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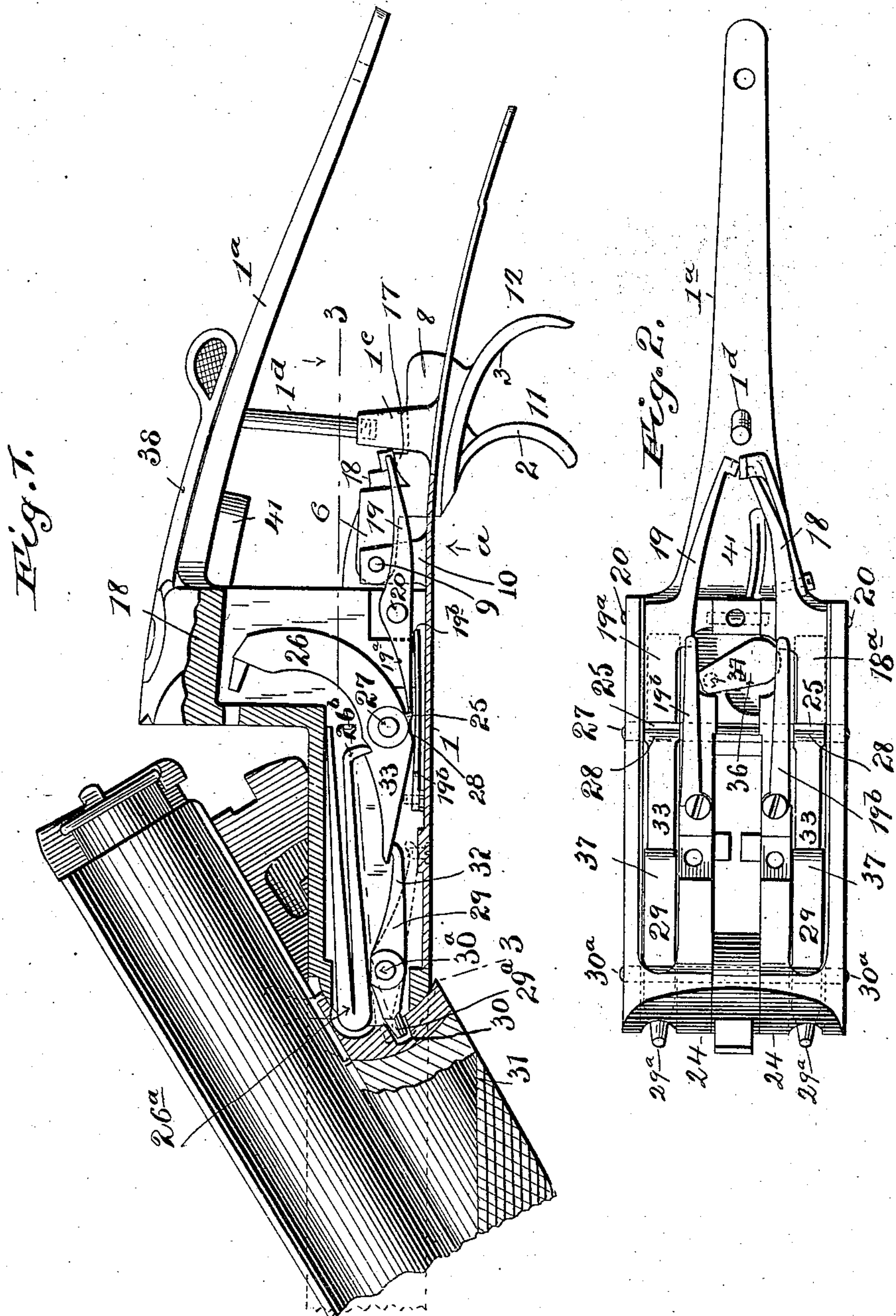
Patented Dec. 11, 1900.

F. E. JAEGER.  
LOCK FOR MULTIBARREL FIREARMS.

(Application filed June 22, 1900.)

(No Model.)

3 Sheets—Sheet 1.



WITNESSES  
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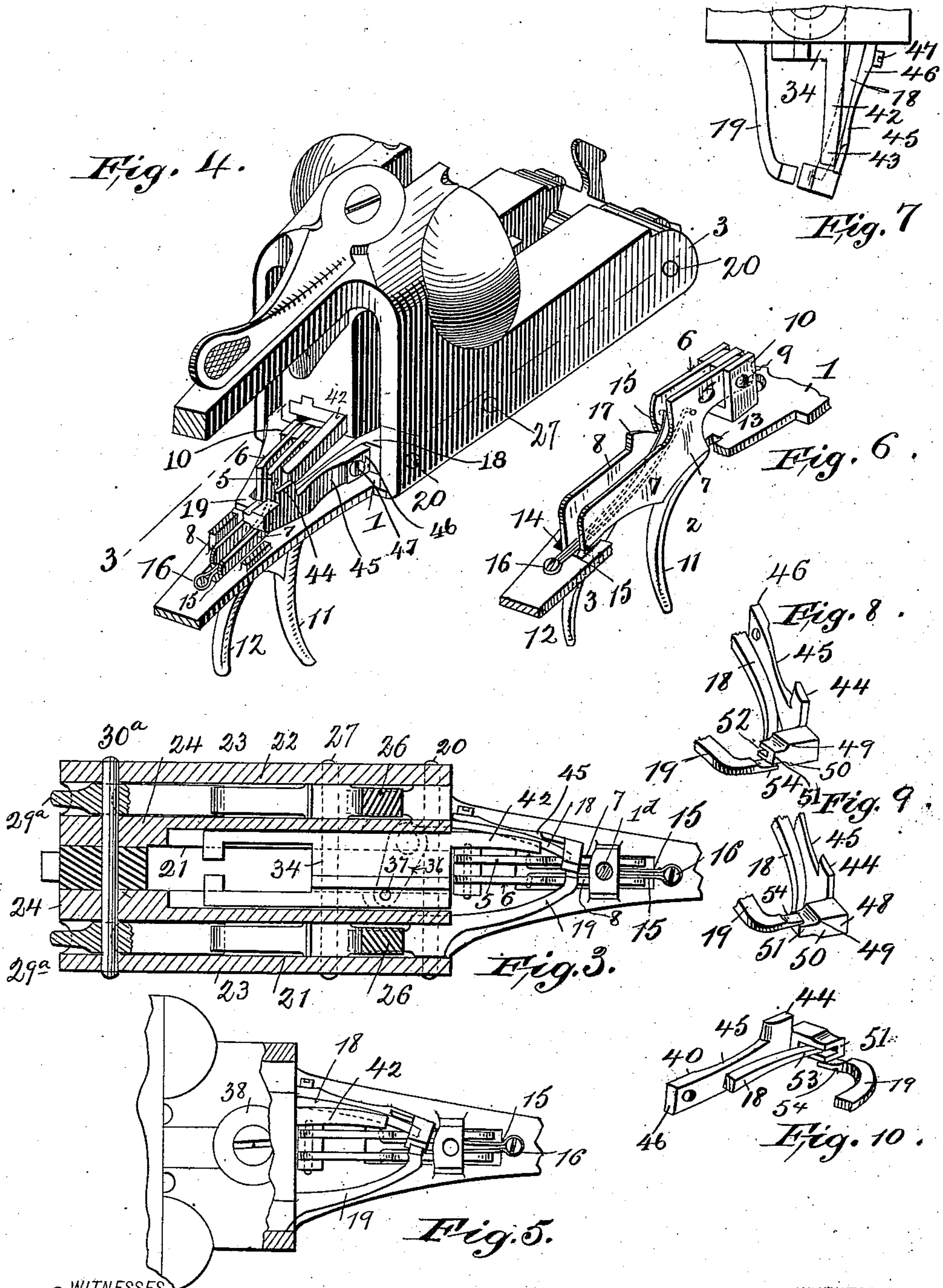
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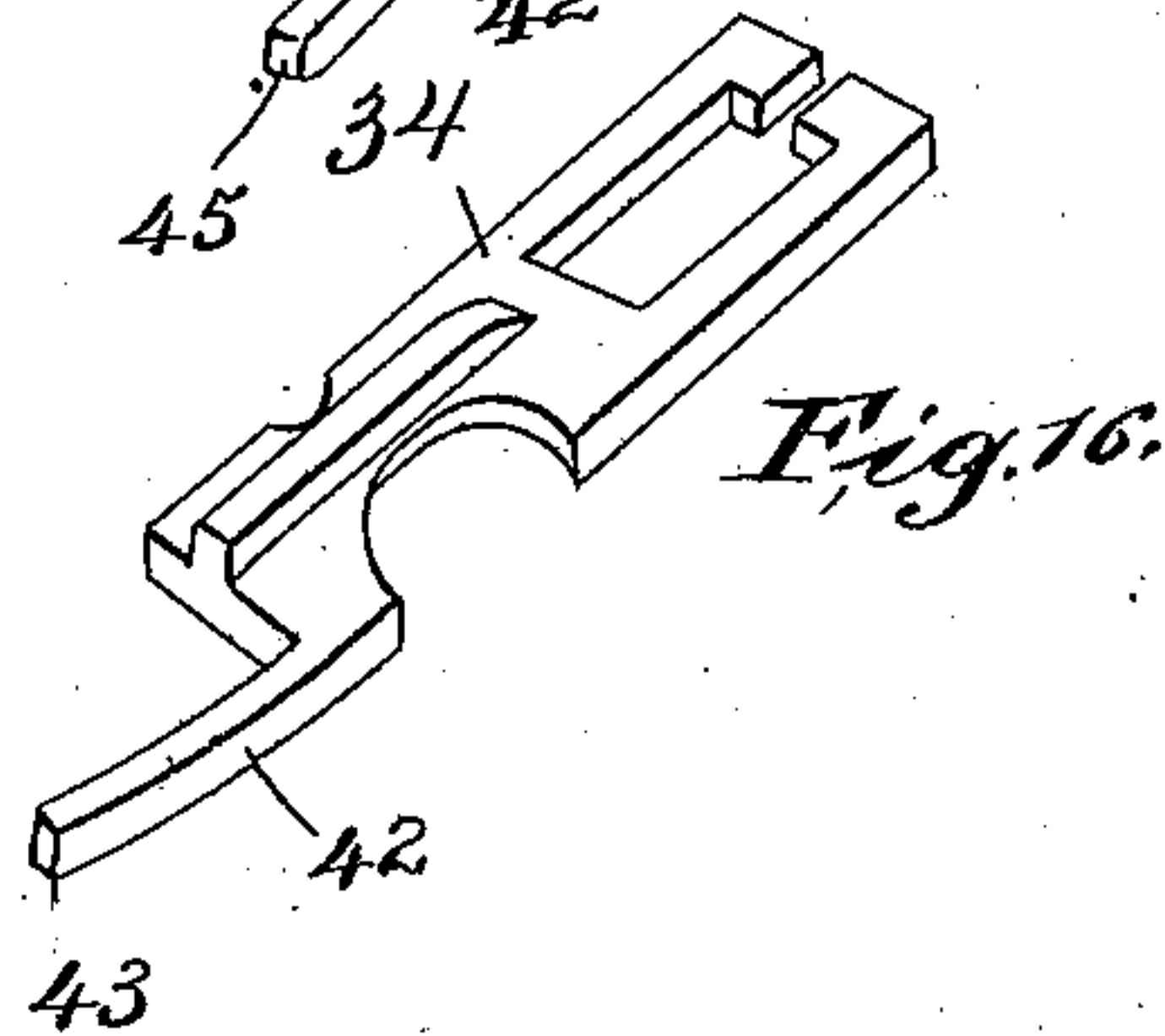
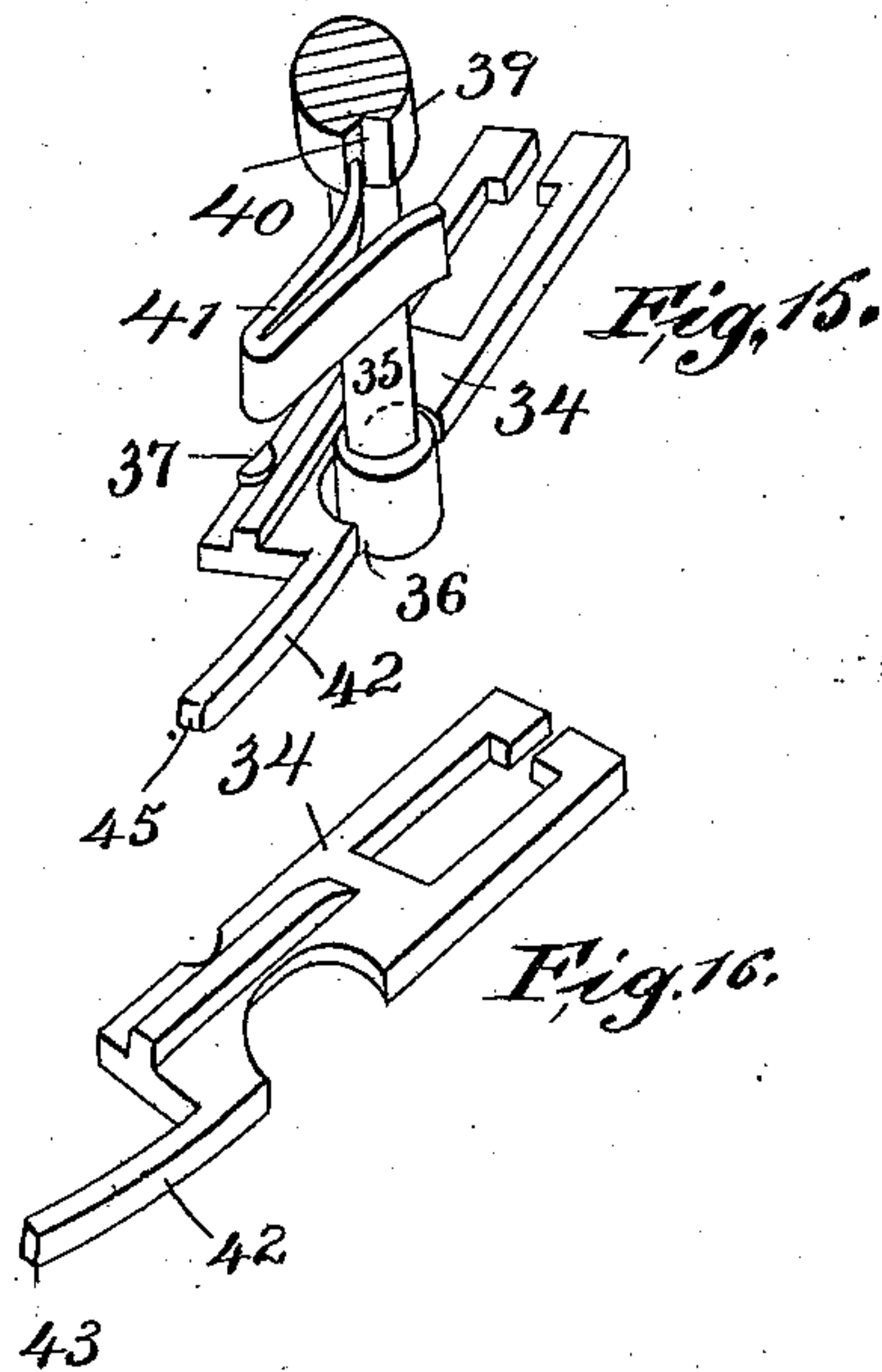
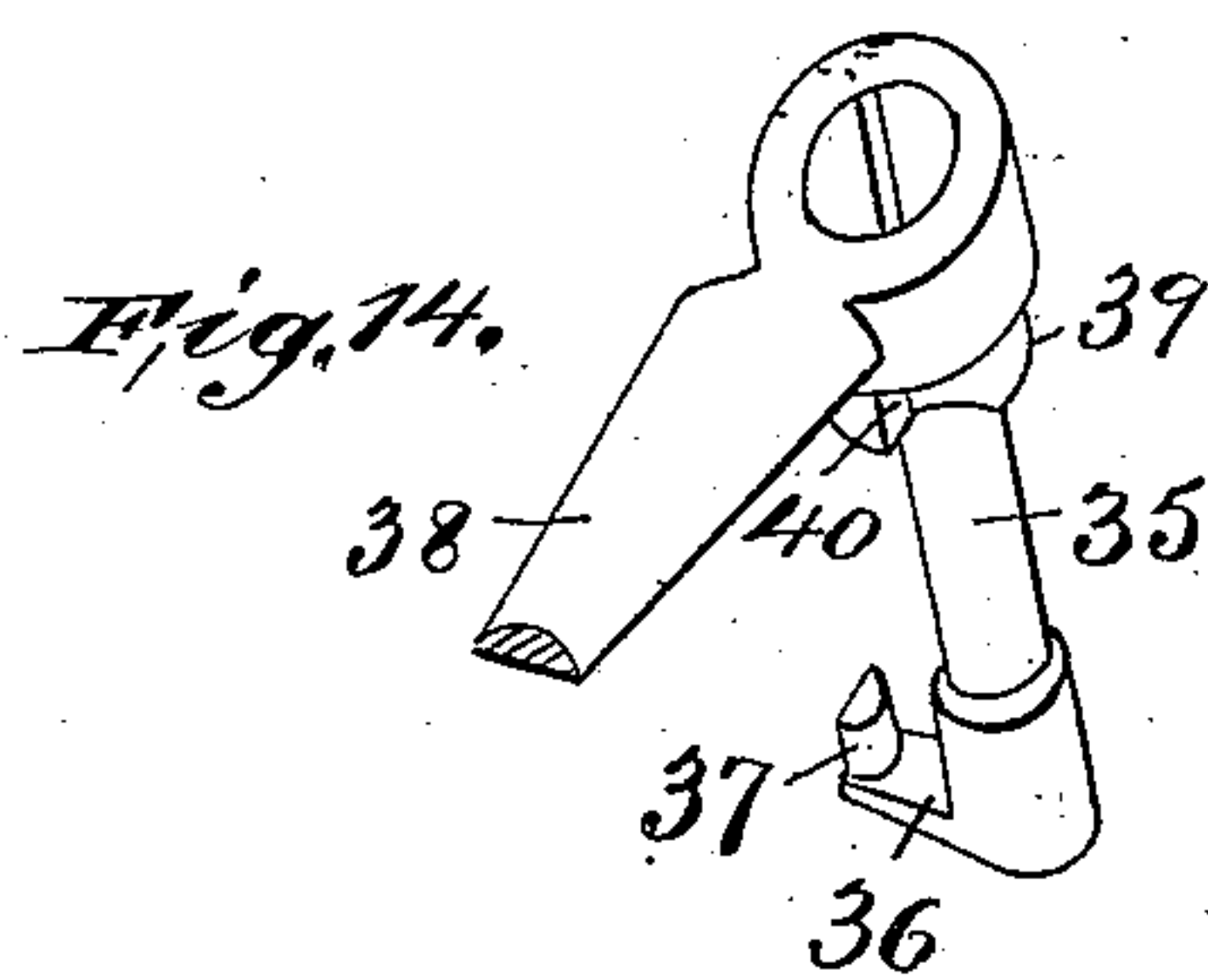
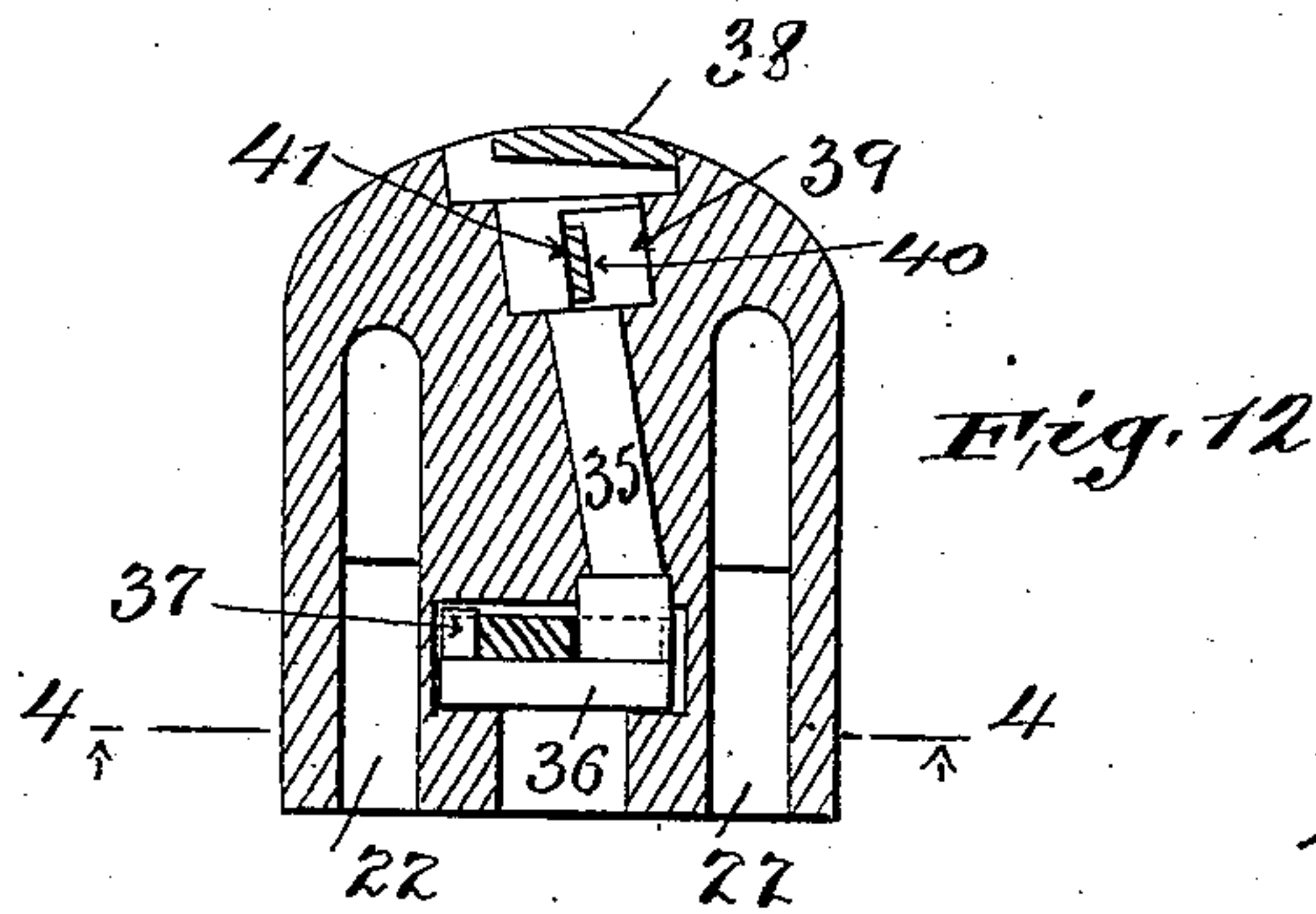
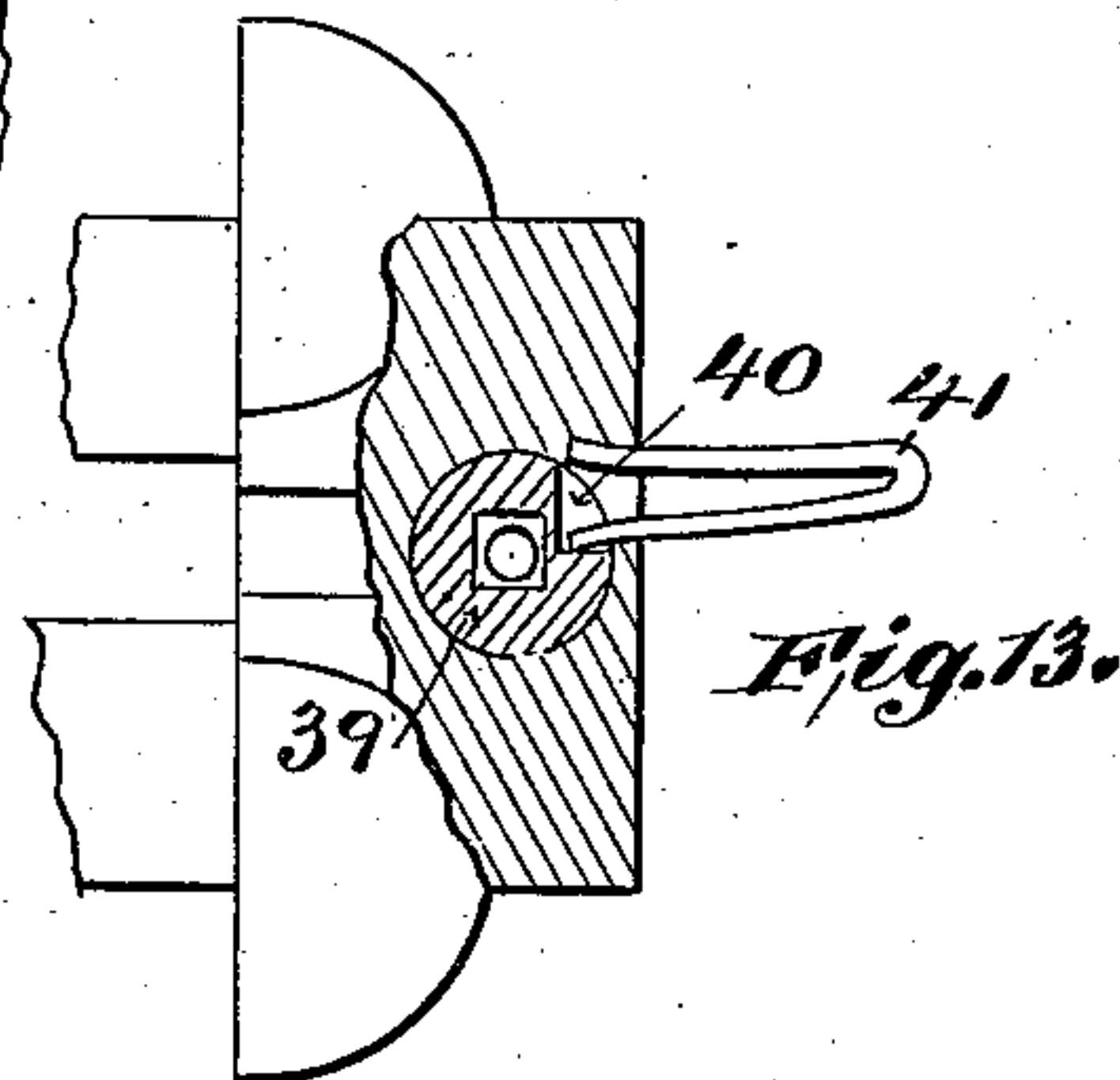
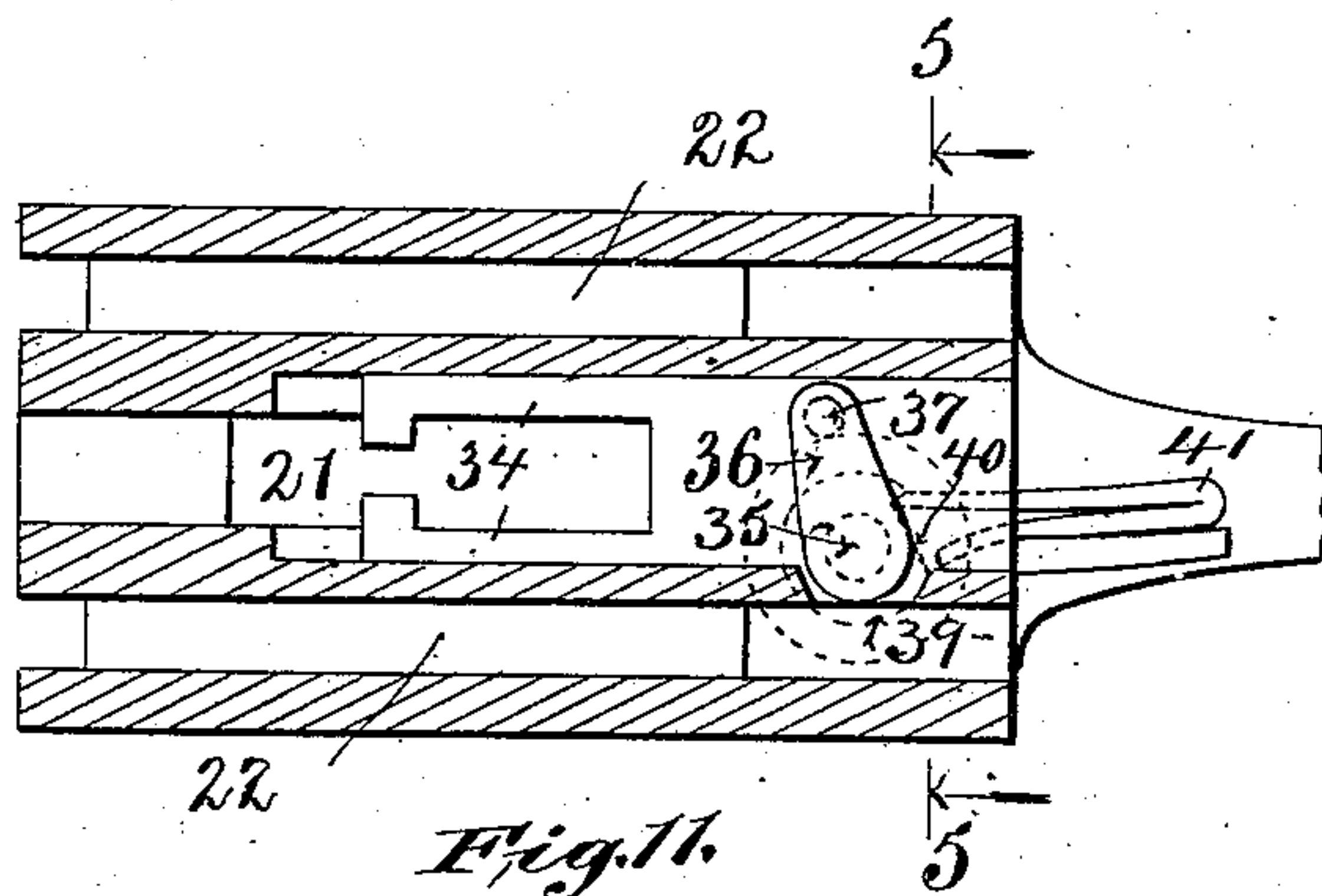
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# UNITED STATES PATENT OFFICE.

FRANZ E. JAEGER, OF NEW YORK, N. Y., ASSIGNOR OF TWELVE TWENTY-FIFTHS TO EDMUND BITTNER AND CARL BITTNER, OF SAME PLACE.

## LOCK FOR MULTIBARREL-FIREARMS.

SPECIFICATION forming part of Letters Patent No. 663,545, dated December 11, 1900.

Application filed June 22, 1900. Serial No. 21,193. (No model.)

*To all whom it may concern:*

Be it known that I, FRANZ E. JAEGER, a subject of the Emperor of Germany, residing in the city, county, and State of New York, have invented certain new and useful Improvements in Locks for Multibarrel-Firearms, of which the following is a specification.

My invention has relation to a lock or hammer mechanism for firearms having a plurality of barrels; and the object of my invention is to provide a mechanism whereby an ordinary multibarreled gun can be fired in the usual manner—viz., by pressing the front or right trigger the right barrel is discharged or by pressing the left trigger the left barrel is discharged, or it is adapted to fire the right and left barrel by pressing the front trigger twice, once for each barrel, or the reverse order for left and right barrel may be used by pressing the rear trigger twice, once for each barrel.

My invention therefore consists in the construction and novel combination of parts whereby the foregoing results can be accomplished.

In the drawings forming part of this specification, Figure 1 is a side elevation of the frame of the gun, with the part of the barrel connected therewith, partly in section. Fig. 2 is an inverted plan view of the frame and upper tang with the trigger-plate removed, looking in the direction of the arrow *a*, Fig. 1. Fig. 3 is a longitudinal sectional view taken approximately on the line 3-3, Figs. 1 and 4. Fig. 4 is a perspective view of the frame, showing the trigger mechanism. Fig. 5 is a plan view of the frame with the upper tang removed, showing the sears in the position which they will occupy when the right sear has been fired and the tripper-block dropped and engaging the left sear preparatory to firing the left barrel by the right trigger. Fig. 6 is an enlarged perspective view of the triggers and their method of support. Fig. 7 is an end view of a portion of the frame, showing the two sears, the bridge-bolt, and the tripping extension therefrom. Fig. 8 is an enlarged perspective view illustrating the connection of the tripper-block and spring, the position of the sears indicating the left

barrel fired, with the right ready to be fired by the left trigger. Fig. 9 is a like view indicating the reverse of the operation illustrated in Fig. 8 and wherein the right barrel has been fired by the right-hand trigger, the sear for the left trigger being in a position for firing the left barrel by the movement of the right or front trigger. Fig. 10 is a perspective view illustrating the connection of the right sear with the tripper-block and spring, the left barrel having been fired by the left trigger, the right ready through the left trigger. Fig. 11 is an inverted longitudinal sectional view of the upper portion of the frame approximately on the line 4-4, Fig. 12; and Fig. 12 is a transverse sectional elevation on the line 5-5, Fig. 11. Fig. 13 is a section and plan of the rear end of the frame. Fig. 14 is a perspective view of the bridge-bolt-operating means. Fig. 15 is a like view of the bridge-bolt and its operating means combined, and Fig. 16 is a like view of the bridge-bolt detached.

Similar numerals of reference indicate corresponding parts throughout the several views.

The improvements herein recited embrace two or more sears, with means for cocking the hammers, simultaneously raising the rear or operative ends of the sears, and further means (specifically a retractile tripper-block) for automatically connecting the rear ends of the sears, whereby either trigger will initially vibrate the sear—say the right—with which it first comes in contact and then on a repetition of the vibration operate the left sear.

The improvements also embody means which in the present instance is utilized from a part of the gun ordinarily employed for the purpose of locking the barrels to the stock and unlocking them, whereby after the discharge of either or both of the barrels, which involves the vibration of either or both of the sears, the tripper-block will be moved outwardly, so as to allow the tripper-block to assume what I shall call its "intermediate" or "normal" position.

From the foregoing and as hereinafter pointed out it will be apparent that my specific improvements embody means for automatically connecting and disconnecting the



ends of the usual sears and adding to the locking or bridge bolt or equivalent mechanism an extension for operating this connecting means.

5 I have illustrated, therefore, the parts of a gun of usual construction and which are adapted to cooperate with my improvements; but it will be clear that my improvements may be embodied in guns of other construction.

10 In the drawings forming part of this specification, 1 is the trigger-plate, provided with a plurality of triggers 2 3, there being two in this special instance, 2 being the right or forward and 3 the left or rear trigger, the forward portions or noses 5 6 of the trigger-shanks 7 8 being pivoted to the pin 9 in the block 10, the trigger on the right-hand side having its finger-hold 11 more forwardly presented than the one on the left-hand side, whose finger-hold 12 is at the rear, whereby they are termed "forward" and "rearward" triggers, both trigger-shanks passing through slots 13 14 in the trigger-plate. A retaining-spring 15, Figs. 3, 4, and 6, secured to the trigger-plate 16 and having its free ends secured to the trigger, is also present. This holds the triggers in their proper places and prevents them from dropping. The rear or left trigger 3 is provided with a projection 17, Fig. 6, for engaging with the left sear, as hereinafter described. The right sear is not so provided, the reason for which will be apparent farther on.

35 At 18 19 are the right and left sears, respectively controlled in the usual way by the sear-springs 19<sup>b</sup> and which are hinged upon a pin 20, which passes from side to side of the frame, across the side and central grooves 21 22, and through the separtments 23 24, their forward ends being adapted to engage when the hammers are cocked, as shown in Fig. 1, a nipple or lug 25 extending from the hammers 26 near their pivoting-pins 27, all in the usual way. 40 The usual mainspring 26<sup>a</sup>, with its tooth 26<sup>b</sup> engaging the hammer in the usual way, is also present. The hammers forward of the lug 25 are recessed or notched, as at 28, to provide means for allowing the forward ends 50 18<sup>a</sup> 19<sup>a</sup> of the sears a further or supplemental downward movement after discharge.

At 29 is the cocking-lever, pivoted on the pin 30<sup>a</sup> and of the usual construction, its nose 29<sup>a</sup> being adapted to engage an aperture 30 in the muzzle-butt 31 of the gun, the rear extension 32 of which engages the forward projection 33 of the hammer in the usual way.

60 At 34 is the bridge-bolt usually employed for the purpose of locking the barrels to the frame. This bolt is adapted to be reciprocated forwardly and rearwardly and guided in the usual manner by the upright rod 35, the bolt resting on the rocker-arm 36 and is held in place by pin 37, eccentrically engaging the bolt, the reciprocation being caused by the eccentric movement of the pin 37, 65 the upper end of the rod being secured to the

lever 38, having a hub 39, provided with a shoulder-recess 40, engaging the free end of a spring 41, fastened in the frame, all operating in the usual way. 70

The rear end of the bridge-bolt 34 is provided with an extension or arm 42, acting as a retractor for the tripper-block, to be described, and which is normally in line with 75 and adapted to have its cam-like end 43 engage with an upwardly-extending lug 44, formed on a flat spring, the inner end 46 of which is secured by a screw 47 to the right-hand sear 18, and at the end of the spring 80 (which I shall call the "tripper-spring") is formed the tripper-block, having shoulders 49 50 formed on the upper and lower surface thereof, connected by a vertical wall or projection 51, forming an intermediate recess 52, 85 into which the rear end 53 of the right-hand sear 18 rests, so as to form a support for the end of the tripper during the latter's movement transversely relatively to the ends of the sears, while the rear end of the left sear 90 19 is provided with an inwardly-projecting point 54.

The spring 45 and tripper-block 48 may be secured to either sear, if desired, accompanied by a like change in the location of the extension 42 from the bridge-bolt. 95

The operation is as follows: The lever 38 being vibrated, moving the bridge-bolt against the stress of the spring 41, so as to break the gun-joint, and simultaneously moving the projection 42 rearwardly causes it to strike the lug 44 on the spring, thereby forcing it to spring sidewise or laterally against its tension, and thus moving the tripper-block 48 away from its engagement with the point 54 of the left-hand sear 19, the block being moved upon the end of the right-hand sear 18 as a guide, and whenever the lever 38 is released and the bridge-bolt retracted the spring will force the intermediate nose or projection 51 of the tripper-block against the point 54 of the left-hand sear, thereby holding the tripper-block in its intermediate or normal position. The discharge of either or both barrels leaves either the left-hand-sear point on top of the nose of the tripper-block or, reversely, the nose of the tripper-block on top of the left-hand-sear point, and the rearward movement of the bridge-bolt and its extension throws out the tripper-block to free the nose from the sear-point, allowing the sear-spring to vibrate the rear end of the sear downwardly to bring it in line with the projection of the tripper-block, or, reversely, should the discharge have left the tripper-block on top of the left-hand sear the rearward movement of the projection 42 will free the tripper-block from the left-hand sear, allowing the right sear to drop down and bring the nose of the tripper-block into contact with the left-hand-sear point, so that simultaneously with the operation of breaking the gun the tripper-block is moved out of engagement with the left-hand sear, or vice versa, allowing the rear end of either of 130



the sears to vibrate downwardly, bringing the tripper into its normal or intermediate position, the gun being broken at the joint, and, further, upon breaking or opening pivotal movement of the parts cocks the hammers and elevates the rear ends of the sears. The gun parts are then in position to permit either trigger to be vibrated, say, to discharge the right and left barrel by the right trigger or left and right barrel by the left trigger, or both barrels from both triggers, as right trigger for the right barrel and left trigger for the left barrel. When the sears are ready for discharging vibration, as before stated, the tripper-block is in the normal position ready to discharge the gun, as indicated in Figs. 1, 2, 3, and 4, with the nose 51 in contact with the point 54 of the sear 19.

By reference to Fig. 3 it will be noted that should the right-hand or forward trigger be vibrated the trigger-shank 7 will come in contact with the lower side of the tripper-block, (which, being deeper than the sear-plate 19, does not require the lug 17, which is formed upon the trigger-shank 8,) elevating the rear end of the sear 18 through its connection with the recess 52 of the tripper-block, depressing the forward end 18<sup>a</sup> of the sear 18 from the dog 25 against the stress of the sear-spring 19<sup>b</sup> on the hammer, allowing the mainspring 26<sup>a</sup> to vibrate the lower end of the hammer, forwardly moving the upper end of the hammer for discharge, so as to bring the recess or notch 28 in the hammer in line with the forward end 19<sup>a</sup> of the sear, the sear-spring 19<sup>b</sup> then forcing the forward end sear into the notch, thus providing for it an excess of vibration over the discharging impulse, moving downwardly the rear end of the sear until the upper shoulder 49 of the tripper-block lies below the plane of the left-hand sear-point 54. The tripper-spring, which has been distended, as previously described, forces the tripper-block underneath the left-hand sear-point, which bridges or connects the ends of the sears, so that another complete vibration of the right or forward sear brings the trigger-shank 7 against the tripper-block, vibrates the rear of the left-hand sear, freeing the hammer and discharging the barrel, as previously described. Both barrels having been discharged, to reset the sears for further discharge the bridge-bolt is vibrated, as previously described, moving its extension 42 into contact with the lug 44 on the tripper-spring, throwing the tripper-block out, so that when the hammers are cocked the intermediate nose projection 51 on the tripper-block will lie against the left-hand sear-point 54. The parts are now in position to be operated so that the left-hand sear can be initially used for the purpose of discharging, first, the left-hand barrel and, secondly, by a second complete vibration the left-hand barrel. The hammers being cocked as in Fig. 1, vibration of the left or rear trigger causes the lug 17 on the trigger-shank 8 to vibrate the left-hand sear, it being under-

stood that the rear ends of both sears are at this time elevated to almost their complete upward movement and that but very little further movement is necessary to free the hammer. Discharge of the left-hand barrel brings the recess 28 in the hammer into line with the forward end of the left-hand sear 19, permitting the sear-spring to vibrate the rear end of the sear downwardly, when the sear-point 54 will pass the projection of the tripper-block, as shown in Fig. 8, placing the parts in position, so that by a further complete vibration of the left or rear trigger the right-hand barrel can be discharged.

It is apparent that by reason of the fact that both sears can be independently vibrated either barrel can be discharged by either trigger—that is to say, the left-hand barrel can be discharged by the left-hand or rear trigger and the right-hand barrel discharged by the right-hand trigger—so that in addition to the interchangeability of the discharge previously described the gun can be used in the ordinary way.

Instead of employing the mechanism hereinbefore described in connection with the gun adapted to have barrels discharged in series, as before explained, it is clear that the improvements can be utilized with a single-trigger gun and multibarrels for discharging the barrels in set sequences—namely, either left and right always or right and left always, depending upon which sear the trigger is adapted to be initially brought in contact with.

It is apparent that many changes and modifications can be made in my invention and it may be otherwise embodied without departing from the spirit thereof.

I claim—

1. In a gun, the combination with the pivoted sears, the pivoted triggers, and a tripper-block carried by either of the sears adapted to alternately engage the upper and under sides of the other sear, and means for operating the tripper-block, substantially as described.

2. The combination with the plurality of sears, the tripper-spring secured to one of said sears, the tripper-block on the end of the spring, and means for moving the tripper-block to alternately engage the upper and the under side of the opposing sear, substantially as described.

3. The combination with the sears of the tripper-block secured to one of the sears and having the nose or projection, the spring carrying the tripper-block, and means for transversely vibrating the tripper-block to cause the same to alternately engage and disengage one of the sears, substantially as described.

4. The combination with the pivoted sears, the tripper-spring, the tripper-block having shoulders upon its upper and lower sides, the bridge-block and means for reciprocating it, a projection from the bridge-block, and a lug on the tripper-spring adapted to engage said projection to cause the latter to engage or



disengage one of the sears, substantially as described.

5 5. The combination with the sears, of the tripper-block having the recess into which the end of the one sear extends, a spring secured to said sear at one end, its free end being secured to the tripper-block, and means for causing the tripper-block to engage and disengage the other sear, substantially as described.

10 6. The combination with the sear 19 having inwardly-extending point, the sear 18, the laterally-extending tripper-block having the

upper and lower shoulders 49 50, an intermediate nose or projection 51 forming a recess 15 for engagement with the sear 18, and the spring 45 secured to the sear 18 at one end and at its free end to the tripper-block, substantially as described.

Signed in the city, county, and State of 20 New York this 21st day of June, 1900.

FRANZ E. JAEGER.

Witnesses:

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SOPHIA SEKOSKEY.