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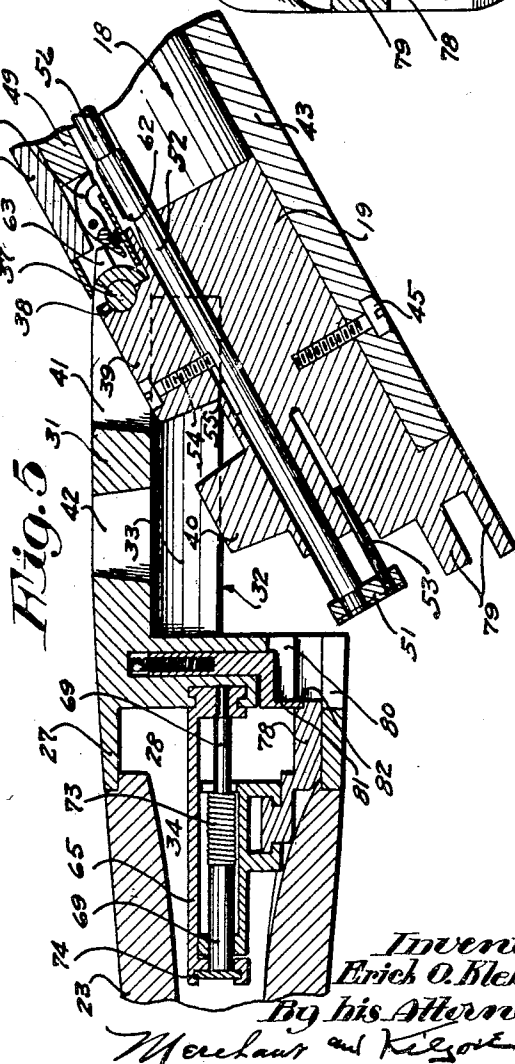
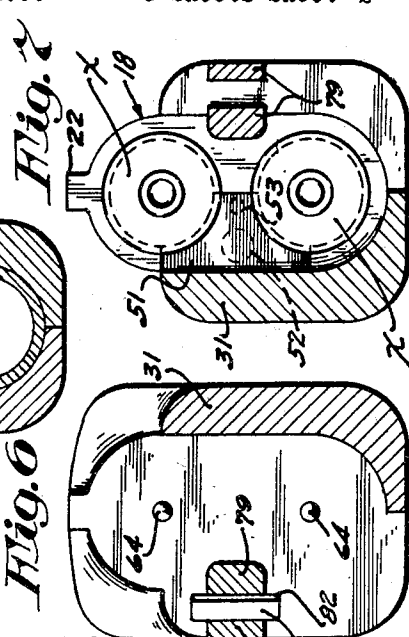
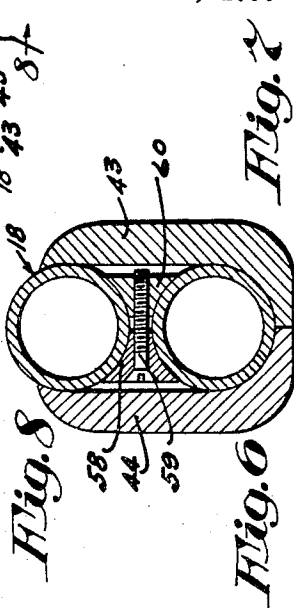
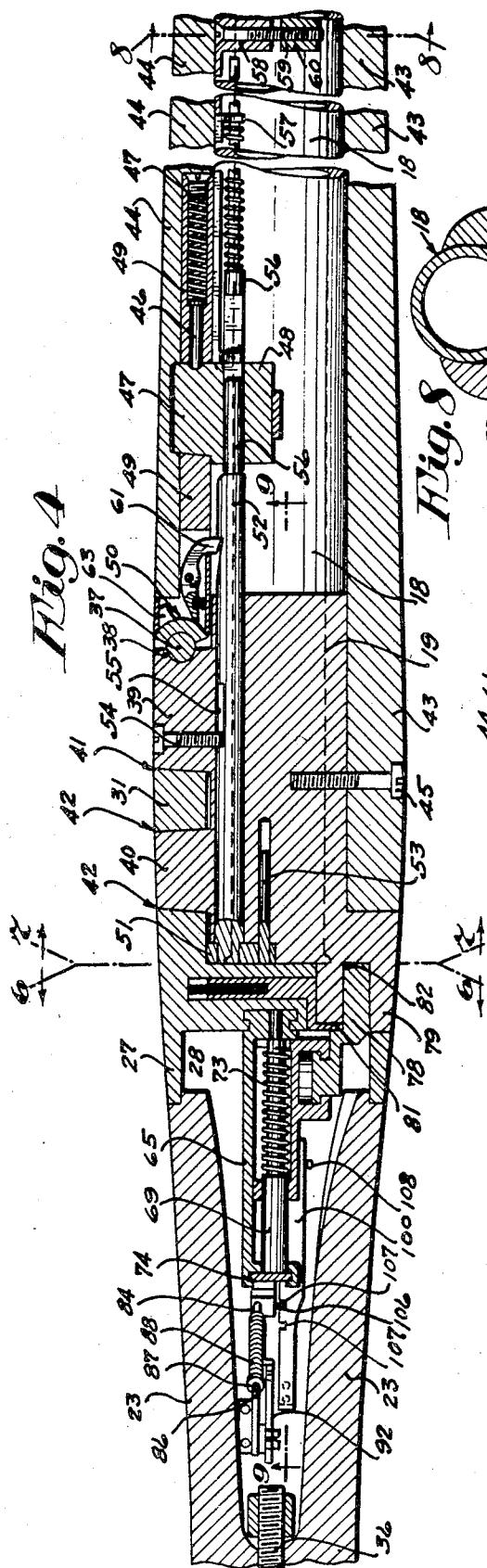
E. O. KLEBE

1,834,544

SHOTGUN

Filed Nov. 10, 1930

3 Sheets-Sheet 2



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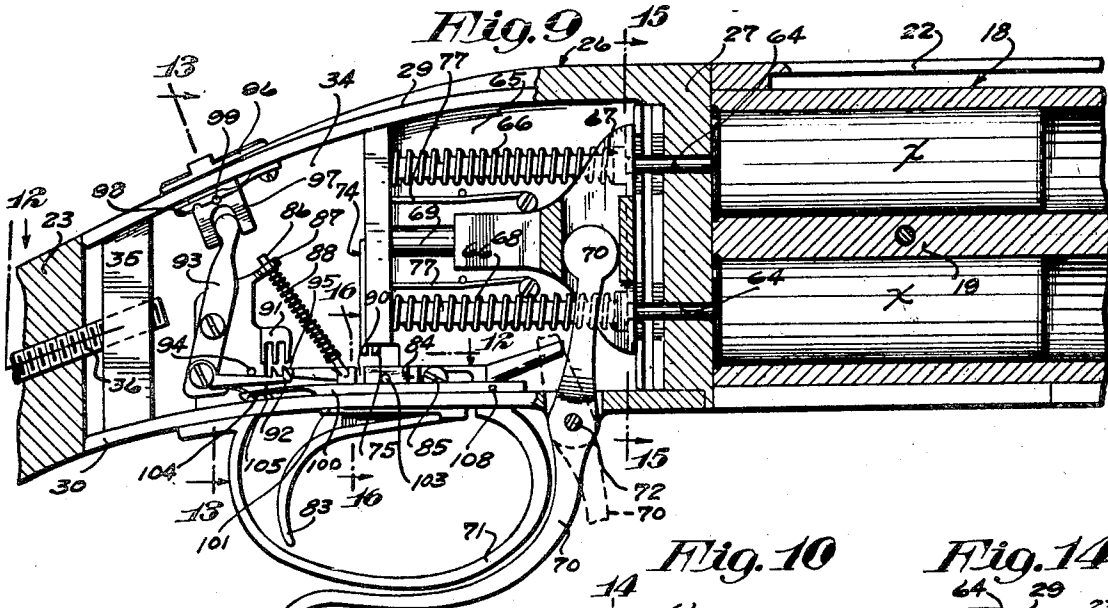
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3 Sheets-Sheet 3



UNITED STATES PATENT OFFICE

ERICH O. KLEBE, OF MINNEAPOLIS, MINNESOTA

SHOTGUN

Application filed November 10, 1930. Serial No. 494,454.

My invention has for its object to provide a breech loading shot gun or the like that is simple in its action, easy and convenient to operate, of light-weight and that can be manufactured at a relatively small cost.

To the above end, generally stated, the invention consists of the novel devices and combinations of devices hereinafter described and defined in the claims.

In the accompanying drawings, which illustrate the invention, like characters indicate like parts throughout the several views.

Referring to the drawings:

Fig. 1 is a right-side elevation of a double barrel breech loading shot gun constructed in accordance with my invention;

Figs. 2 and 3 are detail views in section taken on the lines 2—2, 3—3 of Fig. 1, on an enlarged scale;

Fig. 4 is a fragmentary view partly in plan and partly in horizontal section taken on the line 4—4 of Fig. 1, on an enlarged scale;

Fig. 5 is a view corresponding to Fig. 4 with the exception that the breech is open and the outer extremities of the gun are further broken away;

Figs. 6, 7 and 8 are detail views principally in section taken on the lines 6—6, 7—7 and 8—8 of Fig. 4;

Fig. 9 is a fragmentary view partly in right-side elevation and partly in longitudinal central section taken on the line 9—9 of Fig. 4 with the firing pins in operative positions;

Fig. 10 is a fragmentary detail view of the firing pins and selector mechanism with said firing pins retracted and with the selector mechanism positioned to fire the lower barrel;

Fig. 11 is a view corresponding to Fig. 10 with the exception that certain of the parts have been further broken away, other parts removed, and with the selector mechanism positioned to fire the upper barrel;

Fig. 12 is a fragmentary detail view partly in plan and partly in longitudinal horizontal section taken on the line 12—12 of Fig. 9;

Fig. 13 is a detail view principally in section

taken on the irregular line 13—13 of Fig. 9;

Fig. 14 is a view principally in section taken on the line 14—14 of Fig. 10;

Fig. 15 is a fragmentary detail view principally in section taken on the line 15—15 of Fig. 9;

Fig. 16 is a fragmentary detail view in section taken on the line 16—16 of Fig. 9; and

Fig. 17 is a fragmentary detail view illustrating the trigger safety device set in an inoperative position.

The barrels of the shot gun illustrated are indicated as an entirety by the numeral 18 with the exception of the breech 19, and which barrels are positioned, the one directly above the other, and rigidly connected and held with the proper convergence by a plurality of cross-tie members 20 that are longitudinally spaced to leave air gaps 21 between said barrels. On the top of the upper barrel 18 is a ventilated rib 22.

The stock of the gun is indicated, as an entirety, by the numeral 23 with the exception of its butt plate 24 and the two laterally spaced fore-end extensions 25 formed by a vertical bifurcation in said stock. This bifurcated fore-end of the stock 23 is designed to receive the rear end portion of a frame 26, which connects the breech 19 to the stock 23.

The frame 26, with which a breechblock 27 is integrally formed, includes a recess 28 at the back of said block, upper and lower rearwardly projecting tongue-like members 29 and 30, respectively, and a forwardly projecting member 31 on the left-hand side of the breechblock 27. This frame member 31, at its bottom portion, is extended inwardly under the lower barrel 18, as indicated at 32, and is provided with a segmental seat 33 on which said barrel rests. The recess 28 and space between the fore-end extension 25 and the upper and lower frame members 29 and 30, respectively, form a chamber 34 for the breech mechanism, as will hereinafter be described.

To facilitate the mounting of the breech mechanism in the chamber 34, the lower frame member 30 is detachably secured by screws, not shown, to the under side of the

breechblock 27. The rear ends of the frame members 29 and 30 are rigidly connected by a nut-acting vertical tie member 35. The stock 23 is rigidly and detachably secured to the frame 26 by a screw bolt 36, which extends longitudinally into the stock 23 under the butt plate 24 and has screw-threaded engagement with the nut-acting tie member 35, which is detachably secured by screws, not shown, to the frame members 29 and 30. The bolt 36 holds the forward ends of the fore-end extensions 25 tightly pressed against the marginal edge portion of the frame 26 at the recess 28, which, together with said bolt and the contact of the frame members 29 and 30 with the fore-end extensions 25, rigidly connect the stock 23 to the frame 26.

Referring now in detail to the primary object of this invention, to wit: the mounting of the breech 19 on the frame 26 whereby said breech is opened and closed about a vertical axis by a horizontal swinging movement of the barrels 18 in respect to the stock 23, there is provided a vertical hinge pin 37 and a segmental seat 38 therefor. This mounting further includes front and rear horizontally spaced lugs 39 and 40, respectively, on the left side of the breech 19, correspondingly spaced and formed seats 41 and 42 in the frame member 31 thereof. The vertical hinge pin 37 is mounted in a bore in the fore-end portion of the frame member 31, rigidly held in place and extends in part into the seat 41 at the front end thereof, see Fig. 5. The hinge seat 38 is formed in the front end of the lug 39 which is segmental in cross-section. When the breech 19 is closed the interlocking engagement between said breech and frame member 31 just described together with the abutting breech 19 and breech-block 37 firmly holds the hinge pin 37 in its seat 38 and the barrels and stock against endwise separation.

Fore-end members 43 and 44 for the stock 23 are applied, respectively, to the right and left-hand sides of the barrels 18, extend under said barrels and meet at the transverse center thereof. The fore-end member 43 is detachably held in place by a screw 45 that has threaded engagement with the breech 19, see Figs. 4 and 5. The fore-end member 44 is detachably held in place by a spring-projected friction pin 46 which extend rearward and projects into a seat in a lug 47 formed with a block 48 rigidly secured to and between the barrels 18 on the left side thereof. This friction pin 46 is mounted in a casing 49 set into the inner face of the fore-end member 44, at the rear end portion thereof, rigidly secured thereto and having an aperture into which the lug 47 extends.

The rear end portion of the fore-end member 44 extends outward over the rear end of said member and has formed therein a segmental seat 50 in which the correspondingly

formed end of the frame member 31 turns during the opening and closing of the breech 19 and holds the hinge pin 37 in its seat 38 when the breech 19 is open.

A lock for holding the breech 19 closed will be presently described.

An ejector 51, for the shells X in the gun, is normally held in a recess therefor in the breech 19 at the left-hand side thereof and extends under the rims of said shells in the customary manner. This ejector 51 is fixed to the rear end of a stem 52, mounted for endwise sliding movement in a bore-like-seat formed in the breech 19 and which stem projects forward thereof between the barrels 18 at the left thereof. A pin 53 on the ejector 51, eccentric to the stem 52, works in a bore in the breech 19 and holds said ejector from turning about the axis of said stem. The endwise movement of the stem 52 in the breech 19 is limited by a screw 54 having threaded engagement with the lug 37 and extends into a longitudinal notch 55 in the stem 52, see Figs. 4 and 5.

A spring-projected plunger 56 is provided for projecting the ejector 51 and is mounted in the block 48 and a bearing bracket 57 for endwise sliding movement in axial alignment with the stem 52 and impinges against the rear end thereof. The bracket 57 is held in position by separable interlocking engagement with the front end of the block 48 and a block 58 secured by screws 59 to a part 60 integral with the barrels 18. During the closing of the breech 19, the ejector 51 engages the breechblock 57 and is retracted thereby against the spring pressure of the plunger 56.

At the completion of the retracting movement of the ejector 51 a spring-pressed dog 61, mounted in the casing 49, engages a stop shoulder 62 on the stem 52 and holds said stem against the action of said plunger. Just before the final closing movement of the breech 19 a trip lug 63, on the outer end of the frame member 31, engages the dog 61, moves the same out of the path of movement of the stop shoulder 62 and releases the stem 52. At this time the plunger 56 acting on the stem 52 projects the ejector 51 to extract the shells X. When the breech 19 is again closed, the projected ejector 51 engages the breechblock 27, retracts said ejector together with the plunger 56 and places its spring under tension. At the completion of this retracting movement the dog 61, which was released by the trip lug 63 during the initial closing movement of the breech 19 automatically moves in front of the stop shoulder 62 and holds the ejector 51 retracted.

A pair of upper and lower firing pins 64 axially aligned with the corresponding barrels 18 have their forward end portions mounted in bore-like seats in the breechblock 27 and their rear end portions are

mounted in correspondingly formed seats in an auxiliary frame 65. This frame 65 is rigidly secured to the breechblock 27 at the back thereof by a vertical sliding interlocking engagement, extends rearward into the chamber 34 and is normally held by the frame members 29 and 30 against said sliding movement. The firing pins 64 are individually propelled or projected by encircling coiled springs 66 compressed between the auxiliary frame 65 and fixed collars 67 on the forward end portions of said pins. These firing pins 64 are entirely out of engagement with the auxiliary frame 65 except at the rear ends thereof, and hence, are free for reciprocatory movements.

A slide 68, by which the firing pins 64 are retracted, is mounted on said firing pins, forward of their fixed collars 67, and a fixed rod 69 for longitudinal sliding movement thereon. This rod 69 is secured at its ends to the auxiliary frame 65 midway between the firing pins 64 and is parallel thereto. Normally the springs 66 hold the slide 68, by the engagement of the collars 67 therewith, against the auxiliary frame 65 as a stop which limits the projecting movement of the firing pins 64. A rearward movement of the slide 68 acting on the collars 67 retracts the firing pins 64 and tensions their springs 66 and this movement of said slide is limited by the engagement of its rear end with the auxiliary frame 65.

Reciprocatory movement is imparted to the slide 68 by a lever 70 which extends upward into the chamber 34 through an aperture in the frame member forward of a trigger guard 71 on said member. This lever 70 is pivoted, intermediate of its ends, at 72 to and between a pair of depending lugs on the frame member 30 and its long or outer arm extends rearward under the trigger guard 71 and its free end portion is in diverging relation thereto to facilitate the gripping of the lever 70 to manipulate the same.

The short or inner arm of the lever 70 is connected to the slide 68 by a joint 72 which includes a disk-like head on the free end of said arm and a vertical way on the right-hand face of said slide in which said head works, see Fig. 9. A coiled spring 73 encircling the rod 69 is compressed between a part on the front of the slide 68 and a shoulder on said rod, see Fig. 4, and normally and yieldingly holds said slide in its foremost position and with the lever 70 in its rearmost position.

Two catches 74 and 75 are provided for individually holding the upper and lower firing pins 64, respectively, retracted against the tension of the propelling spring 66. These catches 74 and 75 are in the form of slides mounted on the rear end of the auxiliary frame 65 for vertical sliding movement and arranged to enter transverse lock-

notches 76 in the firing pins 64 when retracted. These catches 74 and 75 have transverse apertures through which the rear end portions of the firing pins 64 project and springs 77 anchored to the auxiliary frame 65 yieldingly hold said catches so that they ride on the firing pins 64 and move into the lock-notches 76 when brought into registration therewith, see Figs. 10 and 14. When the firing pins 64 are retracted by the lever 70 acting on the slide 68 the catches 74 and 75 automatically enter the lock-notches 76 and hold said pins retracted. During this movement of the slide 68 the spring 73 is tensioned by its retracting movement and placed under strain to project said slide and return the lever 70 to normal position.

The lock heretofore referred to for holding the breech 19 closed is, as shown, a flat bolt 78 mounted in a seat in the frame 26 for endwise sliding movement longitudinally of the gun at the right side thereof and for movement into and out of a cooperating bifurcated lock-lug 79 formed with the breech 19. Said lock-lug 79 is constructed and arranged to enter a notch-like seat 80 therefor in the right side of the frame 26 when the lock-bolt 78 is retracted and the breech 19 closed, see Figs. 4 and 5. The lock-bolt 78 is secured to the slide 68 for common movement therewith by interlocking vertical sliding engagement with the way of the joint 72 and the inner arm of the lever 70 works between the slide 68 and lock-bolt 78. Simultaneous with the retracting of the firing pins 64 by the slide 68 the lock-bolt 78 is withdrawn from the bifurcated lock-lug 79 and releases the breech 19 to permit the same to be opened.

An automatic catch 81 is provided for holding the lock-bolt 78 retracted during the opening and closing of the breech 19 and is released by the final closing movement of said breech. Said catch 81 is mounted in the frame 26 for horizontal endwise movement transversely thereof and is spring-projected into the seat 80. When the breech 19 is closed the catch 81, at its outer end, bears on the lock-bolt 78 during the projecting and retracting movements thereof and at the completion of said retracting movement the catch 81 enters a lock-notch 82 in the outer end of said lock-bolt. During the final closing of the breech 19 and lock-lug 79 engages the catch 81 and moves the same against the tension of its spring out of the lock-notch 82 and releases the lock-bolt 78 to permit the same to be projected by the spring 73, acting on the slide 68, into the bifurcated lock-lug 79.

From the above description it will be seen that a single forward movement of the lever 70 acting on the slide 68 retracts the firing pins 64 into positions in which they are automatically and individually held by the catches 74 and 75, respectively. This same

movement of the slide 68 retracts the lock-bolt 78 to permit the breech 19 to be opened and positions the lock-bolt 78 to be automatically held by the catch 81. When the breech 19 is closed the catch 81 is automatically operated to release the lock-bolt 78 which, under the action of the spring 73 on the slide 68, is projected into the lock-lug 79 to again lock the breech 19 closed. The return of the slide 68 to normal position by the spring 73 also resets the lever 70 and positions said slide out of the way of the firing pins 64 when released.

A single trigger 83 is provided for successively indirectly operating the catches 74 and 75 to release the retracted firing pins 64 in any desired order through a selector mechanism and which trigger is mounted on the frame member 30 within the guard 71. This selector mechanism includes a horizontal lever 84 which extends longitudinally of the frame 26 and is fulcrumed, intermediate of its ends, at 85 to the auxiliary frame 65 for compound vertical pivotal movement and endwise sliding movement.

A spring-projected push rod 86, which forms a part of an escapement, as will presently appear, is provided for endwise moving the lever 84 forward and hold the same in its lowermost pivotal position. This push rod 86 extends forwardly and downwardly longitudinally of the lever 84 and is hingedly attached at its lower end to the rear arm thereof for swinging movement longitudinally of said lever. The upper end portion of the push rod 86 extends through a hole in a bracket 87 for endwise sliding movement. This bracket 87 is rigidly secured to the frame member 30 and a coiled spring 88 encircling the push rod 86 is compressed between a shoulder on said rod and the bracket 87 and under strain to move the lever endwise forward and at the same time press the rear arm thereof onto the frame member 30 as a stop.

When the firing pins 64 are held retracted by the catches 74—75, the lower ends thereof are in the same plane and closely positioned to the upper edge of the rear arm of the lever 84 when held depressed by the push rod 86. The trigger 83 extends longitudinally under the rear arm of the lever 84 and when manually operated pivotally lifts said trigger to operate either one of the catches 74—75 depending on the longitudinal adjustment of said lever.

A clearance notch 89 is formed in the lever 84 for one of the catches 74—75 when the other thereof is being operated by said lever. In Fig. 10 the lever 84 is positioned, to wit: in its rearmost position to operate the catch 75 and release the lower firing pin 64 and at which time the notch 89 prevents said lever from coming into contact with the catch 74 and thereby operate the same.

To operate the catch 74 and release the upper firing pin 64 the lever 84 is moved into its foremost position, as shown in Fig. 11, and in which position the notch 89 is aligned with the catch 75 and the lever 84 when pivotally moved by the trigger 83 operates the catch 74 and release the upper firing pin 64.

When the order of firing is reversed from the just given or, in other words, when the lever 84 is positioned to operate the catch 74 and release the upper firing pin 64 a second or rear clearance notch 90 in the lever 84 permits free movement of said lever.

An escapement, of which the push rod 86 and its spring 88 forms a part, is provided for automatically setting the lever 84 for the next firing pin 64 after one thereof has been released and includes a fixed inverted toothed bar 91 formed with the bracket 87 and a co-operating spring-held toothed dog 92 pivoted to the lower end of an upright lever 93 on said bracket for swinging movement toward or from said bar.

A stop pin 94 on the bracket 87 limits the pivotal movement of the dog 92 toward the bar 91. Said escapement further includes a laterally projecting tooth 95 on the rear arm of the lever 84 for cooperating with the teeth of the dog 92.

A thumb slide 96 is provided for operating the lever 93 and thereby endwise shift the dog 92 and endwise position the lever 84 to align its clearance notch 89 with one of the catches 74—75 so that the other of said catches will be operated when the trigger 83 is pulled to pivotally move the lever 84. Formed with this thumb slide 96 is a depending flat guide lug 97 which works in a longitudinal slot in the frame member 29 and is connected to the upper end of the lever 93 by a joint which permits compound pivotal and sliding movement of said lever on the guide lug 97.

A notched spring 98 anchored to the frame member 29 and a cooperating pin 99 on the guide lug 97 yieldingly holds the slide 96 in either a forward or a rearward position. When the slide 96 is in its rear forward position, see Fig. 11, the lever 84 is set to operate the catch 74 and release the upper firing pin 64 and when the slide is in its foremost position the lever 84 is positioned to operate the catch 74 and release the lower firing pin 74. To reset the lever 84 after the firing pins 64 have been released, the front end of said lever is arranged to be engaged by the front end portion of the slide 68 during the latter part of its retracting movement and thereby endwise move the lever 84 against the spring action on the push rod 86.

By reference to Fig. 9 it will be noted that the faces of the teeth on the dog 92 and the back of the teeth 95 are reversely beveled so that during the retracting movement of the lever 84 the tooth 95 will ride over the teeth of the dog 92 and at which time said dog will

be depressed against the tension of its spring and moved away from the stop 94. After the lever 84 has been reset its tooth 95 is back of the rearmost tooth on the dog 92 and its engagement therewith holds the lever 84 against forward movement under the spring action of the push rod 86.

During the pivotal movement of the lever 84, by the trigger 83 when pulled to fire the lower barrel 18, its tooth 96 is lifted above the rear tooth on the dog 92 and into the rear notch in the toothed bar 91 and when the trigger 83 is released the return pivotal movement of said lever carries the tooth 95 between the two teeth on the dog 92 and allows the lever 84 to move a step forward under the action of the push rod 86. This movement of the escapement during the firing of the lower barrel 18 automatically positions the lever 84 to fire the upper barrel 18. When the trigger 83 is pulled to fire the upper barrel 18 pivotal movement imparted to the lever 84 by said trigger carries the tooth 95 out of engagement with the front tooth on the dog 92 and into the front notch on the toothed bar 91 and when said trigger is released return pivotal movement of the lever 84 by the push rod 86 positions the tooth 95 forward of the front tooth on the dog 92, see Fig. 9.

The action of the escapement when the thumb slide 96 is positioned to fire the upper barrel 18 is the same as that just described except the relation of the teeth on the dog 92 in respect to the notches in the bar 91, see Fig. 11. In this operation of the escapement the tooth 95 during its first upward movement enters the front notch on the bar 91 and during its second upward movement it is positioned forward of the dog 92.

The push rod 86 acting through the lever 84 holds the trigger 83 in its lowermost position and an upward pull on said trigger turns the lever 84 about its pivot 85 and operates one of the catches 74—75 depending on the endwise position of said lever.

A safety device for the trigger 83 is provided and includes a long bar 100 which rests on the frame member 30 parallel to the lever 84 for endwise sliding movement and which bar is endwise operated by a slide 101 on the under side of said frame member. This slide 101 has intermediate of its ends a flat lug 102 which works in a longitudinally extended slot in the frame member 30 and extends through an aperture in the bar 100, intermediate of its ends, and a pin 103 which extends transversely through said lug over the bar 100 holds said bar and lug assembled.

Formed with the rear of the bar 100 is a leaf spring 104 having on its under side a detent arranged to be positioned by said spring between two short pins 105 on the frame member 30 and spaced longitudinally thereof and which pins hold the bar 100 in an intermediate position. The engagement of the lug 102

with the frame member 30 at the rear end of the slot therein limits the rearward movement of the bar 100 and the engagement of said lug with the frame member 30 at the front end of said slot limits the forward movement of the bar 100. It will thus be seen that the bar 100 has three different positions and is yieldingly held in all of these positions by the engagement of the detent on the spring 104 with either one or both of the pins 105 and during the adjustment of said bar the spring 104 will yield and permit its detent to ride over said pins.

Cooperating with the bar 100 to hold the trigger 83 in an inoperative position, there is secured or formed with said trigger a laterally projecting stop-lug 106 which normally extends transversely under the bar 100. Formed in the left side of the bar 100 are two longitudinally spaced notches 107 for the movement of the stop-lug 106 therein, as will presently appear.

It is important to note that the bar 100 when in its foremost position is arranged to be engaged by the lever 70 when operated to retract the firing pins 64 and move thereby into an intermediate position. A guide pin 108 on the frame member 30 is provided for the bar 100.

For trap shooting the safety device is set in its rearmost position which aligns the rear notch 107 with the stop-lug 106 and thereby permit free movement of the trigger 83. By moving the bar 100 into an intermediate position said bar overlies the stop-lug 106 and thereby prevents movement of the trigger 83. When the bar 100 is in its forward position its rear notch 107 is aligned with the stop-lug 106 so that the trigger 83 may be successively operated to release the firing pins 64. When the lever 70 is operated to release the lock-bolt 78 and permit the breech 19 to be opened, said lever engages the forward end of the bar 100, moves the same rearward and positions the detent on the spring 104 between the pins 105 and in which position of said bar it overlies the stop-lug 106 and thereby automatically sets the safety device so that the trigger can not be operated until said device is manually moved either forward or rearward.

In assembling the breech mechanism it is only necessary to slide the auxiliary frame 65 into interlocking engagement with the frame 26 and the lock-bolt 78 into interlocking engagement with the slide 68 before the lower frame member 30 and parts carried thereby are secured in position. It will thus be seen that the assembly of the breech mechanism is very simple and the relative sliding movement of the auxiliary frame 65 on the frame 26 and the relative sliding movement of the lock-bolt 78 on the slide 68 permits said parts to adjust themselves so that there is no binding action therebetween and

expansion and contraction will not affect their free movements at all times.

The spaced upper and lower barrels with the air gaps therebetween will present very little resistance when swinging the gun horizontally and this action causes the air to pass between the barrels to cool the same. Furthermore, this spacing of the barrels in respect to each other prevents the transmission of heat from one barrel to the other except through a very small area. By mounting the breech 19 on the frame 26 to open and close about a vertical axis permits the gun to be easily operated and comparatively small movement is required to open the breech 19 in order to place the shells therein or extract the same.

What I claim is:

1. A breech loading gun including a spring-projected firing pin, lever-actuated means for retracting the firing pin, a catch for automatically holding the firing pin retracted, means including a trigger for operating the catch to release the retracted firing pin, a lock-bolt actuated by the lever-actuated means normally holding the breech closed, and automatic means operable to hold the lever-actuated means and lock-bolt inoperative when the breech is open and to release said means and lock-bolt when the breech is closed.

2. A breech loading gun including a spring-projected firing pin, a spring-projected slide for retracting the firing pin, a lever for operating the slide to retract the firing pin, a catch for automatically engaging the firing pin when retracted by the slide and holding the same, means including a trigger for operating the catch to release the retracted firing pin, a lock-bolt on the slide operable to hold the breech closed when the slide is projected, and automatic means operable to hold the slide and lock-bolt retracted when the breech is open and to release said slide and lock-bolt when the breech is closed.

3. A breech loading double barrel gun including a spring-projected firing pin for each barrel, a spring-projected slide for retracting the firing pins, a lever for operating the slide to retract the firing pins, catches for automatically engaging the firing pins when retracted by the slide and holding the same, means including a trigger for successively operating the catches to release the retracted firing pins, a lock-bolt actuated by the lever-actuated means normally holding the breech closed, and automatic means operable to hold the lever-actuated means and lock-bolt inoperative when the breech is open and to release said means and lock-bolt when the breech is closed.

4. A breech loading gun including a spring-projected firing pin, a spring-projected slide for retracting the firing pin, a lever

for operating the slide to retract the firing pin, a catch for automatically engaging the firing pin when retracted by the slide and holding the same, means including a trigger for operating the catch to release the retracted firing pin, a lock-bolt on the slide operable to hold the breech closed when the slide is projected, and an automatic catch engageable with the lock-bolt to hold the same and the slide retracted, said automatic catch being constructed and arranged to be engaged by the breech during its closing movement to release the slide and lock-bolt.

5. The structure defined in claim 2 in which the lock-bolt is mounted on the slide with freedom to permit relative vertical movements of the slide and lock-bolt.

6. A breech loading gun constructed and arranged to open about a vertical axis by a lateral movement of the barrel in respect to the stock, a shell extractor having a stem mounted for sliding movement longitudinally thereof, a spring-projected plunger mounted in the breech in axial alignment with the stem of the shell extractor and operative thereon to project the same, a spring-actuated dog arranged to engage a tooth on the stem of the shell extractor when retracted and hold the same retracted when the breech is open, said dog being arranged to engage a part on the frame during the final opening movement of the breech and operated thereby to release the stem of the shell extractor.

7. A breech loading double barrel gun including a spring-projected firing pin for each barrel, lever-actuated means for retracting the firing pins, two automatic catches for independently holding the firing pins retracted, a trigger, and a manually-controlled selector for causing the trigger to operate either one of the catches to release the respective firing pin, said selector being constructed and arranged to be reset by the movement of the lever-actuated means to retract the firing pins.

8. A breech loading double barrel gun including two spring-projected firing pins, one for each barrel, a spring-projected slide for retracting the firing pins, a lever for operating the slide to retract the firing pins, two catches for automatically and individually holding the firing pins retracted, and a selector for determining the order in which the firing pins are to be released and operable to successively operate the catches to release the firing pins, said selector being constructed and arranged to be reset by the movement of the lever-actuated means to retract the firing pins.

9. A breech loading double barrel gun including two spring-projected firing pins, one for each barrel, a spring-projected slide for retracting the firing pins, a lever for operating the slide to retract the firing pins, two catches for automatically and individually

holding the firing pins retracted, and a selector for determining the order in which the firing pins are to be released, said selector being mounted for endwise sliding movement rearward of the slide and pivoted for action on the catches, yielding means under strain to move the selector toward the slide and hold the same against pivotal movement, and a trigger for pivotally moving the selector to operate the catch holding the selected firing pin to release the same, said selector being constructed and arranged to be reset by the movement of the slide to retract the firing pins.

10. A breech loading double barrel gun including two spring-projected firing pins, one for each barrel, a spring-projected slide for retracting the firing pins, a lever for operating the slide to retract the firing pins, two catches for automatically and individually holding the firing pins retracted, and a selector for determining the order in which the firing pins are to be released, said selector being mounted for endwise sliding movement rearward of the slide and pivoted for action on the catches, yielding means under strain to move the selector toward the slide and hold the same against pivotal movement, manually-controlled means including an escapement for setting the selector in predetermined positions in respect to the catches, and a trigger for pivotally moving the selector to operate the catch of the selected firing pin to release the same.

11. A breech loading double barrel gun including two spring-projected firing pins, one for each barrel, a spring-projected slide for retracting the firing pins, a lever for operating the slide to retract the firing pins, two catches for automatically and individually holding the firing pins retracted, and a selector for determining the order in which the firing pins are to be released, said selector being mounted for endwise sliding movement rearward of the slide and pivoted for action on the catches, yielding means under strain to move the selector toward the slide and hold the same against pivotal movement, manually-controlled means including an escapement for setting the selector in predetermined positions in respect to the catches, and a trigger for pivotally moving the selector to operate the catch of the selected firing pin to release the same, said selector being constructed and arranged to be reset by the slide when operated to retract the firing pins.

12. A breech loading double barrel gun including two spring-projected firing pins, one for each barrel, a spring-projected slide for retracting the firing pins, a lever for operating the slide to retract the firing pins, two catches for automatically and individually holding the firing pins retracted, and a selector for determining the order in which the firing pins are to be released, said selector be-

ing mounted for endwise sliding movement rearward of the slide and pivoted for action on the catches, yielding means under strain to move the selector toward the slide and hold the same against pivotal movement, manually-controlled means including an escapement for setting the selector in predetermined positions in respect to the catches, connections for operating the escapement including a thumb-piece, and a trigger for moving the selector to operate the catch of the selected firing pin to release the same.

13. In a breech loading gun a spring-projected firing pin, a spring projected slide, a lock carried by the slide for holding the breech closed, and lever-actuated mechanism for simultaneously retracting the firing pin and releasing the lock.

14. In a breech loading gun a spring-projected firing pin, a spring-projected slide, a lock-bolt on the slide for holding the breech closed, and lever-actuated mechanism for simultaneously retracting the firing pin and releasing the lock-bolt.

15. The structure defined in claim 14 which includes a catch for automatically holding the firing pin retracted, said slide being operable when the firing pin is retracted to release the lock-bolt.

16. In a breech loading gun a spring-projected firing pin, means for retracting the firing pin, a catch for automatically holding the firing pin retracted, means including a trigger for operating the catch to release the firing pin, and a safety device for the trigger that may be manually set in an inoperative position, in a second position to hold the trigger inoperative and in a third position from which it is automatically moved into its second position by the means for retracting the firing pin during the operation thereof to retract said pin.

17. In a breech loading gun a spring-projected firing pin, means for retracting the firing pin, automatic means for holding the firing pin retracted, manually-operated means for operating the automatic means to release the firing pin, and a safety device for the manually-operated means that may be manually set in an inoperative position, in a second position to hold the trigger inoperative and in a third position from which it is automatically moved into its second position by the means for retracting the firing pin during the operation thereof to retract said pin.

18. The structure defined in claim 14 which further includes a catch for holding the lock-bolt and slide retracted and arranged to be released by the breech when closed.

19. In a breech loading gun a frame having a breech block, an auxiliary frame on the breech block, a spring-projected firing pin mounted on the auxiliary frame, a spring-projected slide mounted on the auxiliary frame for retracting the firing pin, a lever

for operating the slide to retract the firing pins, automatic means for holding the firing pin when retracted, and means including a trigger for operating the automatic means
5 for releasing the retracted firing pin.

20. The structure defined in claim 19 which further includes a lock-bolt carried on the slide and normally holding the breech closed.

21. In a breech loading double-barrel gun,
10 a frame having a breech block, an auxiliary frame on the breech block, two parallel spring-projected firing pins mounted on the auxiliary frame, a spring-projected slide mounted on the auxiliary frame and firing
15 pins, a lever for operating the slide to retract the firing pins, automatic means for holding the firing pins when retracted, and means including a trigger for operating the automatic means for releasing the retracted
20 firing pins.

22. A breech loading gun including a frame having at one side an integral forwardly projecting frame member, and a barrel the breech of which is attached to the
25 outer end of the frame member by a vertical pin for horizontal swinging movement, said frame member being extended under the barrel to substantially its transverse center and provided with a segmental seat in which the
30 barrel rests.

In testimony whereof I affix my signature.
ERICH O. KLEBE.

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