

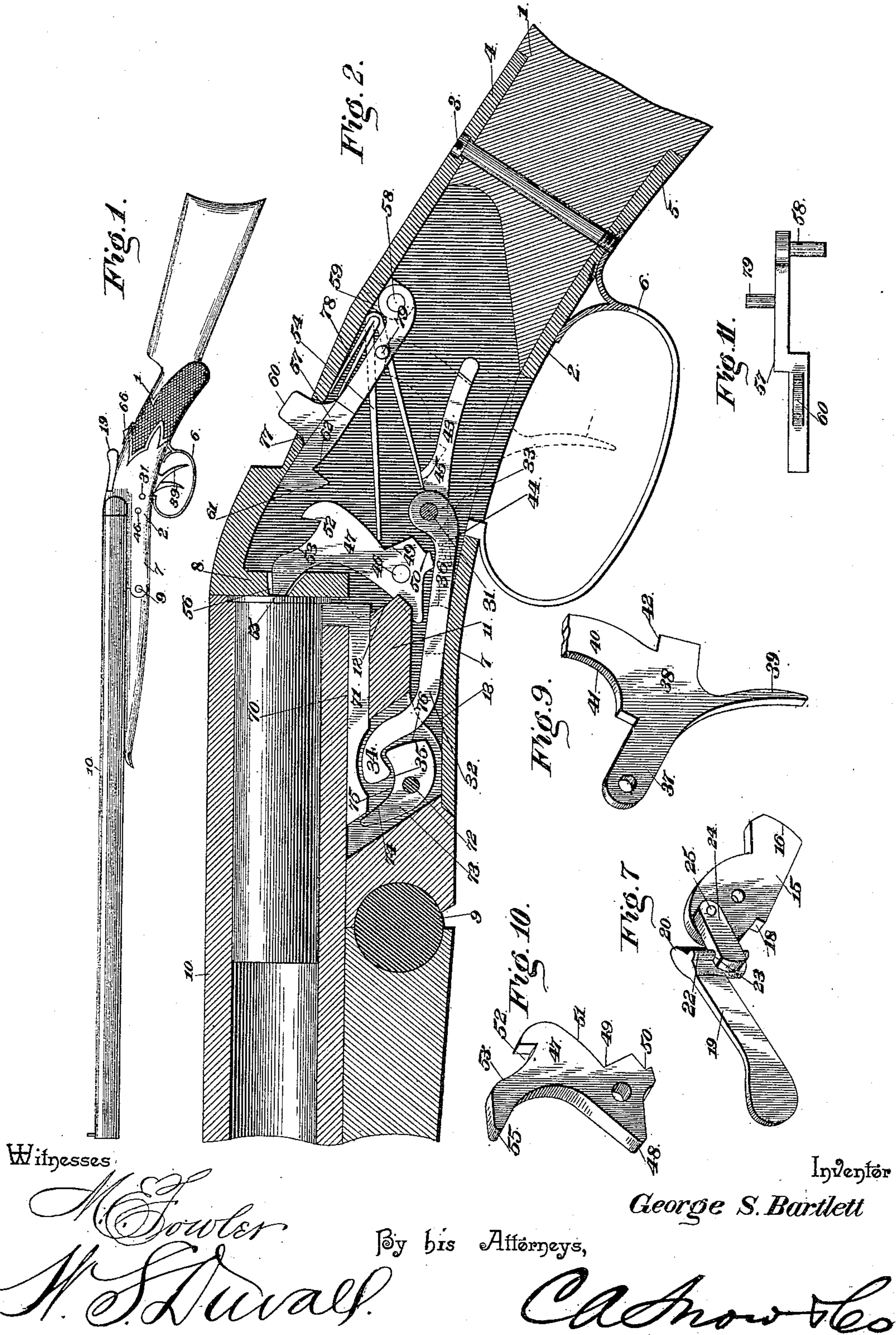
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4 Sheets—Sheet 1.

G. S. BARTLETT,
BREECH LOADING SHOTGUN.

No. 464,060.

Patented Dec. 1, 1891.



Witnesses

M. Fowler
W. S. Duval

By his Attorneys,

Cash & Co.

Inventor

George S. Bartlett

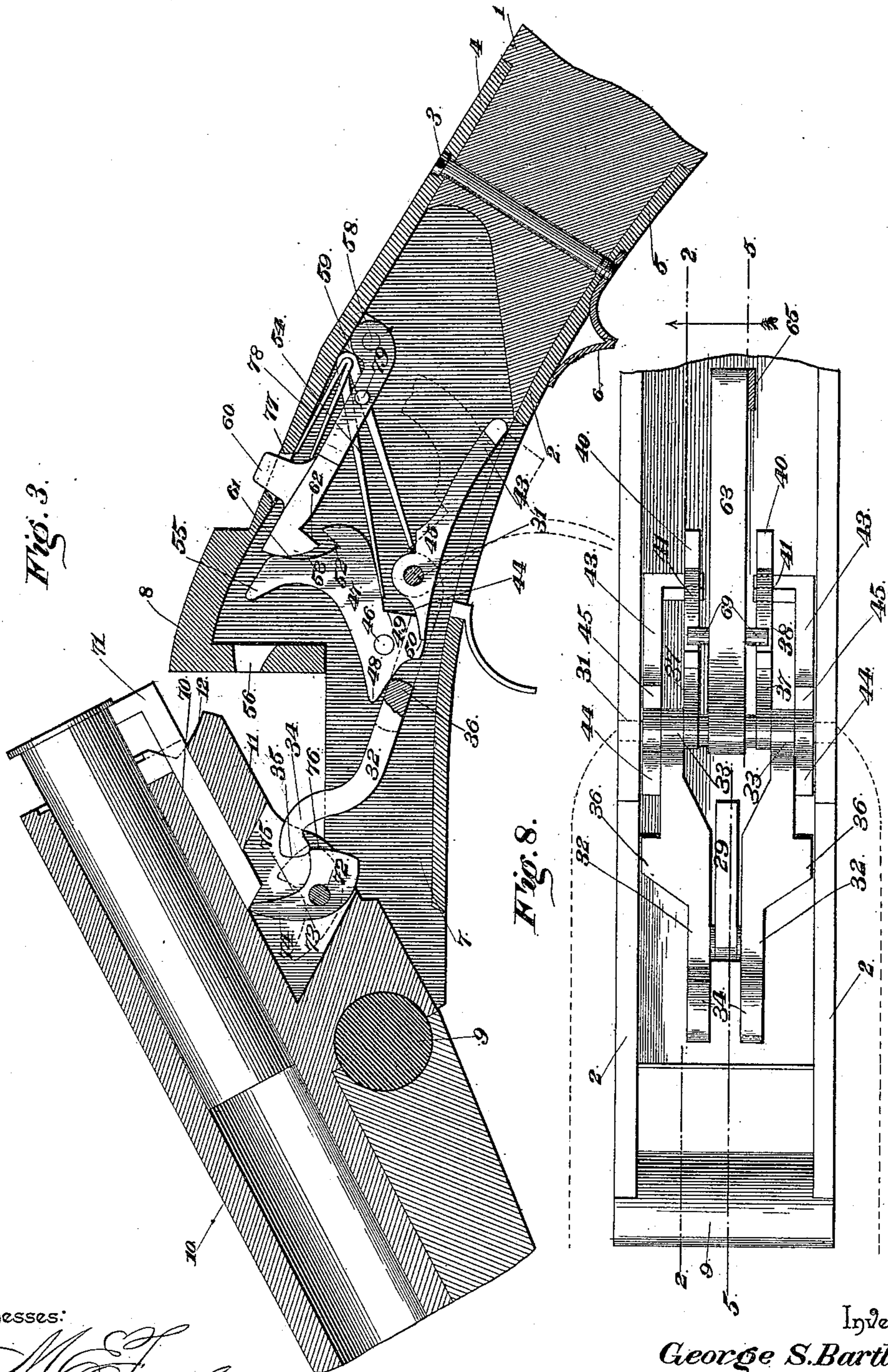
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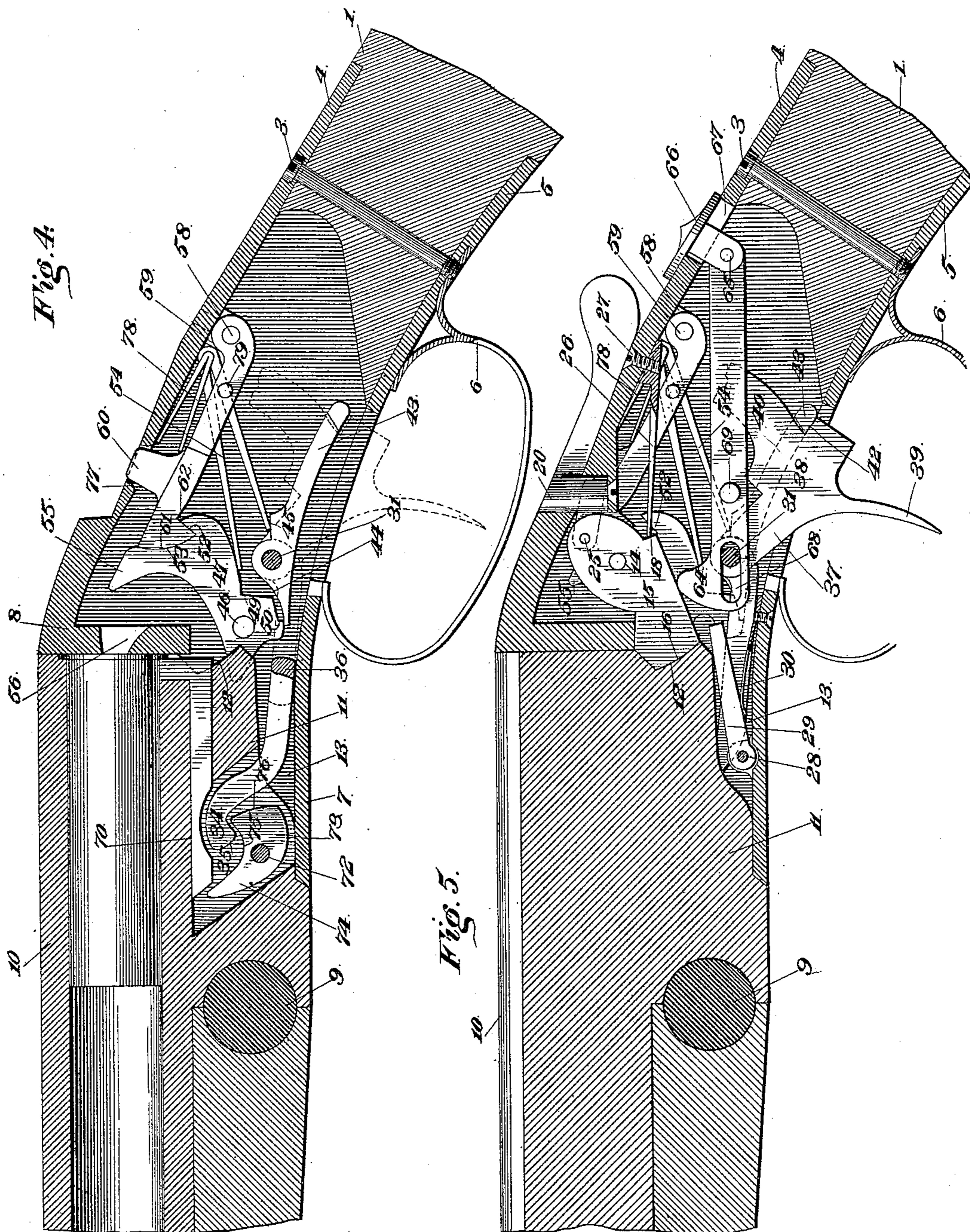
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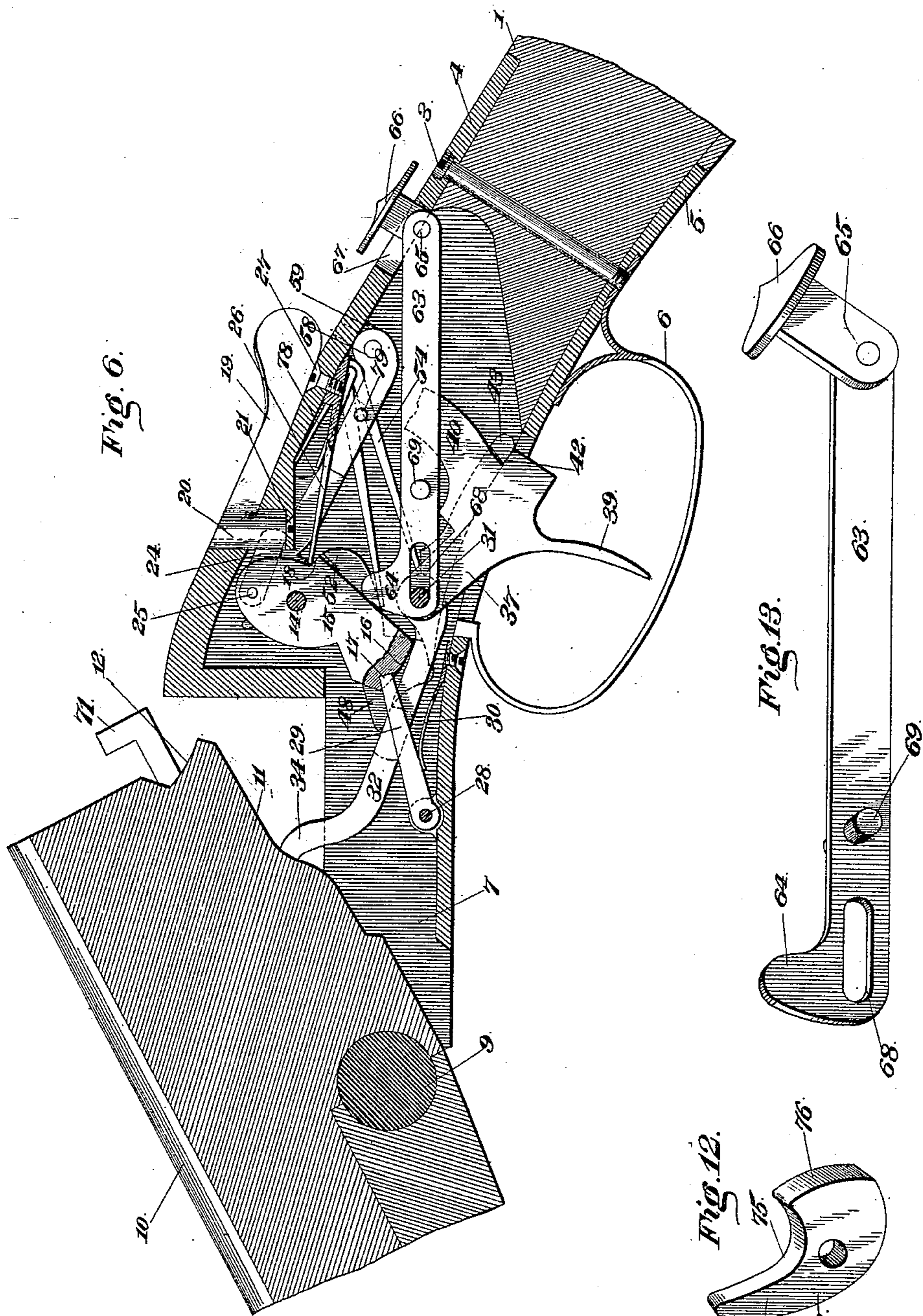
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UNITED STATES PATENT OFFICE.

GEORGE S. BARTLETT, OF ANACONDA, MONTANA.

BREECH-LOADING SHOTGUN.

SPECIFICATION forming part of Letters Patent No. 464,060, dated December 1, 1891.

Application filed July 2, 1891. Serial No. 398,286. (No model.)

To all whom it may concern:

Be it known that I, GEORGE S. BARTLETT, a citizen of the United States, residing at Anaconda, in the county of Deer Lodge and State of Montana, have invented a new and useful Breech-Loading Shotgun, of which the following is a specification.

This invention relates to improvements in breech-loading shotguns; and the objects in view are to provide a gun of very simple and economical construction, the same being composed of few easily manufactured, assembled, and accessible parts; to adapt the gun to automatically cock and extract at the operation of breaking or opening; to provide means for indicating when the gun is cocked; to provide a safety device whereby accidental discharge caused by sudden jars is prevented, and, finally, to provide an improved means for locking the barrels.

With the above main objects and other minor objects in view the invention consists in certain features of construction hereinafter specified, and particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a side elevation of a breech-loading shotgun constructed in accordance with my invention. Fig. 2 is a vertical longitudinal section, the parts being in the position occupied by them when the piece has been fired, the section being taken on the line 2 2 of Fig. 8. Fig. 3 is a similar view on the same line of Fig. 8, the parts being shown in the position they occupy when the gun has just been cocked by the breaking of the piece. Fig. 4 is a similar view, the gun being ready for firing, the barrel closed, and the safety block or catch in engagement with the hammer as when the piece has been jolted or jarred enough to cause accidental movement of the hammer. Fig. 5 is a longitudinal section on the line 5 5 of Fig. 8, the section being taken between the two hammers and at one side of the barrel-locking block. Fig. 6 is a similar view, the gun being broken. Fig. 7 is a detail of the locking-block, with its operating-lever and connection. Fig. 8 is a plan of the gun, the top of the receiver being removed. Fig. 9 is a detail of the trigger. Fig. 10 is a detail of the hammer. Fig. 11 is a detail of the safety-

catch. Fig. 12 is a detail of the tumbler for actuating the extractors. Fig. 13 is a detail of the trigger-locking bar.

Like numerals of reference indicate like parts in all the figures of the drawings.

1 designates the grip portion of the stock of the gun, to which is secured the receiver 2 by means of a removable bolt 3, passed through the upper and lower tail-pieces 4 and 5 of the receiver and through the grip, said tail-pieces embracing the grip in the manner indicated. The bolt 3 also passes through the rear end of the trigger-guard 6. The receiver is somewhat of the usual formation, consisting, as it does, of the forward extension 7 and in rear of the same having the standing block 8. To the front end of the extension 7 there are hinged, as at 9, the barrels 10, having upon their under side the usual lump 11, the rear face of which is slightly concaved, as shown at 12, for a purpose hereinafter apparent, and the under side of which is reduced or recessed, combining with the extension 7 to form the recess 13. In the standing block, which has its under side recessed, there is located upon a transverse bearing-pin 14 the pivotal swinging locking-block 15, the front end of which projects through an opening in the standing block directly opposite the rear end of the lump 11 and has a convexed face 16 for taking against and overlapping the concaved face 12 of the lump. The convexed face 16 is also provided with a shallow recess 17, and at the opposite side of its pivot the block is provided with a shoulder 18.

19 designates the snap-lever, which at its forward end has a cylindrical head 20, longitudinally bored and swiveled in position by an inverted swiveling screw 21, passed into said head and in a countersunk opening formed in the receiver. One side of the head 20 of the snap-lever 19 is provided with a cylindrical lug 22 and the same engages a facial groove 23, formed upon the inner adjacent side of a link 24, which is pivoted, as at 25, to the locking-block above and slightly in rear of its pivot-bearing 14.

26 designates a flat spring, which by a screw 27 is secured rigidly to the under side of the top of the receiver immediately in rear

of the locking-block, the front or free end of the spring resting and bearing against the shoulder 18 of said block, so that the latter is normally pressed forward into locking engagement with the lump of the barrels in the manner heretofore mentioned.

Pivoted, as at 28, in the bottom of the recess 13, hitherto described, is a dog or pawl 29, the same being rearwardly disposed under the lump 11 and normally pressed up against the bottom of the same by means of a light spring 30, secured to the receiver-frame.

When the snap-lever 19 is directly in rear or in line with the stock, the locking-block 15 is in locking position with relation to the lump and the barrels are closed, as shown in Fig. 5. Now by swinging the snap-lever to one side, as shown in Fig. 6, the lug 22 thereof, through the medium of the link 24, forces the upper end of the locking-block to the front and withdraws the lower end from its position over the rear end of the lump, so that the barrels and their lump are tilted and the dog or lever 29 is thrown by its spring 30 up into engagement with the notch or seat 17 of the locking-block, so that the latter is held in a withdrawn position against the tendency of its spring 26. It will be seen, however, that by closing the barrels the lump coming against the dog 29 depresses the same out of locking engagement with the front end of the locking-block, thus permitting the spring 26 to throw the block forward to its locked position.

Reference is now made more particularly to Figs. 2, 3, and 4, in which I have illustrated the mechanism in all of its various positions. It will be understood that the mechanism described may be employed in a single-barrel breech-loading shotgun, in which case the mechanism heretofore described will be located at one side of the center of the receiver, while that hereinafter described will be located at the opposite side. In the present instance, however, I have illustrated and described my invention as applied to a double-barrel breech-loading gun, and as the mechanisms at each side of the receiver are the same that at one side only will be described.

A bolt 31 is passed transversely through the opposite sides of the receiver, and adjacent to the side of the receiver there is mounted upon the same the rear end of the cocking-lever 32, which latter has an eye 33 formed in its rear end, so as to adapt it for loose connection with the bearing-bolt 31. The front end of the cocking-lever is upwardly and forwardly curved to form a hook 34, the face of which at the extremity of the lever is rounded, as at 35. At one side of the lever a lug or extension 36 is formed, the same being laterally disposed. Upon the pin or bolt 31 at the inner side of the cocking-lever there is loosely mounted the front extended end 37 of a trigger 38, which trigger is provided at its lower end with the usual rest 39, at its upper side

with the upper extension 40, having the curved wall 41 at its front, and at its rear side with the shoulder 42.

43 designates the sear, and the same is loosely mounted upon the pin or bolt 31 outside of the cocking-lever. The front end of the sear is beveled, as shown at 44, to engage the hammer hereinafter described, while the rear end is laterally disposed and rests in the notch or seat 42 of the trigger, so that by pressing the trigger the rear end of the sear is elevated and its front end withdrawn from engagement with the teeth or notches of the hammer. The sear is also provided in rear of its pivot with a shoulder 45. A pin or bolt 46 is passed through the receiver a short distance in front of the bolt or pin 31, and upon the same is loosely pivoted the hammer 47. The hammer is provided at its front end with an extension 48, which is over the cocking-lever and nearly rests upon the lateral extension 36 thereof, and at its rear end is provided with an upper notch 49 and a lower sear-engaging notch 50, and the hammer above the notches 49 and 50 is provided with a curved face 51, in which is formed a safety-notch 52, and above the same with a curved face 53.

54 indicates the V-shaped mainspring, the lower terminal of which rests against the shoulder 45 of the sear, thus exerting a tendency to depress the rear end thereof, and the upper terminal of which presses upwardly against the upper shoulder or notch 49 of the hammer, thus exerting a tendency to throw the reduced firing or impact end 55 of the hammer to the front and through the standing-block perforation 56.

57 designates the block safety-catch, which is located in the upper side of the receiver, and at its rear end is pivoted, as at 58, to a depending bearing screw or bracket 59. Upon its upper side the block safety-catch is provided with an indicating-lug 60, while its front end is rounded, as at 61, and in rear of the same provided with a shoulder or safety-notch 62.

63 designates the safety-bar, the same being located at the center of the receiver and immediately in rear of the locking-block. The bar terminates at its front end in an enlarged rounded head 64, and at its rear end is pivoted, as at 65, to a button 66, mounted for sliding in a slot 67, formed in the tail-piece 4 of the receiver. The front end or head of the locking-bar is provided with a longitudinal slot 68, which latter loosely receives the pin or bolt 31, and in rear of said slot is provided with a pin 69, which extends laterally at opposite sides of the bar and in front of and adapted to ride against the curved faces 41 of the triggers.

Dovetailed ways 70 are formed in the sides of the lump 11 on the under side of the barrels, and in each of the same is mounted for reciprocation an ordinary extractor 71 of L-shape and dovetailed in cross-section to fit

the grooves or ways 70. The lump is provided with a pair of recesses, in which upon a bolt 72 is pivoted the pair of tumblers 73. Each tumbler comprises an upwardly-disposed reduced finger 74, which takes against the rear end of an extractor, and is of substantial hook shape as a whole, in that its rear face is curved or concaved, as at 75, and designed to engage the hook 34 of the cocking-lever, the butt-end of the tumbler being curved, as at 76.

The indicating-lug 60 of the safety-catch extends upwardly through an opening 77 when said catch is elevated, as when the piece is cocked, so that it acts to indicate the position of the parts, and hence is called an "indicating-lug." For the purpose of depressing in a yielding manner the catch 57 a V-shaped spring 78 is interposed between the catch and the upper wall of the receiver.

This completes the construction, and the operation is as follows: Taking the parts in the position occupied by them when the piece has been fired and as illustrated in Fig. 2, the snap-lever 19 is first pressed to one side by the tongue of the holder, and in the manner heretofore described withdraws the locking-block 15 from over the lump 11, thus breaking the barrel, so as to open the same. As the barrel is broken the cocking-lever acts to partially rotate the tumbler 73, and thus by swinging the upper end of the same against the forward end of the extractor, forces said extractor outwardly, entirely withdrawing the empty shell. As the tumbler ascends with the rear end of the barrel, it of course during this operation of actuating the extractors also elevates the front end of the cocking-lever, and through the medium of its lateral extension or lug 36, which takes under the front end of the lower extension 48 of the hammer, raises said extension and forces the upper end of the hammer to the rear, during which rearward movement of the hammer the curved face 51 thereof rides upwardly against and over the curved end 61 of the safety-catch, thus elevating the latter until its shoulder 62 has passed by and beyond the notch 52 of the hammer and is resting against the upper curved face 53 of the hammer, said movement being accomplished against the tendencies of the small spring 78 and the mainspring 54. As the bar 63 is forced to the rear by the rearward movement of the locking-block, it will be seen that its pin 69 is thrown directly across the path of the triggers and against the curved faces 41 thereof and that during said movement the button 66 is moved to the rear end of its slot 67. It will be seen that the triggers are now safely locked against any movement whatever, and it will also be seen that the lower ends of the triggers are pressed forward, so as to be subsequently pulled by the rearward movement of the bar. As the hammer is swung to the rear by the elevation of the cocking-lever its notch 50 is engaged by the front end of the

sear. Now, if by any cause—such as a sudden jar or fall of the piece—the end of the sear should be accidentally withdrawn from engagement with the notch 50, it will be seen that the hammer would, so far as the sear is concerned, be liberated and a premature accidental discharge of the piece result. Such accident, however, is provided for by the employment of the safety-catch 57, which, having its shoulder or catch end located above the shoulder 52 of the hammer, would, when the hammer starts forward, be thrown into engagement therewith at the notch 52 by means of the V-shaped spring 78, whereby the hammer has moved but a short distance when it is caught and prevented from farther descent and any accidental discharge. The piece having been loaded, the barrel is closed, the lump 11 throwing the dog out of engagement with the block 15, and the latter being thrown forward to a locked position over the lump. Still the piece is not yet in condition for firing and cannot be discharged by accident or otherwise until the button 66 has been pushed forward, so as to remove the transverse bars 69 from in front of the triggers 38. After this has been accomplished it is simply necessary to pull the triggers and discharge the piece. Such a pull elevates the upper end of the trigger, bringing the same into contact with the pin 79, extending laterally from the safety-catch, and at the time that it elevates the catch from the path of the hammer the shoulder 42 of the trigger serves to elevate the rear end of the sear and withdraw the front end from engagement with the shoulder 50 of the hammer, permitting the latter to be thrown forward and explode the shell by the action of the mainspring 54. When the piece is at a full-cock, the indicating-lug on the upper end of the safety-catch is projected from the opening through which it extends above the receiver, and when lowered or the piece is not at full-cock the lug is about flush with the receiver, so that it constitutes an indicator, always accurately notifying the user when the piece is cocked. It will be seen that if but one barrel is fired, when the gun is broken, but one (and that the empty) shell will be extracted. Such will be obvious from the fact that there is but one spring bearing upon one lever, the other spring being inactive. It will be seen that I utilize the full power of the mainspring in extracting, and that in loading the shells can be pushed entirely home, so that the gun will close much easier than when said shells are forced into the barrel by means of the standing block, against which they scrape and drag in the act of closing the gun. When the hammers are down, the forward projection of the hammers rests upon a projection on the outer side of the cocking-levers, and the said levers bearing down on the rearward projection of the extractor-tumblers cause the tumblers to revolve, and the forward and upward arms of

the tumblers, striking against the extractor-stems, force the extractors backward against the standing block of the frame, throwing out the fired shells when released at the top of the standing block. Tipping the barrels slightly now brings the hammers to a full-cock, thus utilizing the full power of the mainsprings in ejecting. If only one barrel is fired, the fired shell only is ejected, as there is no pressure upon the levers to operate the extracting-tumblers when hammers are at full-cock; but if the holder wishes to eject undischarged shells the barrels are tipped slightly beyond the cocking-point, when the pressure of the mainsprings is brought to bear in the usual manner, leaving the hammers at full-cock; or if it is desired to lower the hammers the triggers are held back while closing the barrels and the hammers drop with the levers. In the event of the holder failing to tip the barrels far enough to cock the hammers the cocking is done by a slight pressure on the shell when loading, the extractor-tumblers being of such shape as to raise the cocking-levers sufficiently to accomplish this, as also to permit of pushing the shell entirely home, which permits of the gun closing much more smoothly than when the shells are forced in by means of the standing block while closing, as also relieving the strain on the hinge.

From the foregoing description it will be obvious that I provide a gun of very economical and simple construction—one that will efficiently operate and be safe and automatic in all its movements and employing in its make-up no projecting hammers or other elements which are liable to accidentally engage the surrounding objects and cause accidental explosion, and one in which, even if so engaged or jarred, such explosion is impossible without the destruction of some of the parts of the gun.

Having described my invention, what I claim is—

1. In a breech-loading shotgun, the combination, with the receiver having the forward extension, the barrels, and the lump pivoted to the front end of the same, of a pivoted lump-locking block located in the receiver and adapted to engage the lump, a snap-lever pivoted to the receiver, and connections between the upper end of the lump-locking block and said snap-lever, substantially as specified.

2. In a breech-loading shotgun, the combination, with the receiver having the forward extension, the barrels, and the lump at the under side of the same hinged to the extension, of the pivoted locking-block located in the receiver and adapted to engage the lump, the lever mounted on the receiver and adapted to actuate the locking-block, so as to withdraw the same from engagement with the receiver, the spring for throwing the block into engagement, and means for locking the block out of engagement with the lump when said

block has been withdrawn, substantially as specified.

3. In a breech-loading shotgun, the combination, with the receiver having the extension, the barrels, and the lump upon the under side of the same, the latter being provided with the curved face 12, of the locking-block pivoted in the receiver and having the convexed front face and the rear shoulder, the spring secured to the receiver and bearing on the shoulder in rear of the pivotal block, the snap-lever terminating at its front end in a cylindrical head having the lug 22, the screw 21, passing through an opening in the receiver and into the head, and the link 24, pivoted at 25 to the upper end of the locking-block and at its rear inner face provided with a recess 23 for engaging the lug 22 of the snap-lever, substantially as specified.

4. In a breech-loading shotgun, the combination, with the receiver having the extension, the barrels, and the lump upon the under side of the same, provided at its rear end with a locking-face, of the locking-block pivoted in the receiver and at its front end adapted to engage and lap over the face of the lump, a spring for pressing the block into such engagement, a lever pivoted to the receiver and adapted to withdraw the block from such engagement a pawl pivoted in the path of the lump, and a spring for pressing the free end of the same up into engagement with a cavity in the locking-block, substantially as specified.

5. In a breech-loading shotgun, the combination, with the receiver, the pivoted gun-barrels having a lump, and the pivoted locking-block for locking the lump, of means for swinging the block to the rear out of engagement with the lump, a trigger located in rear of the block, and devices between the lump and trigger and actuated by the former to depress the trigger in rear of the pivot, substantially as specified.

6. In a breech-loading shotgun, the combination, with the receiver, the barrels, their lump, and the block pivoted in the receiver and adapted at its front end to lock the lump, of a trigger pivoted in rear of the lump, a sliding bar mounted for reciprocation in the path of the block, said bar engaging the trigger and being actuated by the block, and means for subsequently returning the bar, substantially as specified.

7. In a breech-loading shotgun, the combination, with the receiver, the pivoted barrels having the lump, the pivoted lump-locking block, and the spring for throwing the same into engagement with the lump, of the pivoted trigger having the extension 40, the locking-bar 63, slotted to engage the pin of the trigger and located in rear and in the path of the locking-block, the pin extending laterally from the bar and engaging the inclined face of the extension of the trigger, and the button mounted for sliding in a slot in the re-

ceiver and pivoted to the rear end of the bar, substantially as specified.

8. In a breech-loading shotgun, the combination, with the receiver having the extension and the barrel hinged thereto and having the lump and reciprocating extractor, of the pivoted tumbler having its upper end engaging the extractor and its lower end extending in rear of its pivot, the cocking-lever pivoted in the receiver and at its front end engaging the tumbler, and a hammer pivoted in the receiver and adapted to bear upon the cocking-lever and to be elevated thereby, substantially as specified.

9. In a breech-loading shotgun, the combination, with the receiver, the barrels, and lump hinged to the front end of the same, of extractors mounted for reciprocation in the lump, hammers pivoted in the receiver, the tumblers pivoted under the extractors and in front of their pivots engaging the extractors, and the cocking-levers pivoted in the receiver in rear of the extractors and bearing against the hammers, so as to actuate the same, and at their front ends engaging the tumblers in rear of their pivots, substantially as specified.

10. In a breech-loading shotgun, the combination, with the receiver, a hammer pivoted therein and provided upon its upper side with a notch and upon its lower side with a notch, means for raising the hammer, and a spring-pressed sear for engaging the lower notch, of a safety-lock terminating in a shoulder and pivoted in rear of the hammer and a spring for pressing the same against the hammer and in the path of the upper notch thereof, substantially as specified.

11. In a breech-loading shotgun, the combination, with the receiver, a hammer pivoted therein and provided upon its upper side with a notch and upon its lower side with a notch, means for raising the hammer, and a spring-pressed sear for engaging the lower notch, of a safety-lock pivoted in rear of the hammer and having a shoulder formed at its front end and in rear of the same provided with an indicating-lug projecting through an opening in the receiver, and a spring for pressing the catch upon the hammer in the path of the notch, substantially as specified.

12. In a breech-loading shotgun, the combination, with the receiver, the pivoted hammer having a safety-notch in its upper side and provided with a sear-engaging notch at its lower side, a pivoted sear spring-pressed to engage the lower notch, and a safety-lock

spring-pressed upon the hammer in the path of its safety-notch, of a pivoted trigger engaging the sear in rear of its pivot and provided with an extension for engaging the safety-catch, substantially as specified.

13. In a breech-loading shotgun, the combination, with the receiver, a hammer pivoted therein and provided with a notch, and a sear pivoted in rear of the hammer and provided with a shoulder and at its front end adapted to engage the notch, of a trigger pivoted in the receiver and loosely connected with the sear in rear of its pivot, means for elevating the hammer, and a V-shaped mainspring interposed between the hammer and the shoulder of the sear, substantially as specified.

14. In a breech-loading shotgun, the combination, with the receiver, the barrels and lump hinged thereto, the extractors mounted for reciprocation in the lump, the tumblers pivoted to the lump and at their upper ends bearing against the extractors, the transverse bolt 31, the cocking-levers mounted thereon, at their front ends terminating in hooks for engaging the rear hooked ends of the tumblers and in rear of the same provided with projections 36, the hammers pivoted in front and provided with the safety-notches below the same with the notches 49 and 50, the sears 43, having at their front ends engagement with the notches 50 and at their rear ends provided with a lateral extension, said sears also being mounted on the bolt 31, immediately in rear of which they are provided with shoulders 45, and the V-shaped mainsprings 54, having their front terminals taking in the notches 49 and their rear terminals against the shoulders of the sears, of the triggers pivoted at their front ends upon the bolt 31 and provided at their rear sides with seats for the reception of the extensions of the sears and above the same with upward extensions, the catches 57, pivoted in the receiver in rear of the hammers and provided at their front ends with shoulders, and V-shaped springs interposed between the upper sides of the receiver and the catches, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

GEORGE S. BARTLETT.

Witnesses:

R. M. MCKINNEY,

W. M. THORNTON.