

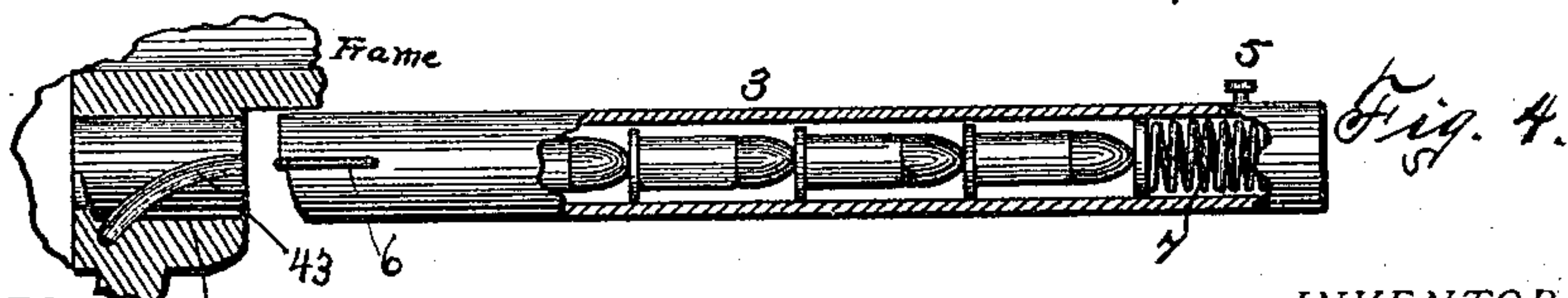
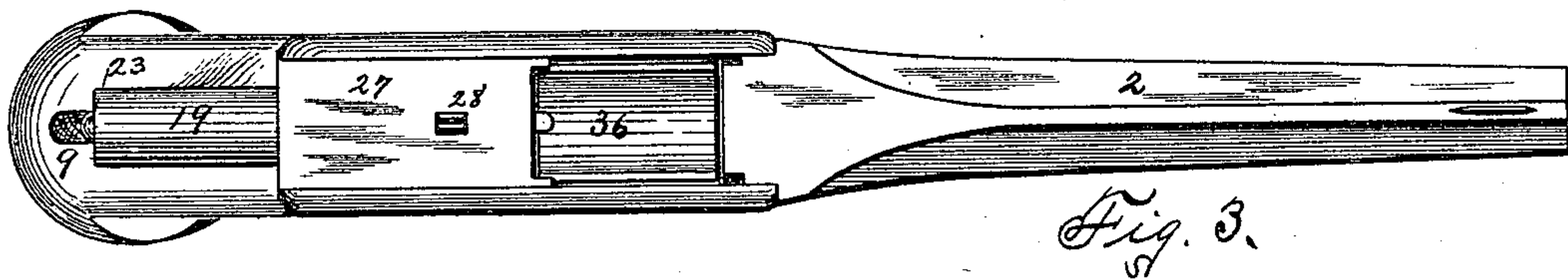
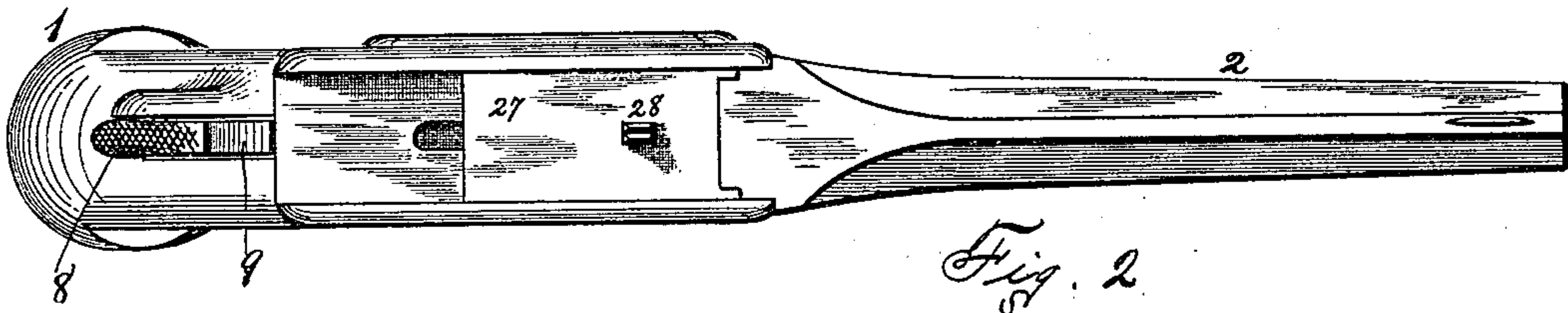
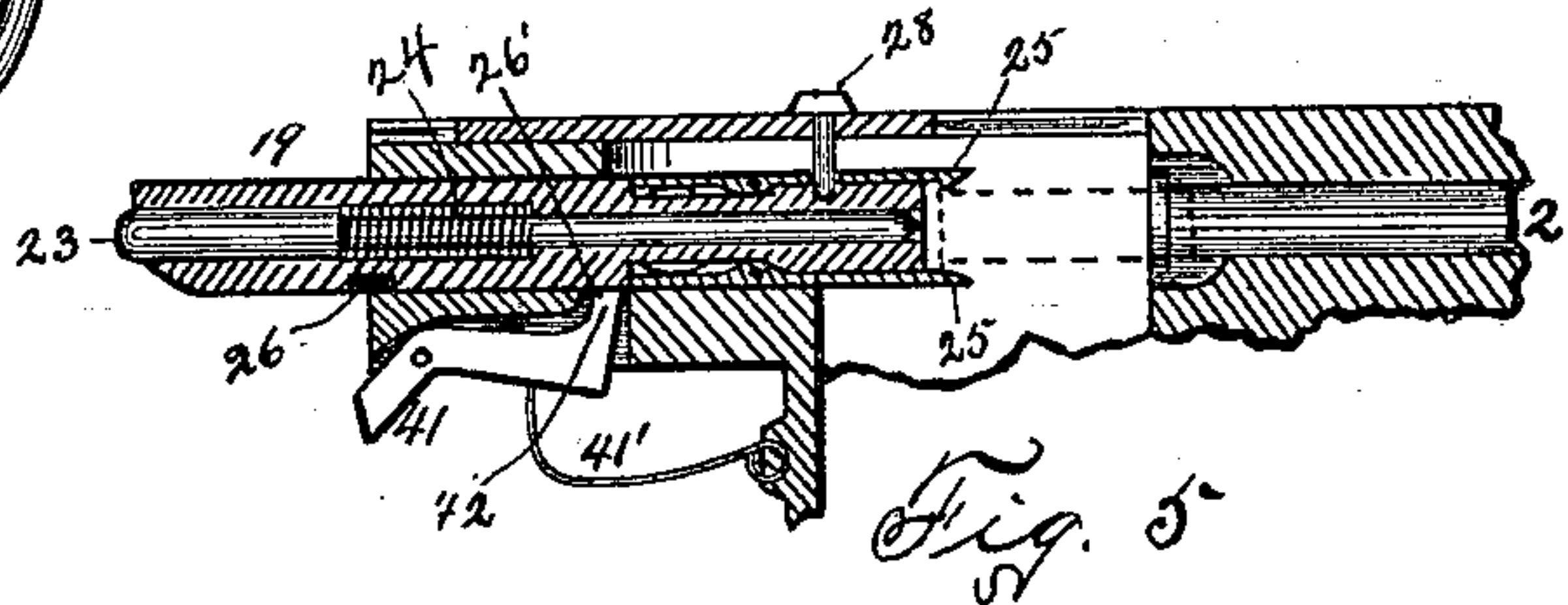
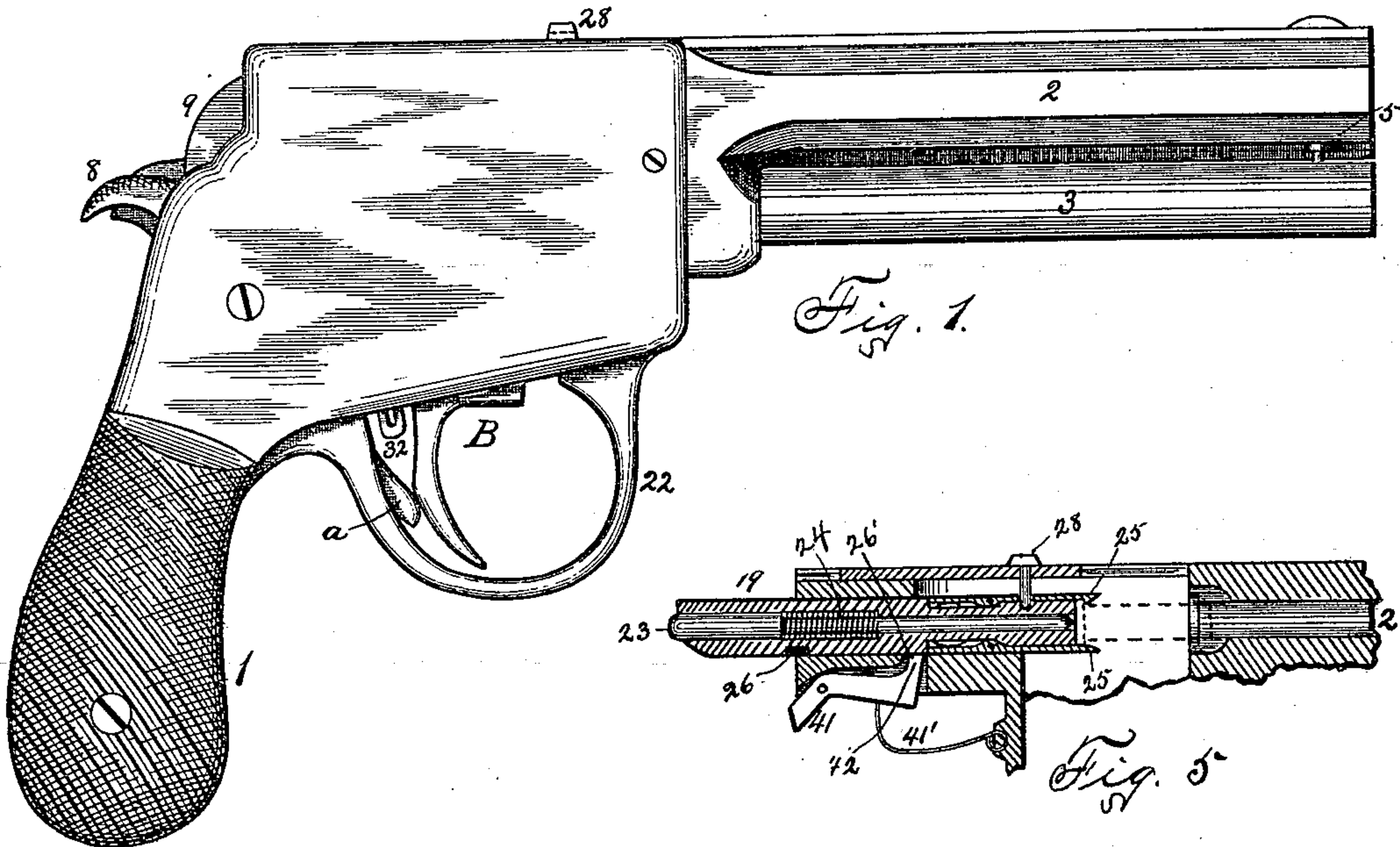
(No Model.)

3 Sheets—Sheet 1.

F. N. THAYER & E. W. FRANCIS.
MAGAZINE PISTOL.

No. 477,280.

Patented June 21, 1892.



WITNESSES:
H. A. Carhart.
C. B. Kime.

INVENTORS:
Fred N. Thayer &
Edward W. Francis.
BY

Smith & Dunsford
ATTORNEYS

(No Model.)

3 Sheets—Sheet 2.

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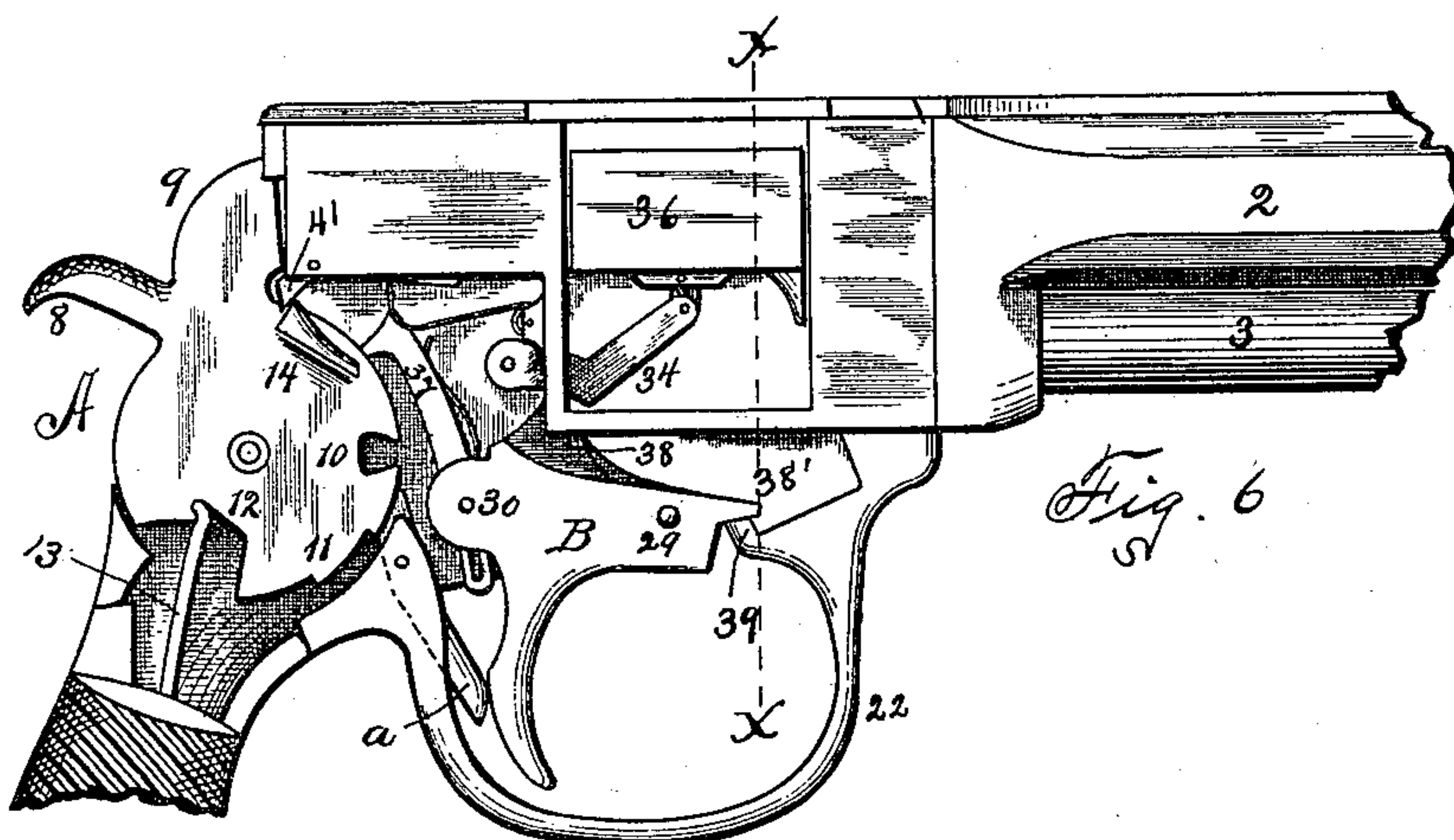


Fig. 6

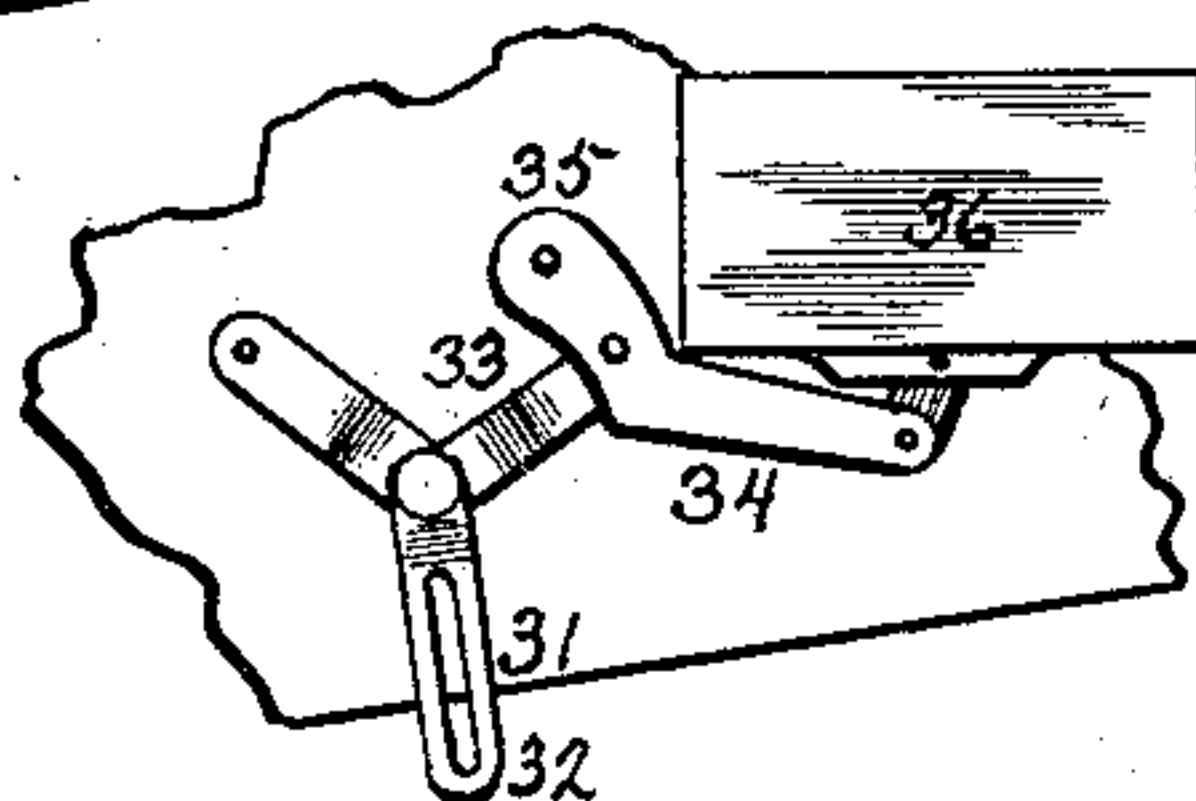


Fig. 12

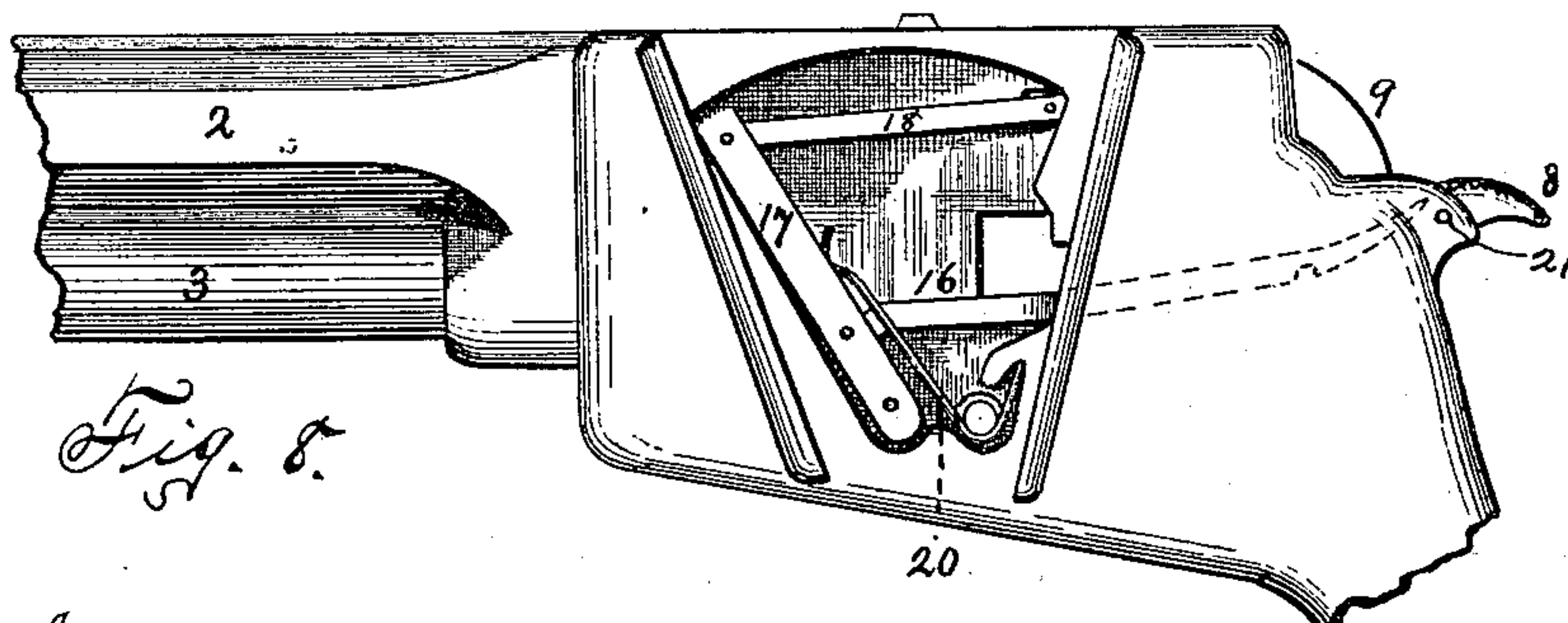


Fig. 8

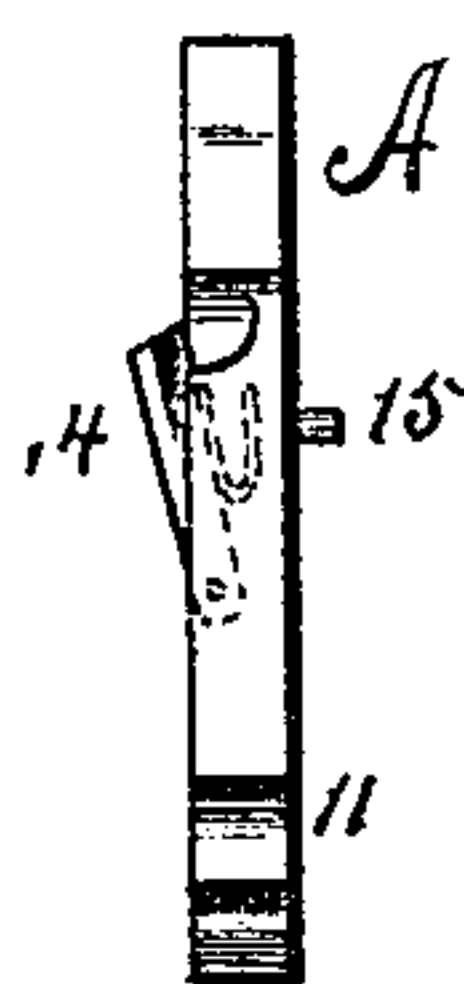


Fig. 11

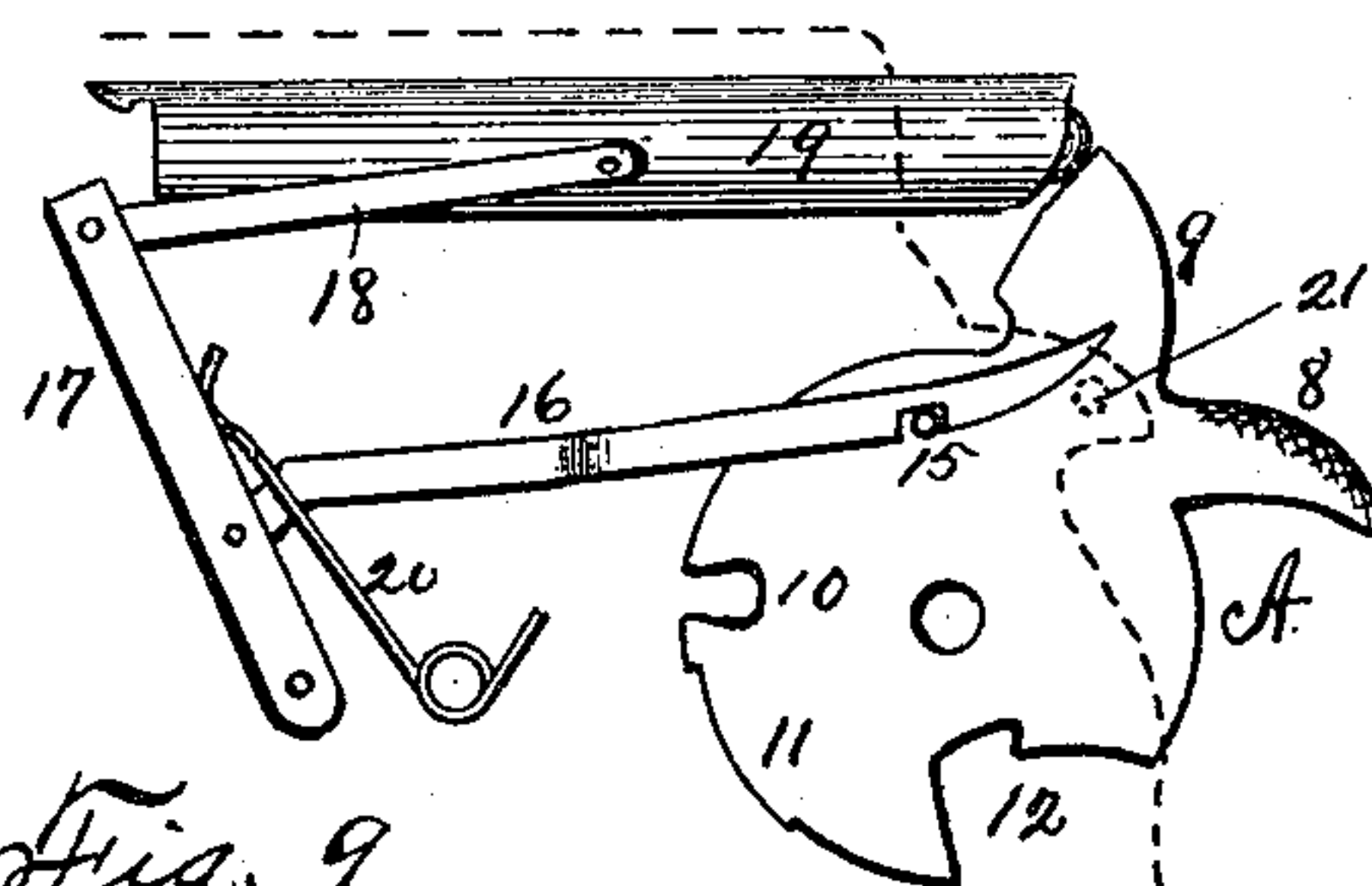


Fig. 9

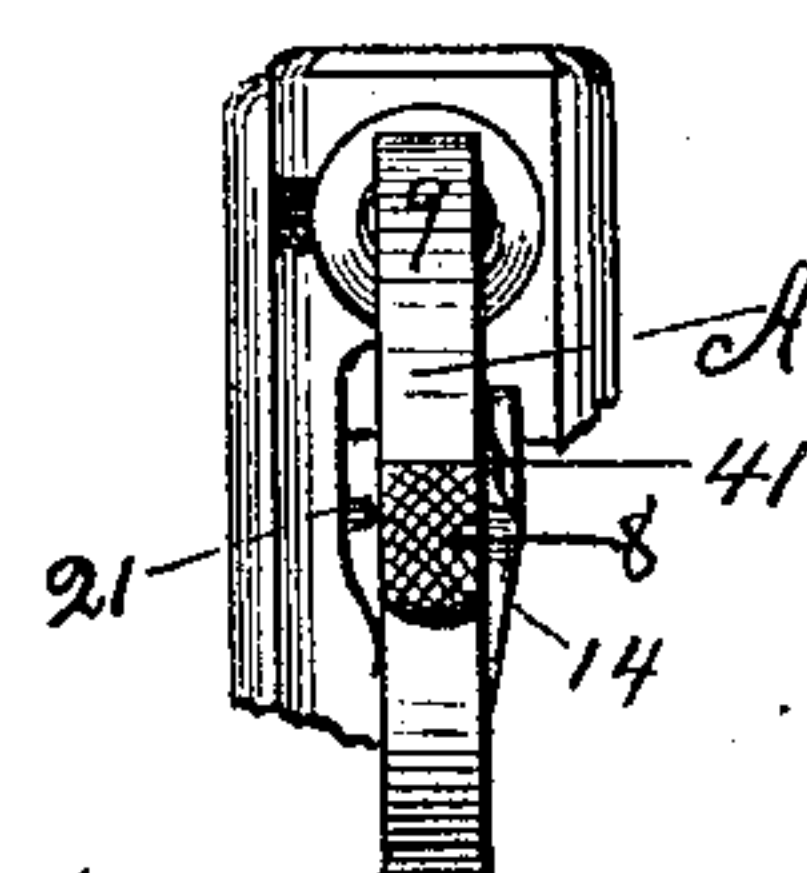


Fig. 10

WITNESSES:
H. A. Carhart.
C. B. Kinnear.

INVENTORS:
Fred N. Thayer &
Edward W. Francis.

BY
Smith & Denison
ATTORNEYS

(No Model.)

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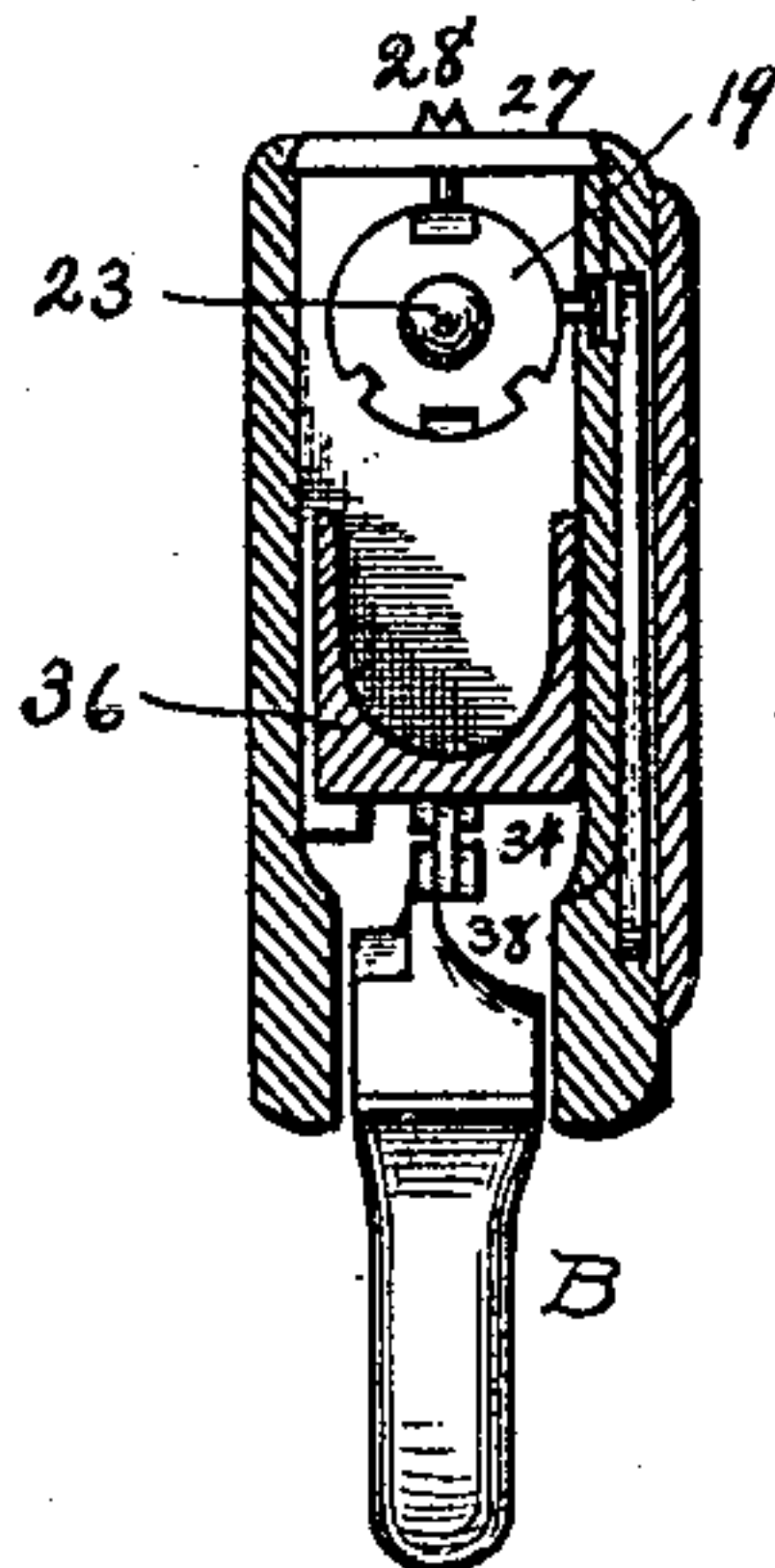


Fig. 13.

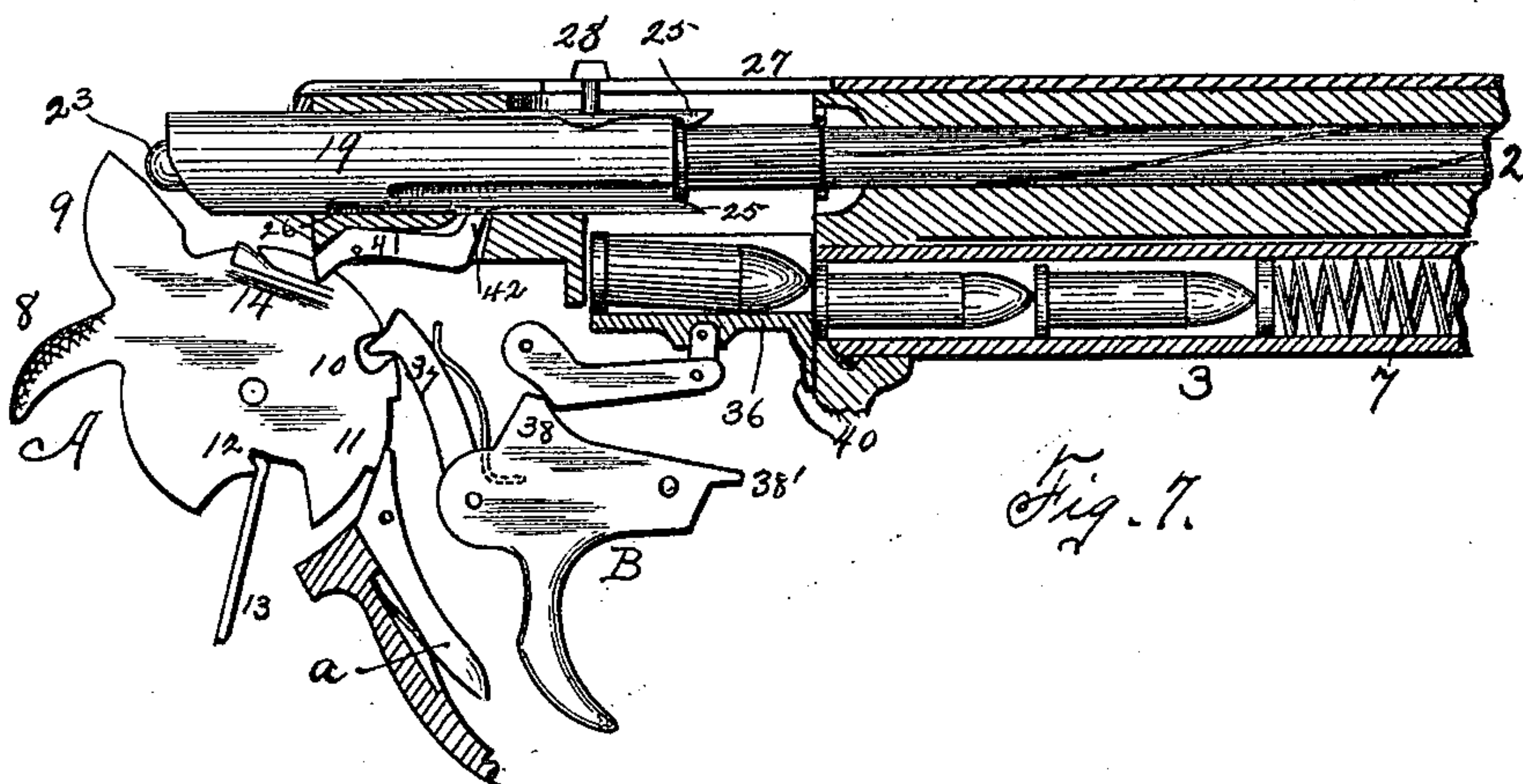


Fig. 7.

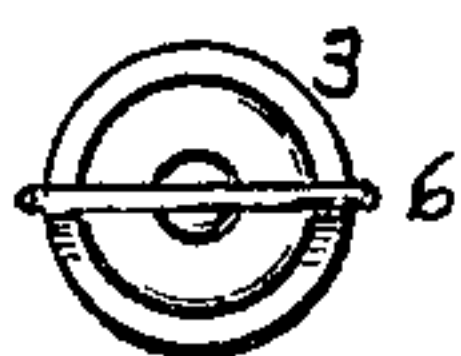


Fig. 14.

WITNESSES:

H. A. Carhart.
C. B. Keime.

INVENTORS

Fred N. Thayer
Edward W. Francis.

BY

Smith & Demissol
ATTORNEYS

UNITED STATES PATENT OFFICE.

FRED N. THAYER AND EDWARD W. FRANCIS, OF BINGHAMTON, NEW YORK.

MAGAZINE-PISTOL.

SPECIFICATION forming part of Letters Patent No. 477,280, dated June 21, 1892.

Application filed August 10, 1891. Serial No. 402,210. (No model.)

To all whom it may concern:

Be it known that we, FRED N. THAYER and EDWARD W. FRANCIS, of Binghamton, in the county of Broome, in the State of New York, have invented new and useful Improvements in Magazine-Firearms, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

Our invention relates to magazine-firearms in which the empty shell is ejected through mechanisms actuated by the cocking of the hammer and a loaded shell elevated into line with the barrel by pulling the trigger and then shoved into the barrel by the firing-pin carrier.

Our object is to produce a magazine-firearm, and particularly a pistol of the class above described—viz., in which the extracting, ejecting, and reloading are all accomplished by the operation of the hammer and trigger.

Our invention consists in the several novel features of construction and operation hereinafter described, and which are specifically set forth in the claims hereunto annexed.

It is constructed as follows, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of our magazine-pistol. Fig. 2 is a top plan of the same as it is closed after a shell is discharged. Fig. 3 is a like view of the same as opened on top for the ejection of an empty shell by the partial cocking. Fig. 4 is a sectional elevation of the magazine and its socket, showing the means for holding the cartridges in it after loading and the means by which the holder is removed from the cartridges as the magazine is pushed back to its seat in the socket in the frame. Fig. 5 is a vertical sectional elevation of the extractor, the slide carrying it, the firing-pin through it, the cover connected to and movable with and by the slide, the mechanism for locking the slide, and part of the barrel. Fig. 6 is a side elevation of the pistol with one of the side plates removed, showing the hammer and trigger mechanisms in the uncocked position as when a shot has been fired. Fig. 7 is a longitudinal vertical sectional elevation showing the hammer partly cocked, the slide and firing-pin drawn partly back, the shell partly extracted, and a fresh cartridge

in the carrier ready to be elevated into line with the barrel by pulling upon the trigger, the trigger and hammer being then locked so that the pull upon the trigger will not release the hammer to fire the piece. Fig. 8 is a side elevation of part of the pistol, showing the side cover removed on the opposite side from Fig. 6 and showing the connections between the hammer and the extractor-slide, which also carries the firing-pin, said mechanism being in the discharged position. Fig. 9 is a detail of the same in their positions when the hammer is cocked to draw the slide back and extract the shell. Fig. 10 is a rear elevation of part of Fig. 6. Fig. 11 is a front elevation of the hammer detached. Fig. 12 is a detail showing the lever mechanism actuated by the trigger to elevate the cartridge-carrier. Fig. 13 is a vertical transverse section on line X X, Fig. 6. Fig. 14 is a rear elevation of the magazine detached, showing the retaining-bail across the butt of the rear cartridge to hold all of them in the magazine.

The pistol-frame is of substantially the form shown in the drawings, comprising a handle 1, a barrel 2, and an intermediate body in which the mechanisms are mounted. The magazine 3 is detachably mounted in a socket 4, Fig. 4, in said body and provided with a button 5, which engages with a notch in the lower side of the barrel, Fig. 1, to lock the magazine in position, and further provided with a bail 6, Figs. 4 and 14, of substantially U form, having its arms pivotally connected to the sides of the magazine, having its body tubular, its front end closed, and containing a spring 7, which is compressed by the insertion of the cartridges and expels them from said body successively, as hereinafter described.

A is the hammer pivotally mounted in the frame, having a finger-piece 8, a point 9, a substantially circular body, a notch 10, tumbler-notches 11, and a seat 12 for the front end of the mainspring 13, which is secured at the other end in the handle, and a side lug 14 of substantially the form shown, and also having a pin 15 projecting from the side opposite to that upon which is said lug. Referring to Figs. 8 and 9, we see a notched bar 16, engaging with said pin 15, and a lever 17, pivotally connected to said bar and pivotally

mounted at its lower end in the body of the frame. Another bar 18 is pivotally connected at one end to the top of the lever 16 and pivotally connected at its other end to the slide 19 and a retracting-spring 20, and, further, by the dotted circle 21, a pin in said frame, with which the beveled point of the bar 16 is in Fig. 9 about to engage, and which will lift said bar out of engagement with the pin 15, so that the spring 20 can throw said slide back to its normal position as the hammer comes to a full-cock, and the point of the auxiliary trigger *a* engages with the lower tumbler-notch 11 in said hammer, Fig. 6 or 7. This trigger *a* is pivoted in the frame, and its outer end projects within the trigger-guard 22, and is provided with a sear-spring (not shown) to hold its point in proper engagement with the hammer-body. Said slide 19 is a cylindrical bar of metal, Figs. 5 and 7, tubularly recessed to receive the firing-pin 23 and its retracting-spring 24, and is provided on its upper and lower sides at its front end with the spring-extractors 25, having their front ends hooked inwardly, and is also provided with a transverse notch 26 in its lower face. This slide is mounted in the top of the frame in line with the barrel and adapted to slide in its seat.

The frame is mortised with vertical walls opening out at the top, substantially as shown, and 27 is a sliding cover connected to slide by the pin 28, and this cover normally closes the top of the mortise, but opens it when the hammer is cocked, operating the mechanism before described, which retracts the slide.

B is the trigger proper, pivotally mounted at 29, Fig. 6, and provided with a pin 30, which projects beyond the face on the opposite side in Fig. 6, and there engages with a slotway 31, Fig. 12, in the lever 32, pivoted at its upper end to the frame, and at the angle connected pivotally to the bar 33, which in turn is connected to the lever 34, which is pivoted at 35 to the frame, and its other end is hinged to the bottom of the cartridge elevator and carrier 36, which consists of a U-shaped box loosely mounted in the mortise aforesaid in the frame. Upon the pin 30 a spring-pawl 37 is pivoted, having its free end hooked, substantially as shown, and which, when the hammer is almost at half-cock, hooks into the notch 10 in the hammer-body, and thereupon the mainspring 13 will throw the trigger downward and through the pin 30 and its connections will draw the carrier down into line with the magazine, and the spring therein will eject a shell therefrom into the carrier. Then when we pull back on the trigger the pawl 37 becomes released from the hammer and the shoulder 38 on top of the trigger will engage with the lever 34 and will raise the carrier until the cartridge therein is in line with the bore of the barrel, which is when the stop-lip 38' engages the shoulder 39 on the trigger-guard, Fig. 6. When it is so

raised, a lug 40 upon the bottom of the carrier stands behind and partly across the rear end of the magazine and prevents another cartridge from coming out therefrom; also as the hammer is cocked to the point where the pawl 37 engages with it the lug 14 thereon engages with the point of the lever 41, which is pivoted in the frame, and throws the spur 42 on its front end out of engagement with and unlocks the slide 19. Then as the movement continues the bar 16 is engaged with the pin 15 and the slide is drawn back, the spur 42, Fig. 7, riding upon its under side; also, the pawl 37 is thrown out of engagement with the hammer, and as the hammer comes to a full-cock the beveled end of the bar 16 engages with the pin 15, raises the bar free from the pin, and the spring 20 throws the slide forward, pushing the cartridge into the barrel, ready to be discharged by the pull of the trigger against the auxiliary trigger and the release of the hammer. When a cartridge has been fired, the retraction of the slide extracts the empty shell, drawing it back into the mortised opening, and then as a new cartridge is elevated it will knock out the empty shell. The firing is actually effected by the hammer driving the firing-pin forward. When the slide is thrown forward, the spur 42 again engages with the notch 26 and locks the slide, which is essential, as the slide abuts against the butt of the cartridge and closes the rear of the barrel to prevent the escape of gas.

Referring to Fig. 4, we will see that curved grooves 43 are cut on two sides of and straight across the bottom of the socket 4, opening outward at about the vertical center of the sides, so that when the magazine is inserted and pushed into the socket the side arms of the bail will enter the side grooves and be gradually forced down until the cartridge is wholly released from said bail.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. In a firearm, a hammer pivoted in the frame, a lever pivotally mounted and having a point with which the hammer engages and a spur upon its other end, in combination with a slide mounted in the frame, provided in its lower side with a notch with which said spur engages.

2. In a firearm, a slide mounted in the frame, in combination with a rotating hammer, a bar detachably connected to said hammer and pivotally connected to a lever, said lever pivotally mounted upon the frame and pivotally connected to a pull-rod, said pull-rod pivotally connected to said slide, and a retracting-spring.

3. In a firearm, the combination, with a rotating hammer provided with tumbler-notches, of an auxiliary trigger pivoted in the guard and having one end adapted to engage with said notches and the other projecting within the guard, and a trigger pivoted in

the frame and adapted when pulled back to engage with said auxiliary trigger and disengage it from the hammer.

4. In a firearm, the combination, with the trigger having a shoulder on its upper face, of a cartridge-elevator, and a lever hinged to its bottom, with which the shoulder on the trigger engages to elevate said carrier by the pull upon the trigger.

5. In a firearm, the combination, with the trigger, the pawl pivotally mounted therein, and the hammer provided with a notch, with which the pawl engages when the hammer is partly cocked, of a lever slotted to engage with the trigger and pivoted in the frame, a bar connected to it and to another lever, a lever pivoted to the frame and hinged to the elevator, and a cartridge-elevator, and the mainspring engaging with the hammer and operating by forcing the trigger down to lower said elevator.

6. In a firearm, the combination, with the trigger, the pawl pivotally mounted therein, and the hammer provided with a notch, with which the pawl engages when the hammer is partly cocked, of a lever slotted to engage with the trigger and pivoted in the frame, a bar connected to it and to another lever, a lever pivoted to the frame and hinged to the elevator, and a cartridge-elevator, and the mainspring engaging with the hammer and operating by forcing the trigger down to lower said elevator behind the magazine, and a cartridge-magazine provided with a cartridge-expelling spring.

7. In a firearm, the combination, with the

trigger, the pawl pivotally mounted therein, and the hammer provided with a notch, with which the pawl engages when the hammer is partly cocked, of a lever slotted to engage with the trigger and pivoted in the frame, a bar connected to it and to another lever, a lever pivoted to the frame and hinged to the elevator, and a cartridge-elevator, and the mainspring engaging with the hammer and operating by forcing the trigger down to lower said elevator behind the magazine, and a cartridge-magazine provided with a cartridge-expelling spring, and a downward lug on said elevator, closing part of the magazine when it is elevated.

8. In a firearm, the combination, with a magazine and a spring within it compressed by the insertion of the cartridges, of a bail pivoted upon the magazine and extending across the open end thereof.

9. In a firearm, the combination, with the magazine, the spring within it, and the bail pivoted upon its sides and extending across its open end, of the frame having a socket to receive the end of the magazine and provided with grooves in its inner surface, with which said bail engages.

In witness whereof we have hereunto set our hands this 30th day of July, 1891.

FRED N. THAYER.
EDWARD W. FRANCIS.

In presence of—

B. A. BAUMANN,
H. J. GAYLORD.