen that the breech-block must first be drawn to the rear. The cartridge to be inserted is then pressed head downward against the follower

or against the cartridge previously inserted and then slid back to the rear of the recess. The front end of the cartridge is then tilted forward and downward until the projections 21 and the rear bearing 20 bear against it, as before described, when it will remain in position to enter the barrel. The above-described construction of the magazine provides for its being charged with cartridges without its removal from the receiver. When the breech-block is moved forward, it forms a cover to the cartridge-recess and holds the cartridges from rising until again withdrawn from the face of said recess.

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

1. In a gun, the barrel, the slotted receiver connected thereto, and the operating-slide provided with a handle and with a pin extending through the slot in the receiver, whereby the slide and pin are guided and the length of their movement determined, in combination with a firing-pin, a breech-block, and a second pin attached to the slide and engaging the firing-pin and breech-block in its rearward movement to retract the same, substantially as set forth.

2. In a gun, the barrel, the slotted receiver connected thereto, and the operating-slide provided with a handle and with a pin extending through the slot in the receiver, whereby the slide and pin are guided and the length of their movement determined, in combination with a firing-pin and breech-block, said slide riding upon the receiver and embracing the breech-block and firing-pin, and a second pin attached to the slide and engaging the firing-pin and breech-block in its rearward movement to retract the same, substantially as set forth.

3. In a gun, the barrel, the slotted receiver connected thereto, having a recoil-shoulder, and the operating-slide provided with a handle and with a pin extending through the slot in the receiver, whereby the slide and pin are guided and the length of their movement determined, in combination with a firing-pin and breech-block, said slide riding upon the receiver and embracing the breech-block and firing-pin, a second pin connected to the slide to retract the firing-pin and block, and a locking-brace pivoted to the breech-block and engaging the recoil-shoulder on the receiver when in firing position, said brace having an operating-cam arranged in the path of the firing-pin during its rearward movement, and also a cam in the path of the second slide-pin during its forward movement, whereby the breech-block is locked and unlocked, substantially as set forth.

4. In a gun, the combination of a barrel, a firing-pin, a slide having a pin engaging said firing-pin during the opening movement of the slide, a receiver or frame provided with a locking-notch, and a locking device pivoted in said receiver and in the path of the firing-

pin during said opening movement, said slide-pin being adapted to move the firing-pin rearwardly independently of the block, substantially as set forth, whereby the locking device is tripped.

5. The cartridge-magazine provided with a curved projection 20 at the top of its rear wall, having an edge arranged to bear on the base of the upper cartridge above the center of its longitudinal axis, substantially as set forth.

6. The cartridge-magazine provided with a curved projection at the top of its rear wall, having an edge arranged to bear forward on the base of the upper cartridge, and flanges on its side walls arranged to bear upon the sides of the cartridge-rim, both the projection and the flanges bearing upon the cartridge above its longitudinal center, substantially as set forth.

7. The cartridge-magazine provided with vertical cartridge-guiding ribs on its interior about its mid-length, and a spiral spring located between said ribs and the rear of the magazine and adapted to be guided and laterally confined by the ribs, and said spring being adapted to push up the rear end of the cartridge, substantially as set forth.

8. The combination of an oblong quadrangular breech-block grooved or recessed upon the under side throughout nearly its entire length, a firing-pin adapted to move in said groove, the locking T-shaped brace having its forward end pivoted in the groove of the breech-block, said groove or recess being made as wide as the block at its rear to admit the wide rear end of the brace, said brace being also equal in width to the breech-block, as shown and described, whereby when the brace is within the groove or recess the whole has a compact quadratic form, substantially as set forth.

9. The combination of the breech-block, the spring-extractor fast on the breech-block, and the spring 22, made fast on the barrel and having a part of its free end immediately above the magazine, and also having a stop adapted to bear on the cartridge to eject the same, said block being provided with a groove to receive the stop, substantially as set forth.

10. In a magazine-gun, the barrel, the receiver provided with a vertical recess at the breech of the barrel, the removable magazine, and the spring provided with a stop adapted to eject the shell and having a part normally over the magazine, substantially as set forth.

11. In a magazine-gun, the barrel, the receiver made fast thereto and provided with a vertical recess at the breech of the barrel, a magazine adapted to be charged with cartridges, a breech-block normally covering said magazine and provided with a groove, and the spring 22, having a part normally over the magazine and provided with a cartridge-

stop 24, adapted to enter said groove, substantially as set forth, whereby the accidental rising of the magazine is prevented, the cartridge ejected, and the whole adapted to permit the removal of the magazine when desired.

In testimony whereof I have signed this

specification in the presence of two subscribing witnesses.

HENRY AUGUSTUS PITCHER:

Witnesses:

WM. ZARRENHAUS,
C. S. STOCKWELL.