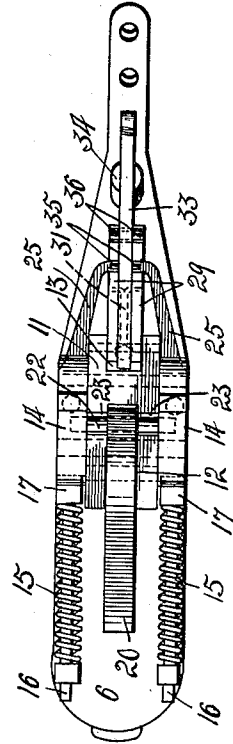
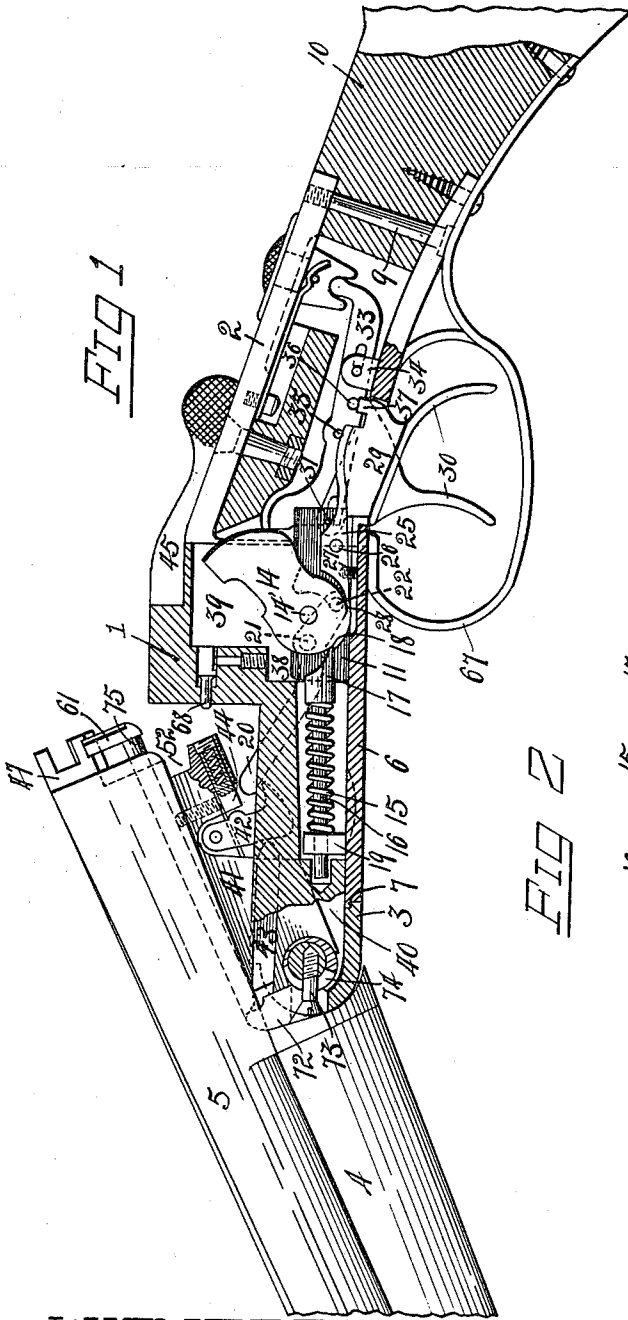


APPLICATION FILED MAY 20, 1912.

1,054,069.

Patented Feb. 25, 1913.

3 SHEETS—SHEET 1.



WITNESSES.

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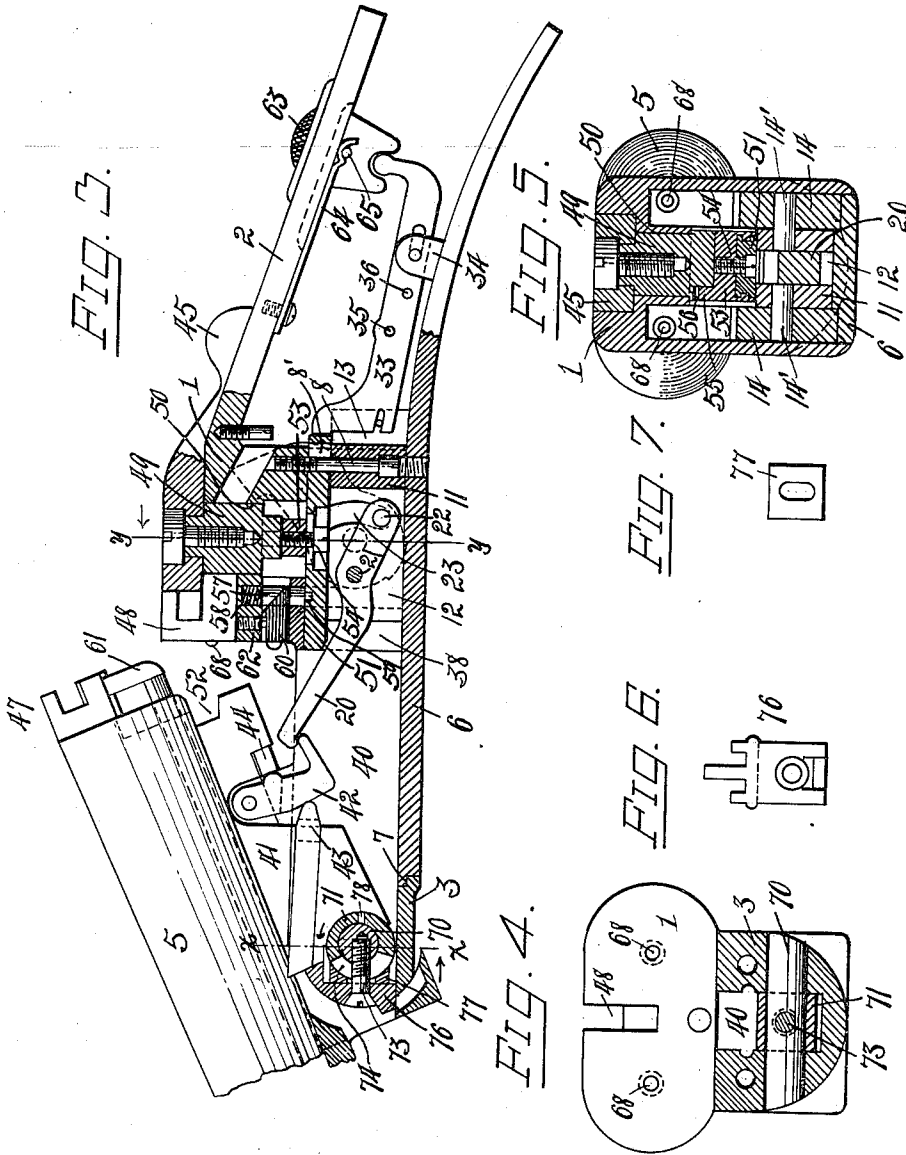
C. D. WILSON.
FIREARM.

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1,054,069.

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3 SHEETS—SHEET 2.



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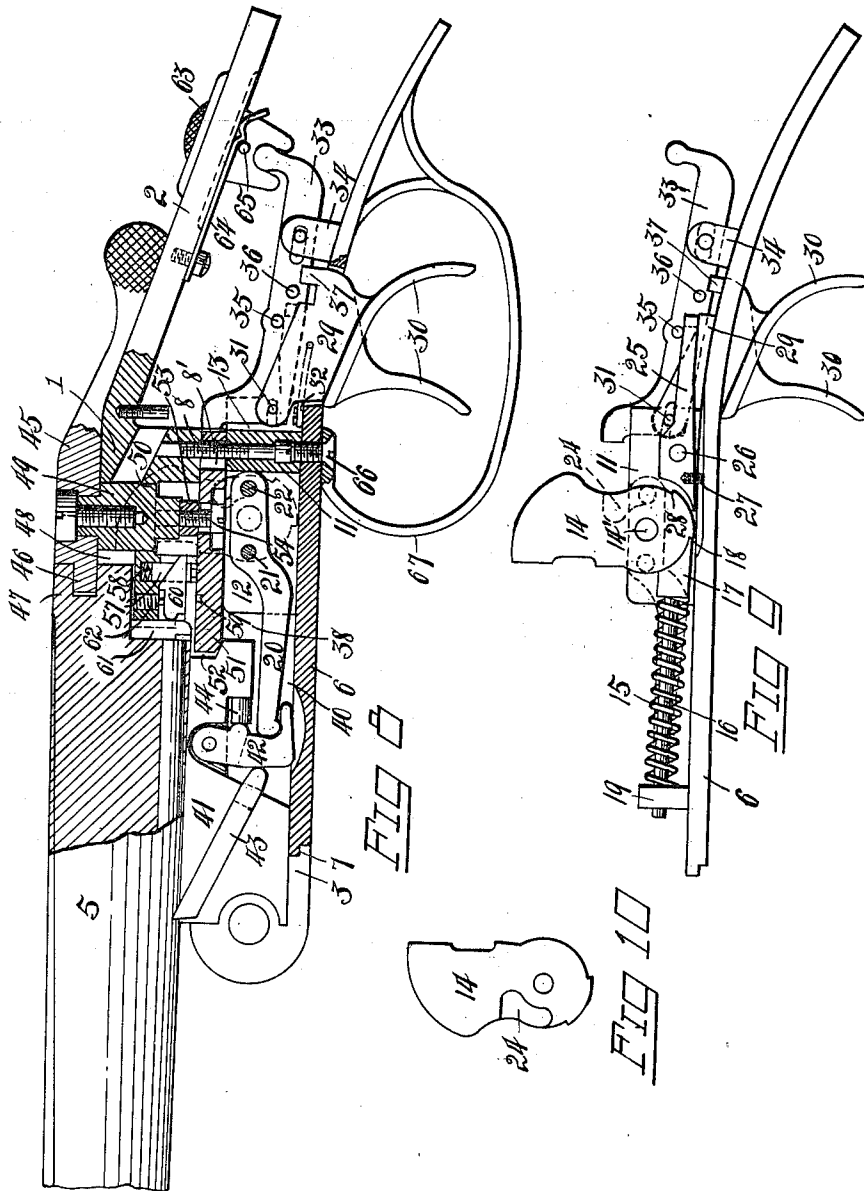
C. D. WILSON.
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3 SHEETS-SHEET 3.



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FIREARM.

1,054,069.

Specification of Letters Patent.

Patented Feb. 25, 1913.

Application filed May 20, 1912. Serial No. 698,462.

To all whom it may concern:

Be it known that I, CHARLES D. WILSON, a citizen of the United States, and a resident of Toledo, in the county of Lucas and State of Ohio, have invented a certain new and useful Firearm; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this specification.

My invention relates particularly to shot-guns or the like of the double-barrel type, but is not restricted to such use, as it may be used in any connection for which it may be adapted or appropriate.

The primary object of my invention is the provision, in a gun of this class, of a lock mechanism, which is simple and inexpensive in its construction, composed of comparatively few parts, and is capable of having its parts easily and quickly assembled, thus enhancing the practicability and commercial value of such guns.

Further objects of the invention are the provision of a lock mechanism, which is carried substantially as a unit by the trigger-plate, and adapted to be removed therewith from the gun; the provision of simple and improved safe means for such mechanism, and the provision of improved means which is operable to lock the stock and barrels in closed or firing position and also to release such parts to permit a relative movement thereof to open position.

Further objects and advantages will be apparent from the following detailed description.

The invention is fully described in the following specification, and while, in its broader aspect, it is capable of embodiment in numerous forms, a preferred embodiment thereof is illustrated in the accompanying drawings, in which,—

Figure 1 is a side elevation of a portion of a gun embodying the invention, with the barrel and stock in open position, and with parts broken away. Fig. 2 is a top plan

view of the trigger-plate and lock mechanism carried thereby, with the parts in cocked position. Fig. 3 is a view similar to Fig. 1, with parts in central longitudinal section, and with the triggers removed. Fig. 4 is a cross-section on the line *x, x* in Fig. 3, with the barrels removed. Fig. 5 is a cross-section on the line *y, y* in Fig. 3. Figs. 6 and 7 are details of parts associated with the forearm hinge. Fig. 8 is a view similar to Fig. 3 with the barrels and stock in closed position and the lock mechanism in fired position. Fig. 9 is a side elevation of the trigger-plate and parts carried thereby, with such parts in fired position, and Fig. 10 is an inner side view of one of the hammers.

Referring to the drawings, 1 designates the customary gun frame, which has the stock attaching arm 2 extending rearwardly from its upper portion, and the water-table arm 3 extending forwardly from its lower portion and hingedly connected to the barrels 5. The trigger-plate 6, which is attached to the under side of the frame is preferably fitted up into a bottom recess of such frame and its arm 3, and is retained therein by having its forward end in hooked engagement with the forward end wall of the recess, as at 7, and its rear portion attached to the frame by screws 8 and 9, the latter of which is projected through an opening in the stock part 10 and threaded into the arm 2 of the frame, as shown in Figs. 1 and 3.

Rising, in the present instance, from substantially the central portion of the trigger-plate is a block 11, which is rigidly attached thereto in any suitable manner and has both ends preferably forked to provide the vertical recesses 12 and 13 in the opposite ends thereof, with the forward recess 12 extending the greater distance into the block. The sides of the block 11 are equidistantly spaced from the side edges of the trigger-plate, and hammers 14, 14 are carried by pivot-studs 14' projecting therefrom, as best shown in Fig. 5, the outer sides of the hammers being preferably flush with the plate edges. Each hammer has its firing movements influenced by a coiled expansion spring 15, which encircles a rod 16 and

forces a head 17 thereon into yielding engagement with a notch 18 in the lower portion of the hammer, said spring having its opposite ends thrust against such head and a stud 19 rising from the forward end portion of the trigger-plate and through which the rod 16 loosely works. The block 11 in addition to carrying the hammers 14 also carries a hammer-cocking lever 20, which has its rear end portion projecting within the block recess 12 and pivoted therein short of its end, as at 21, and provided at the rear of such pivot with a cross-pin 22, which has its opposite ends working through registering slots 23 in the side walls of the recess 12 and projecting into notches or incut portions 24 in the respective hammers. When the hammers 14 are in fired or uncocked position and the forward end of the lever 20 is raised from its normal reclining position the ends of the lever-pin 22 are intended to coact with the lower end walls of the hammer recesses 24 and to move the hammers in unison to full cocked position against the tension of their firing-springs 15. The hammer-cocking movements are automatically imparted to the lever 20 upon a relative breaking of the stock and barrels, as herein-after described.

A sear 25 is mounted at each side of the block 11 immediately to the rear of the base portion of its hammer 14, being pivotally carried by a stud 26 projecting from the associated side of said block. A spring 27 acts upon the forward end portion of the sear 25 to hold its nose in yielding engagement with a notch 28 in the hammer when the hammer is cocked, and has its tail-piece projecting rearwardly from its pivot and angling inwardly at its free end over the inner end portion 29 of a trigger 30. These triggers are two in number, one being provided for each hammer, and each has its upper end portion of web form and working upwardly through a registering slot in the trigger-plate 6 with its forward end projected within the rear end recess 13 of the block 11 and pivoted therein on a pin 31, which is mounted at its ends in the walls of such recess. The triggers 29—30 are shown as being yieldingly retained in one position of their movements by a spring 32. This spring is secured at its forward end within the base portion of the recess 13 and has arms projecting rearwardly therefrom with their rear ends in engagement with the inner sides of the web portions 29 of the respective triggers.

A safe-bar 33 is slidably carried by a stud 34 rising from the trigger-plate 6, and has its forward end working between the web-portions 29 of the two triggers and slotted to slidably work over the pivot-pin 31. This safe-bar is preferably provided on each side thereof with two studs 35 and 36,

which, when the safe-bar is moved rearwardly, respectively move over the rear angled end of the associated sear 25 and a spur 37 on the upper rear end portion of the associated trigger web 29, thus locking both the sear and the trigger against hammer releasing movements.

When the trigger-plate and parts carried thereby are attached to the frame the safe-bar 33 and triggers 30 are disposed under the frame arm 2 and the block 11 and hammers 14 fit up within a registering recess 38 in the lower portion of the frame, such recess being provided at its sides with upward extensions 39 for the upper ends of the hammers to work in. The forward arm of the hammer-cocking lever 20 works forwardly from the recess 38 into a narrow longitudinally extending recess 40 in the center of the frame arm 3, such recess opening through the top of said arm to permit parts carried by the gun barrels to work into or out of the same upon a relative closing or opening of the stock and barrels, as shown in Figs. 3 and 8.

The barrels 5 are provided at the rear of their pivotal point of connection to the frame with a longitudinally-extending downwardly-projecting lug 41 in position to work down within the recess 40 when the barrels are in closed position. A finger 42 pivotally hangs from the lug 41 and has its lower end angled forwardly and hooked under the forward end of the lever 20, whereby the lever will be moved to effect a cocking of the hammers when the barrels are moved to open or shell ejecting position as shown in Figs. 1 and 3. The forward end of the lug 41 forms one member of the gun hinge and removably carries a push-bar 43 the rear end of which is in thrust contact with the forward side of the finger 42 to hold the same in lever engaging position. The finger 42 is yieldingly held in contact with the push-bar 43 by a spring-pressed plunger 44, which is carried in the lower rear end portion of the lug 41, as best shown in Fig. 1. The push-bar 43 is preferably of forked form to adapted it to straddle the rear end portion of the lug 41, each side of the lug being recessed for the respective legs of the push-bar to work in, as shown.

45 designates the customary barrel locking lever which is pivoted to the top of the frame 1 for lateral swinging movements relative thereto, and has its forward end provided with a nose-piece 46, which, when the barrels are in closed position, is intended to interlock with the notched tongue 47 projecting rearwardly from between the rear ends of the barrels, such tongue fitting down within a registering recess 48 in the frame. The lever 45 is fixedly carried by a stub-shaft 49, which is mounted for rotary

movements in a circular vertically-disposed socket 50 in the top portion of the frame, which socket opens at its lower end into the socket 38 of the frame into which the trigger-plate block 11 projects.

Mounted in the upper portion of the recess 38 immediately below the lower end of the socket 50 for longitudinal reciprocatory movements relative to the frame is a lock-bar 51, which when the frame and barrels are in closed position, is intended to have its forward end project into a notch 52 in the rear end of the barrel lug 41, as shown in Fig. 8, thus preventing an opening of the gun until the bar 51 has been moved rearwardly for such purpose. The reciprocatory movements of the bar 51 are imparted thereto from rotary movements of the lever 45 and attached stub-shaft 49 through the medium of a block 53, which block is fixed to the bar 51 by a screw 54, and is shown in Fig. 5 as straddling the bar 51 with its legs in sliding tongue and groove connection therewith, and as having a stud 55 projecting upwardly from one side thereof into a registering recess 56 in the lower end of the stub-shaft 49 at one side of its axis. The stud 55 and socket 56 are so arranged that upon a swinging of the locking-lever 45 from locking position the bar 51 and attached block 53 will be moved rearwardly so as to move the nose of the bar from engagement with the notch 52 of the barrel flange, thus permitting an opening of the gun, and that upon a movement of the lever 45 to closed or barrel-locking position the bar 51 will be moved forwardly to engage the notch 52. The screw 54, which connects the bar 51 and block 53, is preferably projected through a longitudinally-extending slot in the bar 51 to permit of a relative adjustment of the bar and block as the assembling of the parts or a wearing of the same may require.

In order to prevent a movement of the lever 45 and connected parts to barrel-locking position when the barrels are in open position, or until they have been moved into closed position, I provide a spring-pressed locking plunger 57, which is mounted for vertical movements in a socket in the frame 1 immediately above the forward end portion of the bar 51, and has its lower end yieldingly pressed against the top surface of the bar by a spring 58. The plunger 57 is provided at its lower end with a spur, which, when the bar 51 is in the retracted position shown in Fig. 3, fits into a registering socket 59 in the bar to lock the bar in such retracted position. The plunger 57 is moved to bar releasing position by the rearward movement of a wedge-block 60 in coaction with an inclined surface or shoulder of such plunger, said wedge-block having a part projecting without the forward

side of the frame in position to be engaged and pressed inwardly by the coaction therewith of the ejector-plate 61, or other registering part of the barrels, when the barrels are moved to closed position, such contact not taking place until the barrels are nearly in closed position relative to the frame, as best shown in Fig. 8. It is thus apparent that upon a closing of the barrels the ejector-plate 61, or other registering portion of the barrels, will coact with the outer end of the wedge-block 60 and force it inwardly to impart a bar releasing movement to the plunger 57 to permit a movement of the lever 54 and other barrel locking parts to locking position. The wedge-block 60 is shown as being retained within the frame, by a screw-stud 62 coacting with a shoulder thereon.

In order that the safe-bar 33 may have automatic locking movements communicated thereto upon an opening of the gun, the rear end of the lock-bar 51 and the forward end of the safe-bar are terminated in substantially abutting positions whereby a rearward or barrel-releasing movement of the lock-bar will move the safe-bar to sear and trigger locking position. When the gun has been closed the safe-bar may be moved forward to inoperative position by a forward-movement of a finger-slide 63 on the top surface of the frame, such slide having a tongue working downwardly through a slot in the frame arm 2 and forked to straddle the upturned rear end of the safe-bar, as shown. A spring-finger 64 acts upon a pin 65 on the finger-slide tongue to yieldingly retain the slide at the limit of either direction of its movements, as will be apparent.

The screw 8, which assists in attaching the trigger-plate and associated parts to the frame, is shown as projecting through a slot 8', in the lock-bar 51 and has its head preferably countersunk relative to the trigger-plate 6, as shown in Figs. 3 and 8, and a screw 66, which secures the forward end of the trigger-guard 67 to the plate 6, is shown as being threaded into such countersink.

68, 68 designate the firing pins which are mounted for reciprocatory movements in the frame 1 in position to be struck by the respective hammers 14.

In the coupling together of the frame and barrels of a gun it is customary to hook the forward end of the barrel lug 41 around the rear portion of the pivot-pin 70, which is mounted in the forward end portion of the frame arm 3, the barrel-lug being retained in hooked engagement therewith by the attaching of the forearm 4 of the frame to the barrels, as is well understood in the art. In order to compensate for wear which may occur between the coacting surfaces of the barrel lug 41 and the pin 70, I encircle the pivot-pin with an eccentric

bushing which is mounted for rotary movements upon the pin and receives the thrust or bearing of the barrel lug, as shown in Figs. 1 and 3. It will be apparent, with this arrangement, that a turning of the bushing 71 upon the pin will effect an adjustment of the barrels relative to the gun frame so as to take up any wear or looseness between the same. In Fig. 1 the bushing 71 is shown as being clamped in adjusted position relative to the pin by a block 72, which is firmly drawn to the outer side of the bushing by a screw 73 that projects through an opening in said block and a registering circular slot 74 in the bushing and threads transversely into the pivot pin 70, thus effecting a clamping or binding of the bushing between the pin and block. The block 72 in addition to cooperating with the screw 73 to clamp the bushing 71 in adjusted position, has its upper end projected into position to coact with the forward end of the ejector-plate rod 75 to impart shell ejecting movements thereto when the barrel is moved to open position, as shown. In Fig. 3 the bushing member 71 is shown as being located in adjusted position by the projection of the clamping-screw 73 through a clamping-block 76 and interposed washer member 77, the forward sides of which block and washer are shown in detail in Figs. 6 and 7. In adjusting the bushing 71 to effect a tightening of the frame and barrel, it is intended to be turned to the left, or in the direction indicated by the arrow in Fig. 3, and when so adjusted effects both a lowering of the barrels upon the frame extension 3 and a rearward movement thereof toward the breech portion of the frame. To effect such adjustment of the bushing, the barrels are first removed from the frame and a pointed tool engaged at its end with the small opening 78 in the forward side of the bushing and pushed downwardly to impart the desired adjusting movement thereto, it being understood that the screw 73 is first loosened for such purpose. The clamping-block 76 is made in the shape shown so that, in addition to serving as a clamping block for the adjustable-bushing it is adapted to perform other functions which form no part of the present invention and therefore need not be described.

In the use of my improved gun, the operator, to open the barrels relative to the frame, throws the locking lever 45 to the right to move the locking nose thereof from engagement with the notched tongue 47 at the rear end of the barrels, as with the guns of this nature commonly used. The moving of the lever 45 in this manner, in addition to releasing its engagement with the barrels, also effects a rearward movement of the lock-bar 51 from locking engagement with the notch 52 in the barrel lug due to the co-

operative action of the pin and socket 55 and 56 on the lever shaft and the block 53 attached to the lock-bar. When the lock-bar 51 has reached the limit of its rearward movement, the spring-influenced plunger 57 drops into locking engagement with a registering socket 59 therein to hold the barrel-locking parts in released position until the barrels have been again moved to their closed position. Upon a movement of the barrels to closed position the ejector-plate 61, in the present instance, coacts with the projected end of the wedge block 60 to throw such block inward in coaction with the plunger 57 to raise such plunger from barrel-locking position, thus permitting a return of the locking parts to barrel locking positions. Upon an opening movement of the barrels the finger 42, which is carried by the barrel lug 41, moves the hammer cocking lever 20 to cause the ends of the pin 22 thereof to engage the lower end wall of the hammer recesses 24 and move such hammers to full cocked positions against the tension of the hammer springs 15, in which positions they are held by the respective sears 25. The safe-bar 33, which was automatically moved rearwardly to place the pins 35 and 36 thereof in locking engagement with the respective rear angled ends of the sears 25 and the trigger-spurs 37, prevents a release of the sears from the hammers until the safe bar has been moved to inoperative position for such purpose. The coaction of the safe-bar with both the triggers and the sears not only prevents a firing movement of the triggers but also prevents the sears 6 from jarring from engagement with the hammer notches 28 as might be the case if the triggers only were locked against sear releasing movements. Upon a closing of the gun barrels relative to the frame, the operator can move the finger slide 63 at will to move the safe-bar from locking position, or vice versa. To remove the trigger plate 6 and attached parts from the frame for the purpose of cleaning, repairing or the like, it is only necessary to remove the screws 8, 9 and 66, the screw 66 being removed to render access to the screw 8. When the lock mechanism has thus been removed from the frame, it is a very simple matter to remove the separate lock parts therefrom, the hammers being loosely mounted on their pivot pins and held thereon by the side walls of the frame, as is also the case with the sears 25. The trigger-pin 31 and safe-bar holding pin in the stud 34 are also capable of being easily removed to permit a quick removal of the triggers and safe-bar.

It is apparent from the above that I have not only provided a gun which is simple, strong and durable in its construction but is economical of manufacture and is free from a considerable number of the complicated

lock mechanism parts commonly employed in guns of this character.

I wish it understood that my invention is not limited to any specific construction or arrangement of the parts except in so far as such limitations are specified in the claims.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is,—

10 1. In a gun, a frame, a barrel hinged thereto, a member carried by the frame for locking the barrel in closed position, means for moving said member to lock or release the barrel, a plunger movable in the frame to lock said member in barrel releasing position, and a block mounted in the frame for reciprocatory movements lengthwise thereof and relative to said plunger and movable by the barrel upon a closing movement thereof relative to the frame to cause it to act on and impart member releasing movement to said plunger.

25 2. In a gun, a frame, a barrel hinged thereto, a barrel locking bar reciprocally movable in the frame, a plunger movable in the frame and influenced to normally lock said bar in barrel releasing position, and a member movable relative to said plunger and having a part in coaction therewith and having its forward end normally projecting beyond the frame in the path of closing movement of the barrel relative to the frame whereby the barrel when moved to closed position imparts a releasing movement to the plunger.

30 3. In a gun, a stock frame, a barrel hinged thereto, means carried by the frame for locking the barrel in closed position and operable to release the barrel, and mechanism automatically operable to lock said means in its inoperative position and to release such means when the barrel has reached a predetermined point in its closing movement, said mechanism comprising two separate relatively movable coacting parts which are movable in different directions one by the other, one of said parts acting on said means and the other part being acted on by the barrel.

50 4. In a gun, a stock frame, a trigger-plate, a block fixed to the inner side of said plate and having a forked end, hammers pivotally carried by said block at opposite sides thereof, sears and triggers carried by said block, and means pivoted within the forked portion of said block and operable to impart cocking movements to the hammers.

55 5. In a gun, a stock frame, a plate removably carried by said frame and having a block portion projecting inwardly therefrom, the opposite ends of said block portion being recessed, a hammer and a sear pivotally carried on each of opposite sides of said block portion, triggers acting on said sears and pivoted in the rear end recess

of said portion, a lever pivoted in the front recess of said portion and having parts capable of acting on the hammers to impart cocking movements thereto when the forward end of the lever is raised.

6. In a gun, a stock frame, a plate removably carried by said frame and having an inwardly projecting block portion, a hammer and a sear pivotally carried by each of opposite sides of said block portion, hammer springs attached to the plate, triggers acting on said sears and pivoted to the rear end of said block, means operable to impart cocking movements to the hammers, and a safe-bar mounted for reciprocatory movements between the triggers and having parts for locking coaction with both the triggers and the sears.

7. In a gun, a frame, a barrel hinged thereto, a member carried by the frame for locking the barrel in closed position, means for moving said member to lock or release the barrel, a plunger movable in the frame to lock said member in barrel releasing position, a wedge block mounted for movements in the frame and movable by the barrel at a predetermined point in a closing movement thereof to move said plunger to release the barrel locking member to permit it to return to barrel locking position.

8. In a gun, a stock frame, a barrel hinged thereto, a barrel locking lever having a shaft part journaled in said frame, a barrel locking bar reciprocally movable in the frame below the inner end of the lever shaft and having a slot disposed longitudinally therein, a block straddling the bar over said slot, a screw projected through said slot and into said block for securing the block and bar in relative positions of adjustment, said block and lever shaft having stud and socket connection at one side of the shaft axis to communicate reciprocatory movements to the bar from rocking movements of the lever.

9. In a gun, a stock frame, a barrel, a pin longitudinally connecting the frame and barrel, an eccentric bushing rotatably mounted on said pin in coaction with one of said parts and having a transversely extending slot therein, a clamping plate in coaction with a side of said bushing and a screw projecting through said plate and bushing slot and threaded laterally into the pin and adjustable to release the bushing to permit an adjustment thereof on the pin or to rigidly clamp a side portion of the bushing between the pin and plate.

10. In a gun, a stock frame having a socket therein, a plate for closing said socket and having a block projecting therefrom into the socket, said block being forked to form spaced legs, and having each leg transversely slotted, a hammer pivoted to the outer side of each block leg, a lever projecting from within the space between the block

legs and fulcrumed therein, said lever having the arm thereof which projects between the legs provided with lateral projections which work through said leg slots and
5 against registering portions of the respective hammers to effect a cocking thereof when the lever is moved in one direction, and a barrel hinged to said frame and having a part for coacting with and imparting ham-
10 mer cocking movements to the lever when

the barrel is moved to open position relative to the frame.

In testimony whereof, I have hereunto signed my name to this specification in the presence of two subscribing witnesses.

CHARLES D. WILSON.

Witnesses:

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C. W. OWEN.