

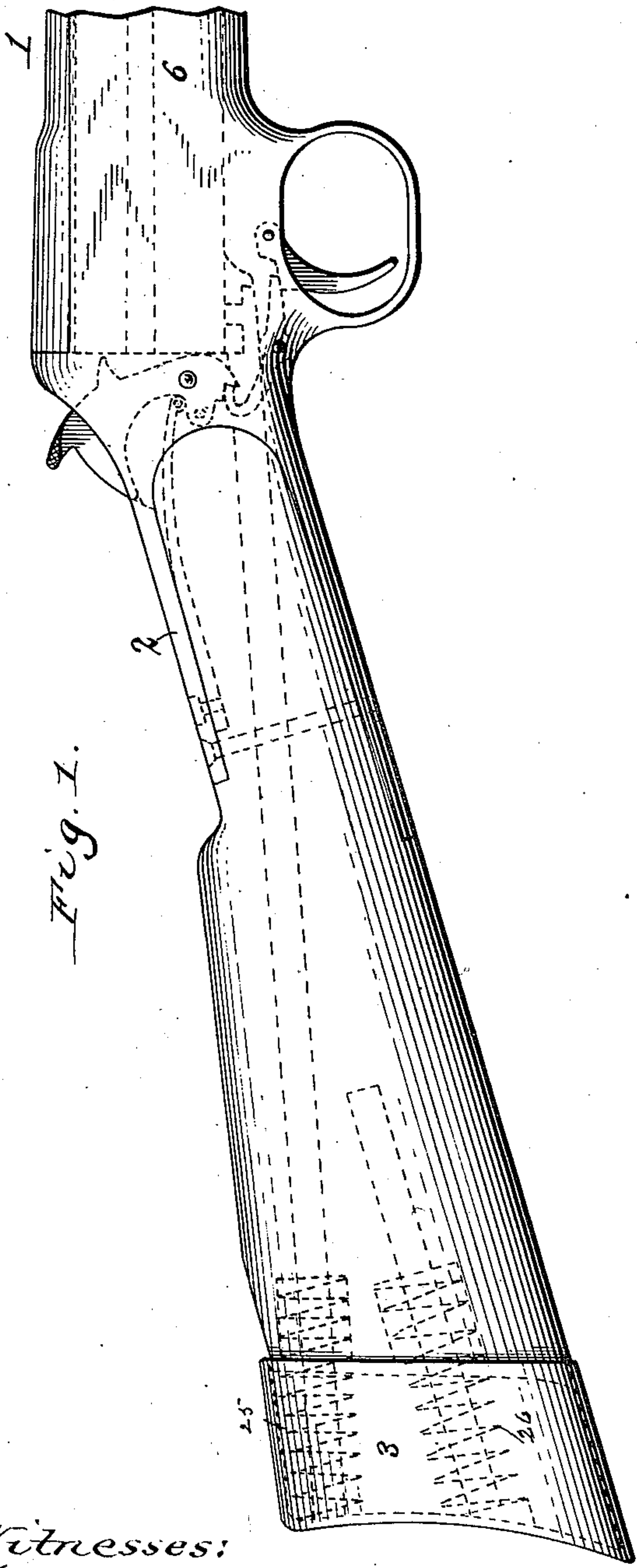
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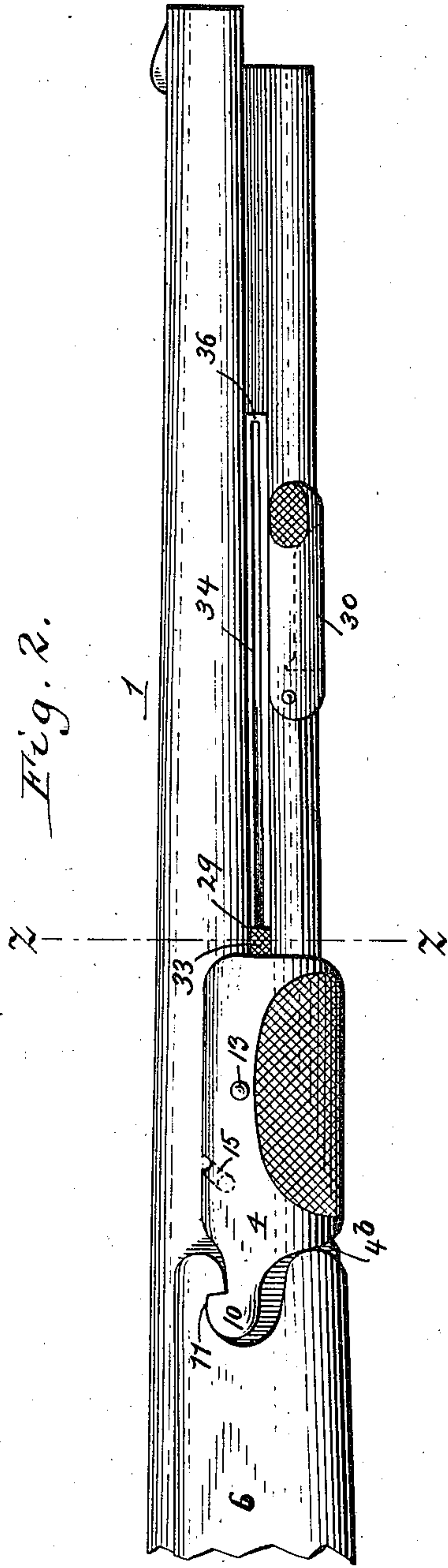
A. BURGESS.  
AUTOMATIC MAGAZINE FIREARM.

No. 557,359.

Patented Mar. 31, 1896.



Witnesses:  
Theo. L. Popp.  
Eduard J. Prehn



Andrew Burgess  
Inventor.

(No Model.)

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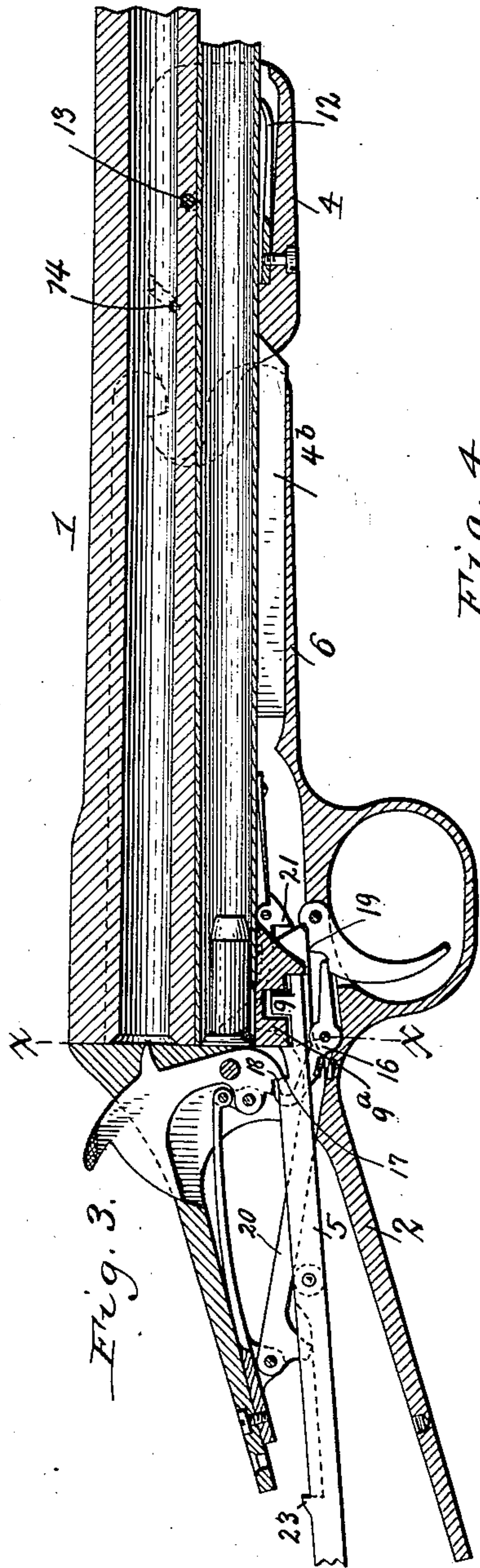


Fig. 3.

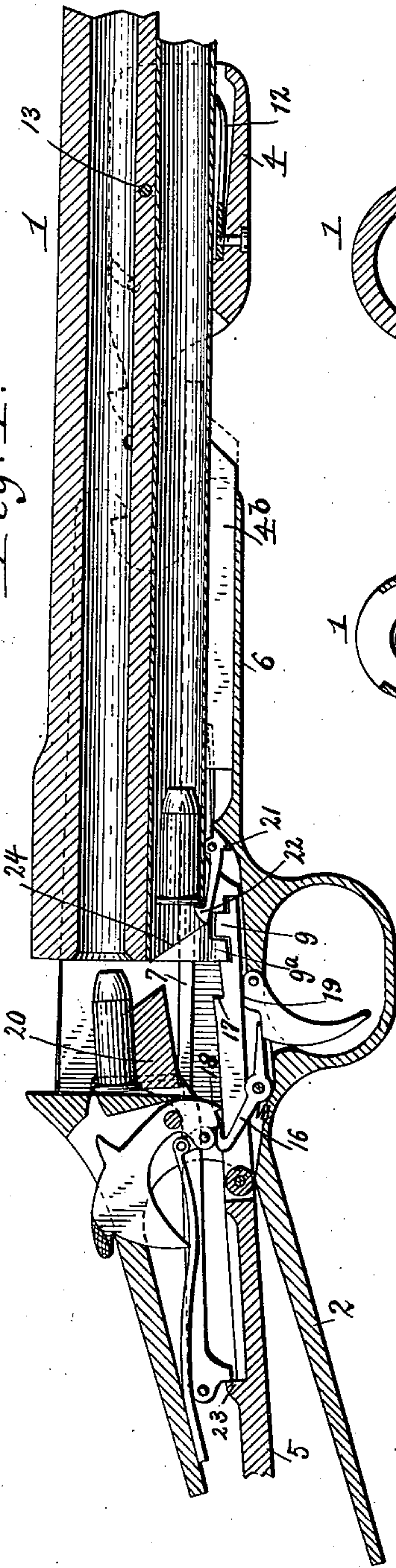


Fig. 4.

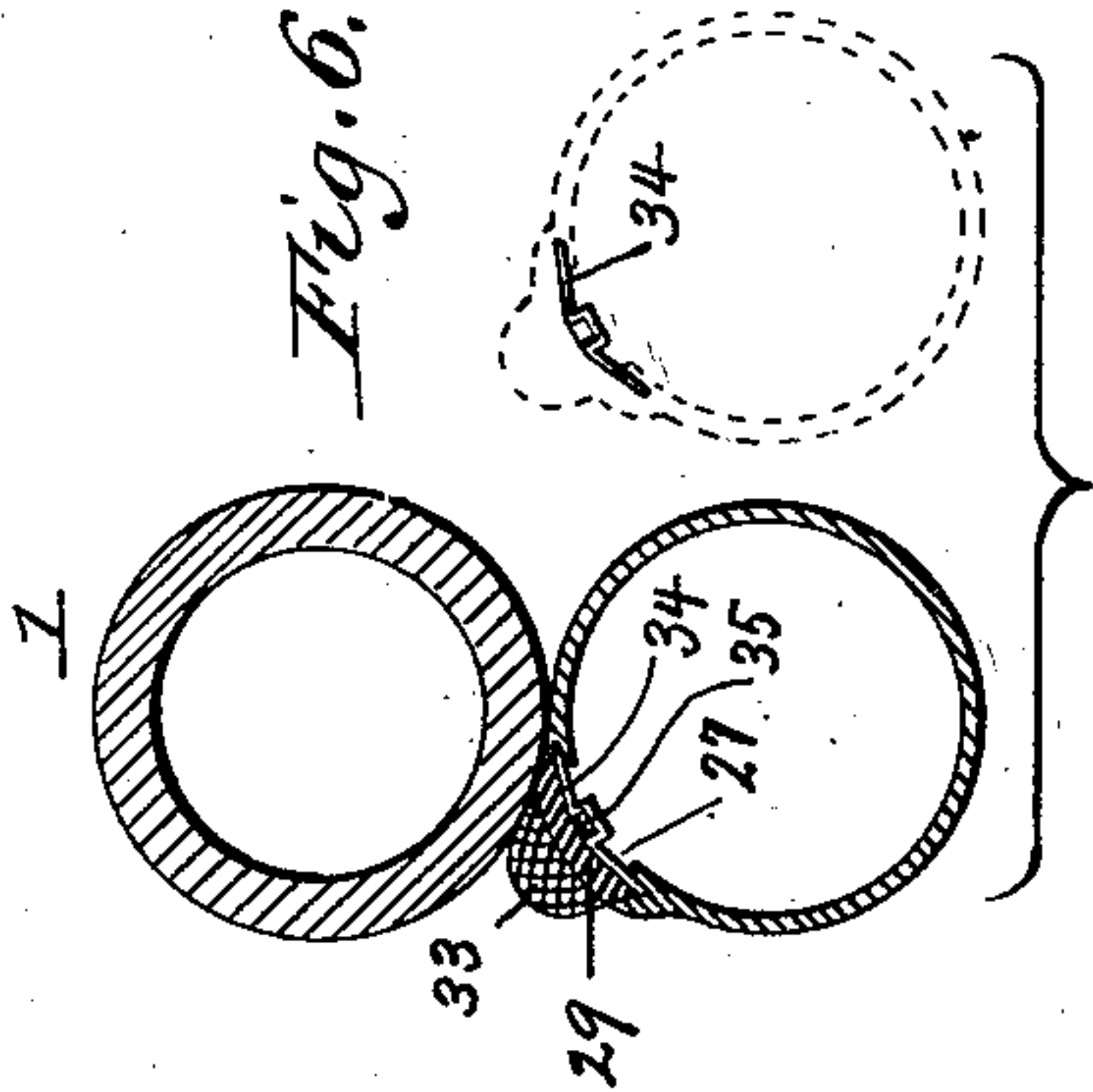


Fig. 5.

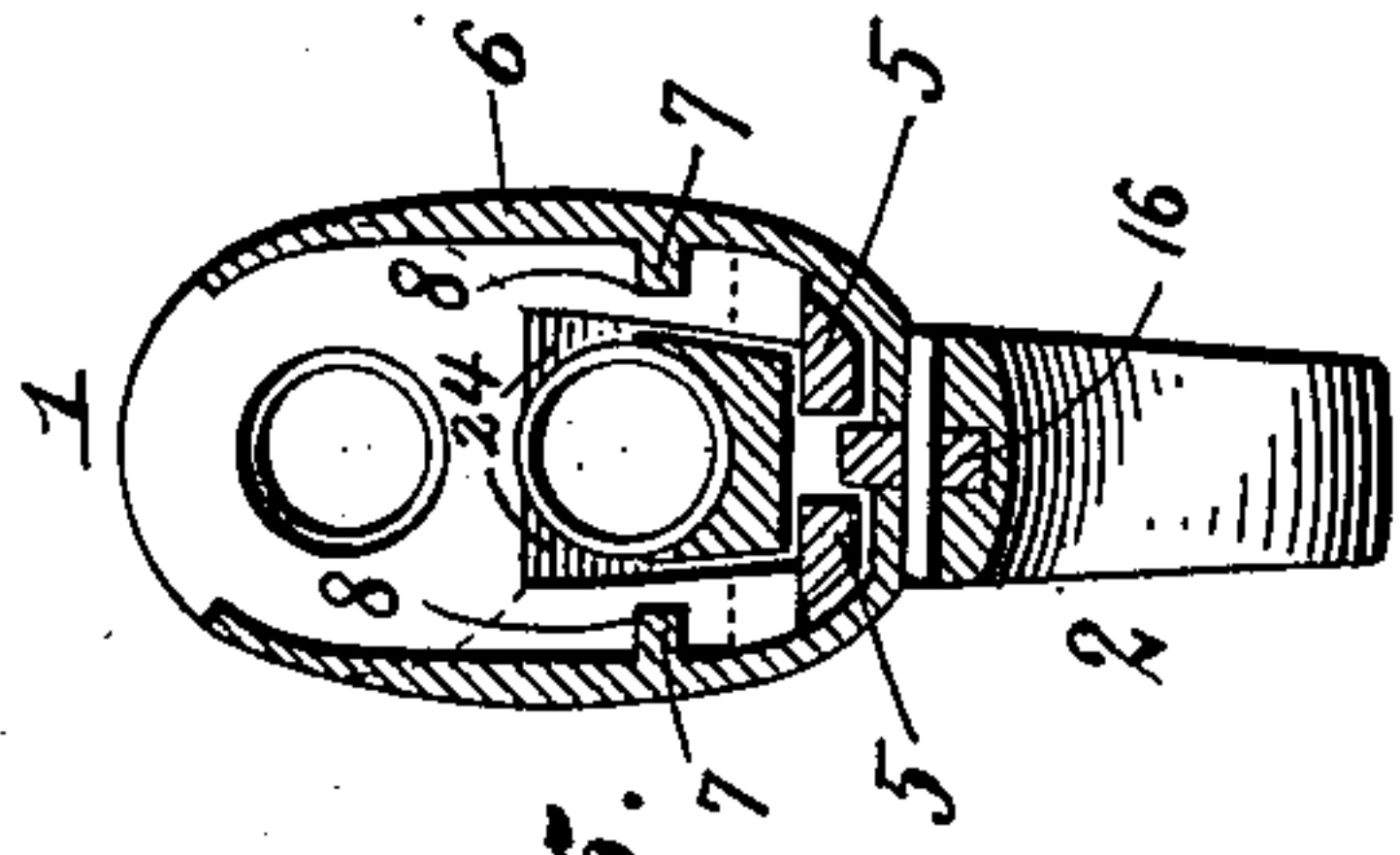


Fig. 6.

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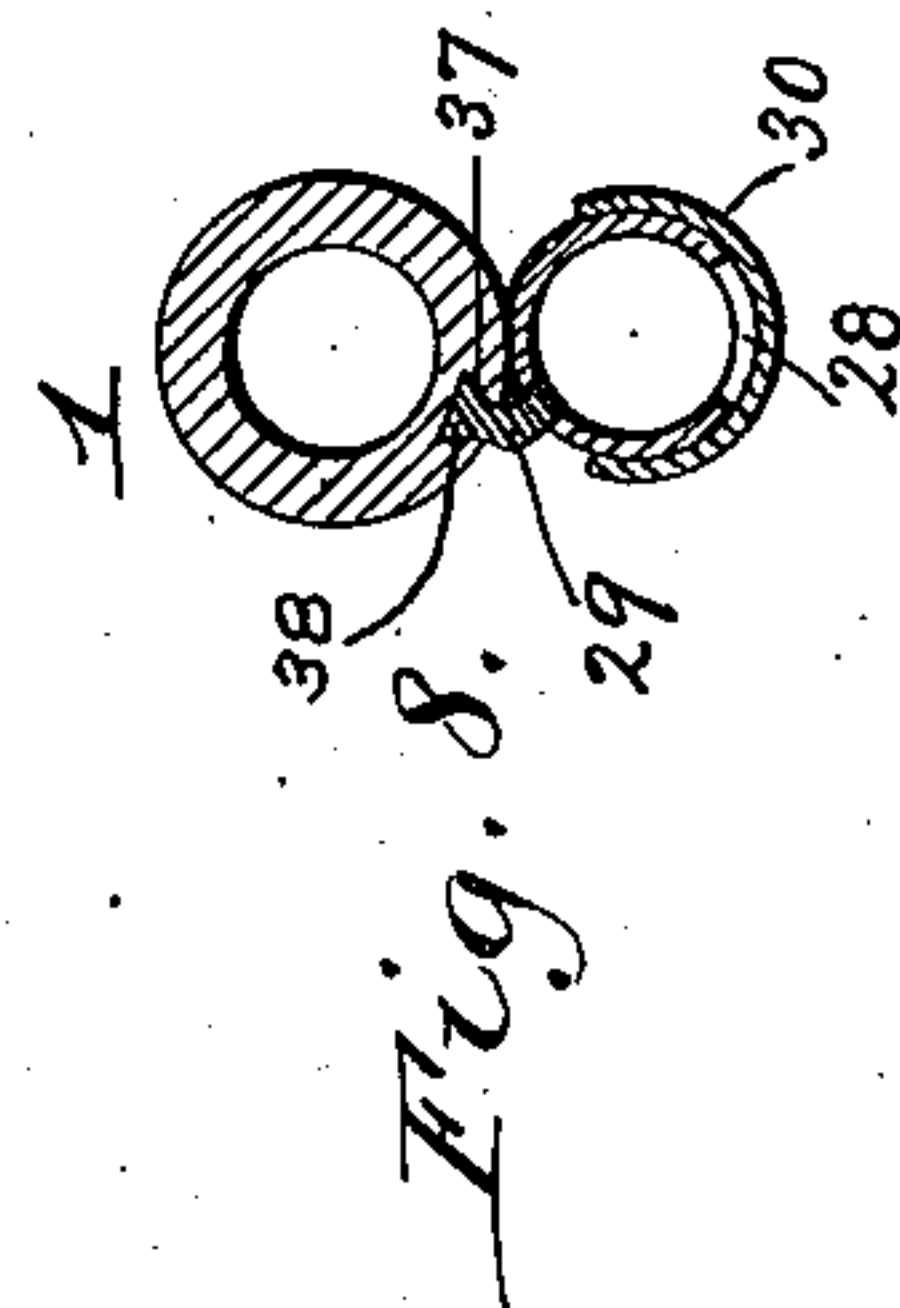
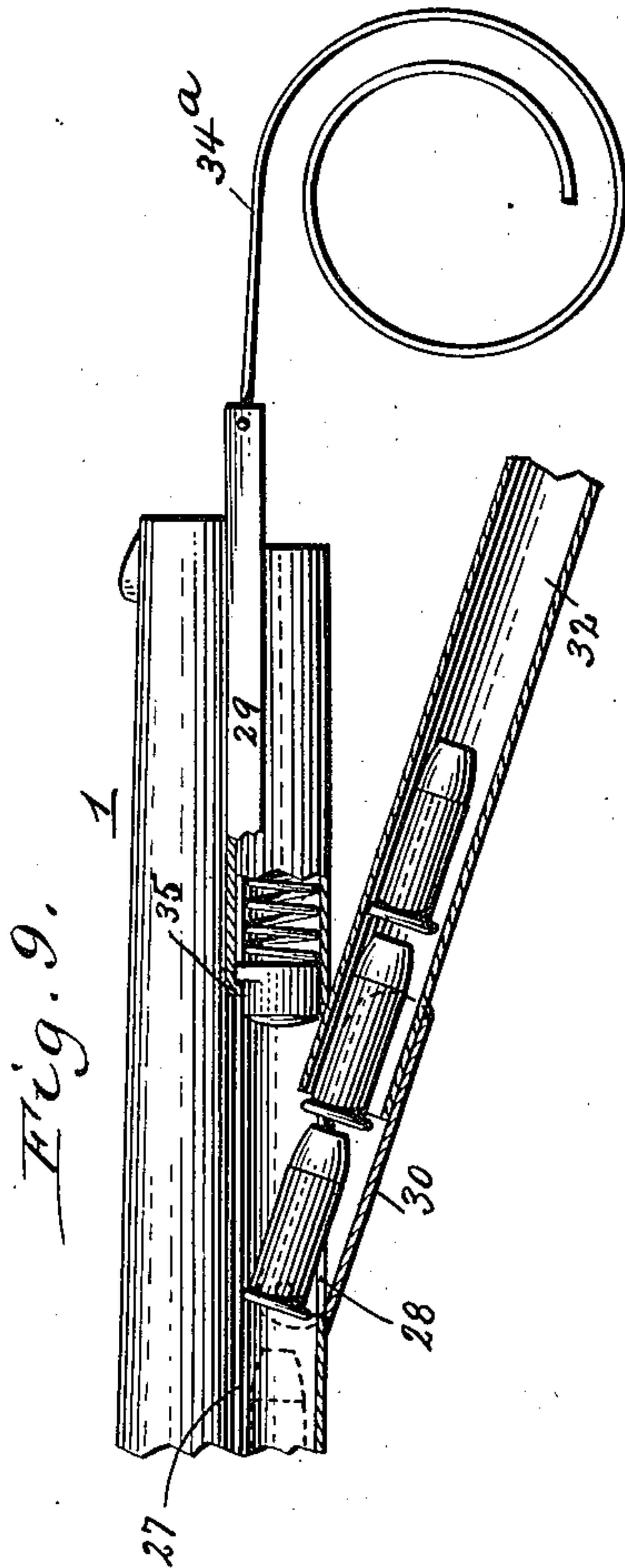
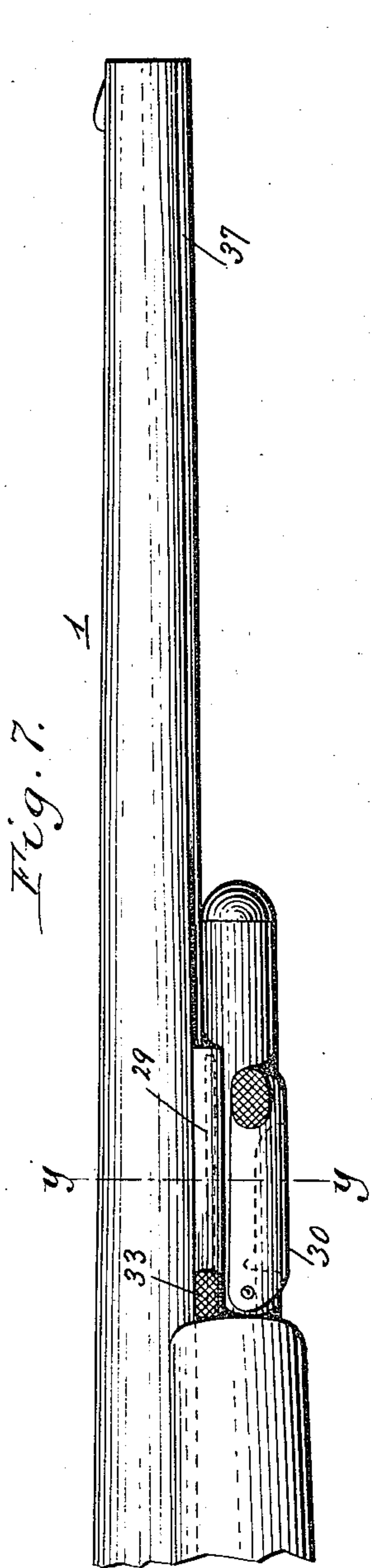
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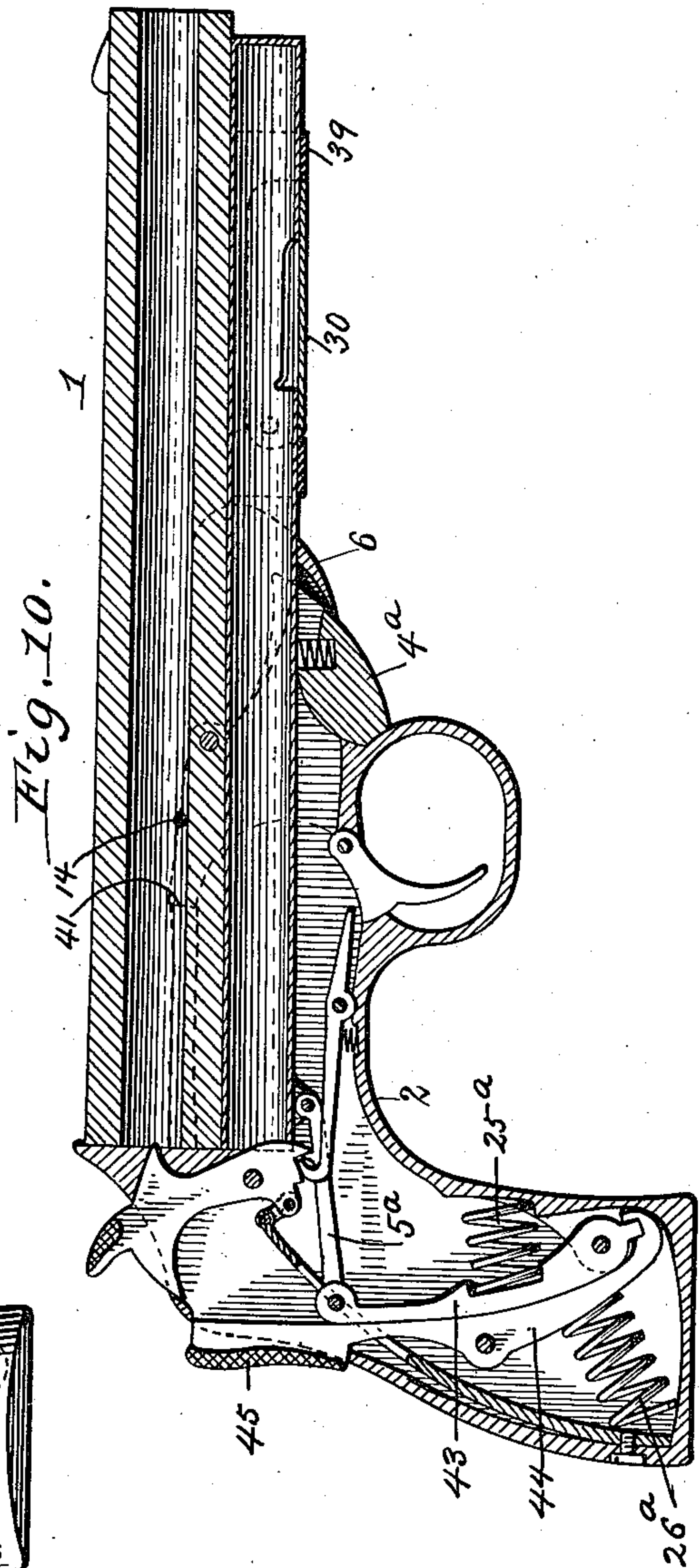
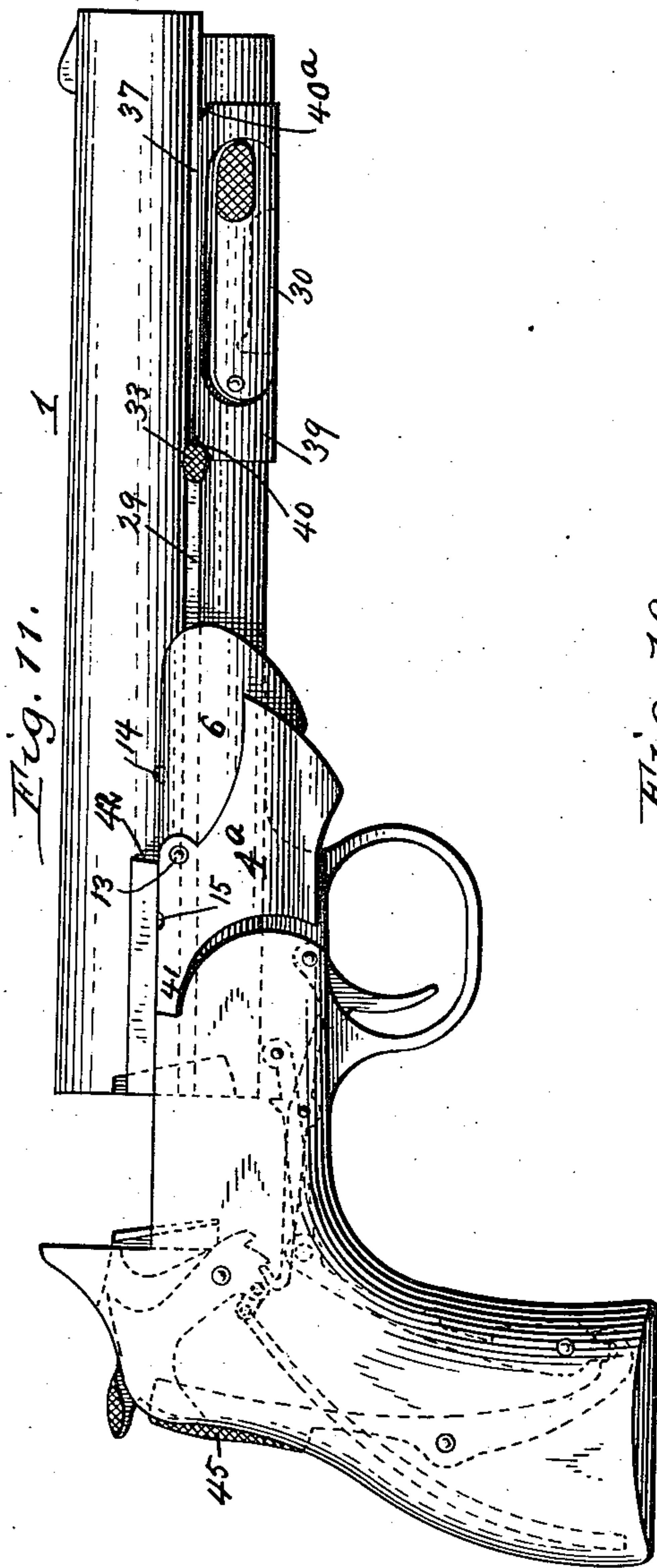
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# UNITED STATES PATENT OFFICE.

ANDREW BURGESS, OF BUFFALO, NEW YORK.

## AUTOMATIC MAGAZINE-FIREARM.

SPECIFICATION forming part of Letters Patent No. 557,359, dated March 31, 1896.

Application filed January 16, 1893. Serial No. 458,435. (No model.)

*To all whom it may concern:*

Be it known that I, ANDREW BURGESS, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented a new and useful Improvement in Magazine and Automatic Firearms, of which the following is a specification.

My invention relates to magazine and automatic firearms, and has for its object ease and simplicity of manipulation; and it consists in connecting a reciprocating barrel or breech-piece to a movable recoil-receiving piece or butt-plate, which operates through the recoil to open the breech; also devices for locking the breech part and barrel part together and unlocking them; devices for cocking the hammer and feeding the cartridges, and method and means of loading the cartridges into the magazine, together with other arrangements and combinations of parts hereinafter more fully set forth and claimed.

In the drawings, Figure 1 is a side elevation of the rear part of a shoulder-gun, parts being indicated in dotted lines. Fig. 2 is a similar view of the front part of the same gun. Fig. 3 is a longitudinal vertical section of the breech portion of the gun (omitting stock) and showing breech closed. Fig. 4 is a view similar to Fig. 3, showing breech open. Fig. 5 is a cross-section on the line  $xx$  of Fig. 3. Fig. 6 is an enlarged cross-section on line  $zz$  of Fig. 2 and a detail being also shown in full and dotted lines. Fig. 7 is a side elevation of the magazine-loading device; and Fig. 8, a cross-section on line  $yy$ , Fig. 7. Fig. 9 is a broken side elevation and partial section of modified device for moving the cartridge-follower. Fig. 10 is a sectional view of a modification of this gun in which a recoil-lever takes the place of the telescoping butt-plate, and Fig. 11 shows the outside of the modification of Fig. 10 with the breech open and mechanism indicated in dotted lines.

In the drawings, 1 is the barrel; 2, the frame; 3, the butt-plate; 4, the locking-piece, and 5 the operating rod or link.

The frame is carried forward in the hollow extension 6, which is provided with the ribs 7, entering corresponding grooves 8 in the barrel portion to thereby confine and guide the barrel to a longitudinal movement in the frame. A rod or link 5 has its forward end

connected to the barrel in convenient manner, as by the turned-up lug 9 on the rod or link entering between lugs 9<sup>a</sup> on the barrel, and this rod extends backward through the stock of the gun to be attached to the butt-plate, and thus connect the butt-plate with the barrel.

I show the rod 5 forked at its forward end; but that is not essential.

The butt-plate is hollow and arranged on the rear of the stock to slide over or "telescope" on the rear end of said stock to receive the recoil in a well-known manner, and has springs to press it backward.

The locking-piece 4, Figs. 2, 3, and 4, is pivoted to the barrel portion of the gun at 13 and has notches or hooks 10 to engage notches 11 of both sides of the frame, and a spring 12 is connected to the locking-piece to throw it into such engagement, as shown in Figs. 2 and 4.

The lower part of the locking-piece 4 is made heavy and constitutes an "inertia-piece" to bring the principal weight of the locking-piece below its pivot, and said locking-piece is also checked, so it may serve as a handle. I also show an auxiliary sliding inertia-piece 4<sup>b</sup> in Figs. 2, 3, and 4, which may be used alone when desirable.

A hole 14 extends through the wall of the barrel, the outer end of said hole being near a recess 15 in the locking-piece. The passage of gas through this hole tends to unlock the locking-piece directly after the cartridge is ignited.

The hammer is hung in the frame and provided with a mainspring, as usual, and a spring-sear 16 is hooked at its rear end to engage a notch in the hammer when in cocked position. The hammer is turned to cock it by a spur or shoulder 17 on the bar 5, which engages the projection 18 on the hammer below its pivot. When said bar 5 moves forward to turn the top of the hammer back to the position shown in Fig. 4, the spur 17 will then ride under the projection 18 of the hammer, which will remain cocked by being held by the hook of sear 16.

A projection 19 on the trigger bears against the bar 5 when the breech is open, as in Fig. 4, so said trigger cannot then engage the sear enough to pull it off, (out of engagement with



its notch in the hammer;) but when the breech shall be closed, as seen in Fig. 3, the bar moves rearward of the point 19, so the trigger is then free to move back and turn the sear and fire the gun in the usual manner.

The carrier 20 is pivoted in the frame at its rear end to lugs projecting downward from the top tang, and the forward concave part of the carrier extends under the magazine when the breech is closed, and its extreme front end strikes the projection 21 of the spring cartridge-stop to turn it and release a cartridge from the magazine.

A spur 23 on the bar 5 engages the carrier below its pivot, as seen in Fig. 4, when the breech is open to raise the carrier, and the carrier is lowered by the incline 24 of the barrel which engages the inclined face of the carrier when the breech begins to close.

It will be seen in Fig. 4 that the cartridge-stop is pivoted at the bottom of the magazine. Said stop has a downward projection 21 and has a hook 22 entering behind the cartridges to hold them in; but when said stop is carried back by the barrel in closing the breech the cartridge-stop is rocked by the inclined end of the carrier engaging therewith, and the cartridge next the stop is released and assumes the position shown in Fig. 3.

In firing, the gas produces pressure through the opening 14 in the barrel to act against the incline 15 of the locking-piece and, if the charge and pressure are great, will alone unlock it; but with less pressure it may require the assistance of the first part of the recoil of the gun, which starts the body of the gun back; but the inertia of the heavy lower part of the locking-piece (or the inertia-piece 4<sup>b</sup>) resists the backward movement and turns said locking-piece on its pivot to complete the unlocking of the breech. The further action of the recoil of the gun being resisted by the butt-plate or recoil-piece which is attached to the barrel, the frame and stock part of the gun only is free and then moves back by the recoil to throw the breech open, and the springs 25 and 26 between the recoil and non-recoil portions of the gun bear the parts in reverse direction to close the breech.

It is obvious that the gas-pressure may be used without the inertia locking-piece or inertia alone serve the purpose of unlocking the breech, and the locking-piece, as shown, may be used as a handle, when the forward pressure of the hand on its lower part will turn and unlock it and move it forward to open the breech and its backward movement close and lock it.

The magazine-tube M is attached to the barrel and provided with the usual follower and spiral spring. A slot 27 in the side of the magazine where it joins the bottom of the barrel extends forward of the loading-hole 28, and a bar 29 engages the follower through said slot to move it forward, as shown in Fig. 9. The loading-hole is protected by a pivoted cover 30, which springs in to grip the maga-

zine and hold it closed, as in Fig. 2; but its forward end may be pulled down, as shown in Fig. 9, when it forms an apron or guide into the loading-hole suitable to receive a loading-tube, as 32, adapted to carry the cartridges and which may drop them all into the magazine, rearward of the follower, at one movement, and the cover may be then pushed upward to close the opening.

Methods of forcing forward the follower through a slot in the magazine are well known, and an outer or inner tube has been used to close the slot.

The side of the magazine-tube M is slotted. (See especially Fig. 6.) A metallic ribbon 34 has its edges in the guide-grooves at the edges of the slot. This ribbon 34 is bent in cross-section, as clearly shown in Fig. 6, except near the ends. (See Fig. 2.) A slide-piece 29 is connected to the ribbon 34 by a pin 35 extending into the internal groove in the ribbon 34. The slide-piece 29 has a button or push-piece 33 attached. The slide-piece 29 has its edges embraced in the groove in the magazine-tube above the edges of the ribbon 34. The slide-piece 29 turns into the slot so as to extend over the end of the follower, as shown in Fig. 9.

To draw back the follower and compress the spring the slide-piece 29 is pushed toward the muzzle, drawing the follower with it, the ribbon 34 sliding when the pin 35 engages the ends of the groove.

In the modification, Fig. 9, the ribbon 34<sup>a</sup> is attached to the slide-piece 29 and is projected from the front of the magazine when the follower is pressed back, coiling itself into position something like that shown in Fig. 9. When the slide-piece 29 is drawn toward the breech of the gun, the ribbon 34 closes the slot in the magazine.

Another modification is shown in Figs. 7 and 8, which is especially applicable to a short magazine. A longitudinal dovetail groove 37 is made in the forward part of the barrel and a rib 38 of the bar 29 enters said groove to hold and guide the bar in its forward and back movement, and by carrying the groove 37 forward to the muzzle of the barrel the bar will move the follower ahead of the loading-hole, projecting but little, if any, beyond the barrel.

A further modification is shown in this connection and with the cover 30 in Fig. 11. The bar is guided by a slot in the barrel, as just described and shown in Figs. 7 and 8, and the device to cover the magazine-slot consists of a thin spring-casing 39 on the outside of the magazine-tube. The casing is open at its top and the edges of its opening abut against the barrel and one edge covers the slot in the magazine. On the covering edge is the incline 40, just forward of the bar 29, so that when the bar shall be forced forward it will engage said incline and thereby force back the edge of the casing to uncover the slot and allow the bar to pull the follower forward, as



before, when the incline 40 will hold the bar forward and the casing will spring back to cover the magazine-slot on moving back the bar.

5 Figs. 10 and 11 show a modification or reversal of the locking device and also a modification of the device for operating the breech in which multiplying-levers are used and a projection from the stock of a pistol is made  
10 to serve as a recoil-piece, in the manner of the butt-plate of Fig. 1. The locking-piece 4<sup>a</sup> is pivoted to the frame extension 6 and has a brace 41 at its rear to swing up, forward of the locking-abutments 42; on both sides of  
15 the barrel to lock the breech, as in dotted lines, Fig. 10, or swing down, as in Fig. 11, to allow the barrel to move forward. The heavy lower part of the locking-piece serves as an inertia-piece to unlock by its inertia, as  
20 before, and the pressure from firing may operate through the opening 14 in the barrel on the incline 15, as before described. The bar 5<sup>a</sup> is attached to the barrel and is here connected to the lever 43, which is operated by  
25 the lever 44 through its projecting hand or recoil piece 45. Springs 25<sup>a</sup> and 26<sup>a</sup> are arranged to turn the levers and close the breech.

It is obvious that the butt-plate, in place of telescoping on the butt-stock, may be fixed  
30 to said stock, which would then telescope with the frame in an equivalent and well-known manner. Then the frame only would move back and operate precisely as the frame and stock portion, as described.

35 I claim—

1. In a gun, the combination of a recoil-piece at the rear end, a connection from said recoil-piece to the barrel, and the frame and breech-piece moving rearwardly between the  
40 barrel and the recoil-piece under the influence of recoil, substantially as described.

2. In a gun, the recoil-piece at the rear, the breech-piece between, and the barrel, and lever connections from the recoil-piece to the  
45 barrel whereby the movement of the barrel may be increased relatively to the movement of the recoil-piece or the breech-piece.

3. In a gun, the breech-piece, the movable butt-plate in position on the stock to rest  
50 against the person of the gunner and thus serve as a recoil-piece, and the barrel connected to the butt-plate by a link, whereby the barrel is moved forward by the impulse of recoil, all combined substantially as described.  
55

4. In a gun, the breech-piece, the recoil-piece and barrel connected by a lever so that the barrel is moved forward by the impulse of recoil, and the spring acting to return the  
60 barrel against the breech-piece, all combined substantially as described.

5. In a gun, the breech-piece and the barrel, a recoil-piece operatively connected to the barrel to move the same away from the  
65 breech-piece under the impulse of recoil, means for retaining the barrel and breech-piece in their closed relation, and an inertia-

piece, connected to said locking means, and acting to give a final impulse to the unlocking under the impulse of recoil, all combined  
70 substantially as described.

6. In a gun, the barrel, breech-piece, and recoil mechanism operatively connected substantially as described, the locking mechanism engaging the breech-piece and barrel, and  
75 the pivoted inertia-piece forming an operating-handle and acting on the locking mechanism to give an impulse of unlocking, all combined substantially as described.

7. In a gun, the breech-piece, the longitudinally-sliding barrel, the recoil-plate and mechanism connecting said plate to the barrel, means for locking said parts in their closed relation, means operated by pressure from the bore of the gun for unlocking the  
85 barrel from the breech, and the inertia-piece acting on said locking means to give the final unlocking impulse, all combined substantially as described.

8. In a magazine-gun, the barrel, the breech-piece, the recoil-piece connected to the barrel, the pivoted cartridge-carrier, and a projection on the barrel and recoil-piece connection, acting on the carrier to tilt the same as the barrel and breech are separated, all combined  
90 substantially as described.

9. In a magazine-gun, the barrel, breech, and recoil-piece connected to the barrel, the hammer, and a projection on the connecting-piece between the barrel and recoil-piece by  
100 which said hammer is cocked, all combined substantially as described.

10. In a magazine-gun, the tubular magazine having a side opening therein, a pivoted cover to said opening adapted to swing outwardly, and a stop by which the outward movement of said cover is limited, whereby the cover is made to act as a loading-guide, and retain the loading-tube in position between the gate and forward part of the magazine, all combined substantially as described.  
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11. In a magazine-gun, the tubular magazine having a side slot, the metallic ribbon having side supports and covering said slot, and means for moving said ribbon lengthwise  
115 of said slot, all combined substantially as described.

12. In a magazine-gun, the magazine having a side slot and a guideway in proximity thereto, the metallic ribbon supported in said  
120 guideway, and the cover-piece having telescopic connection to said ribbon, all combined substantially as described.

13. In a magazine-gun, the tubular magazine having a longitudinal slot, the dovetail grooves at the side of said slot, the metallic ribbon having its edges in said dovetail grooves, and the slide-piece connected to said ribbon, all combined substantially as described.  
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14. In a gun, the recoil-piece, barrel, and breech-piece operatively connected substantially as described, the means for locking the parts in relatively-fixed position, and the bar-  
130



rel-opening in proximity to said locking means, to permit the passage of gas from the bore of said locking means, whereby the same may be unlocked, all combined substantially  
5 as described.

15. In a magazine-gun, the frame, breech, and pivoted carrier having an abutment at its front, and the sliding barrel having an incline at its rear in position to engage and depress  
10 said carrier as the barrel closes backward, all combined substantially as described.

16. In a magazine-gun, the barrel, breech, recoil-piece, and a connecting-piece from the recoil-piece to the barrel, the magazine and  
15 cartridge detent-trip operatively connected to the recoil-piece, all combined substantially as described.

17. In a gun, the breech-piece, the longitudinally-sliding barrel, the recoil-plate and mechanism connecting said plate to the barrel, means for locking the breech-piece and barrel together, and means operated by pressure from the bore of the gun for unlocking the barrel from the breech-piece to allow the barrel to be forced forward by the discharge  
20 by pressure from the recoil-plate, all combined substantially as described. 25

In testimony whereof I herewith affix my signature in presence of two witnesses.

ANDREW BURGESS.

Witnesses:

EDWARD G. FELTHOUSEN,  
THEO. L. POPP.