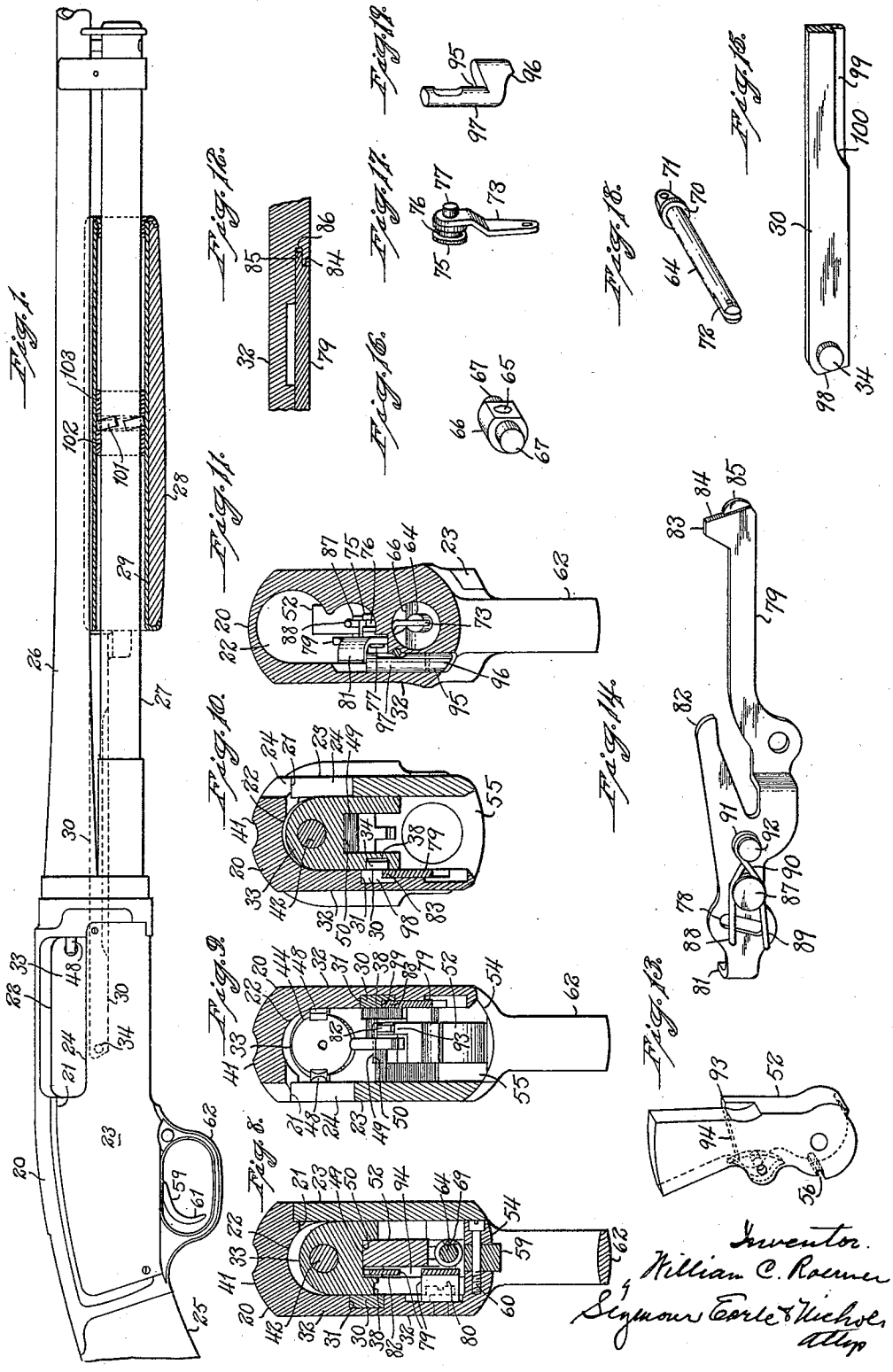
June 6, 1933. W. C. ROEMER 1,912,403

SLIDE ACTION FIREARM

Filed Aug. 19, 1932 3 Sheets-Sheet 1



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SLIDE ACTION FIREARM

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Fig. 2.

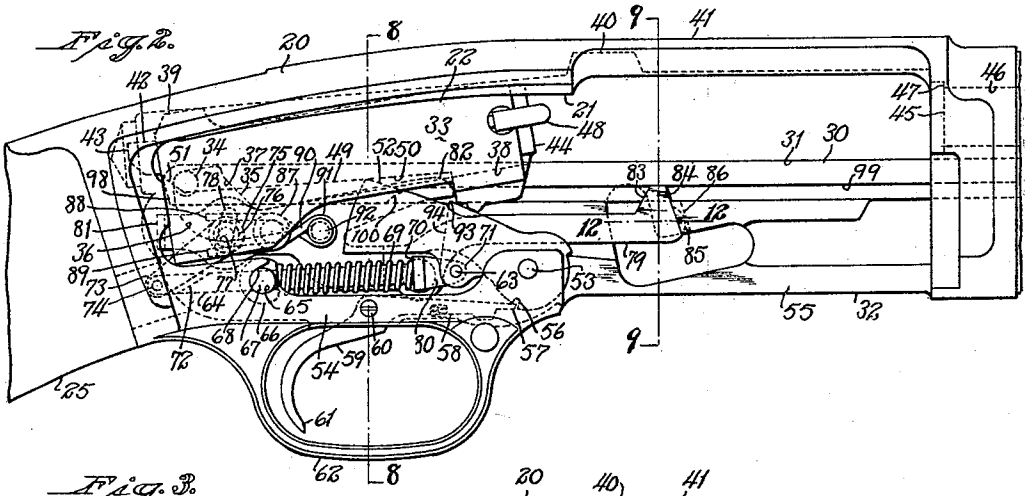


Fig. 3.

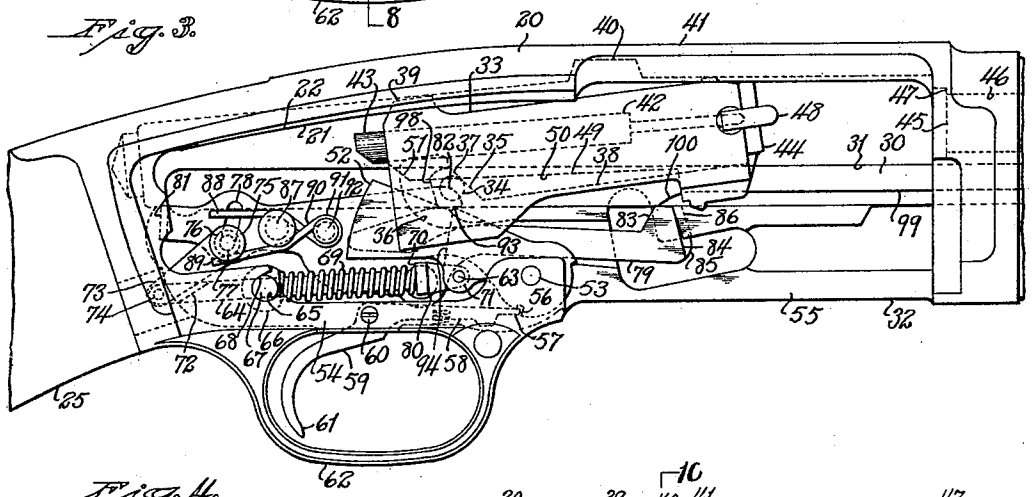
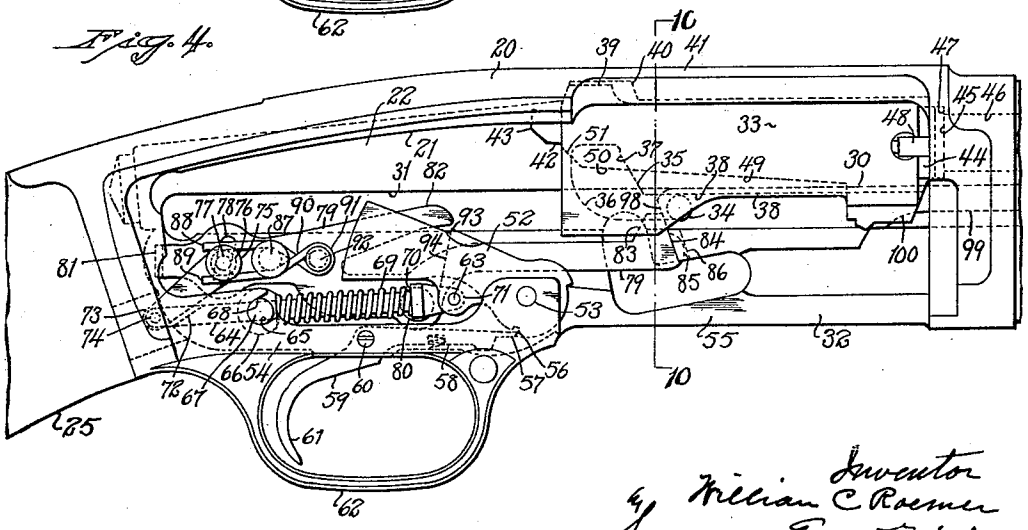


Fig. 4.



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SLIDE ACTION FIREARM

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Fig. 5.

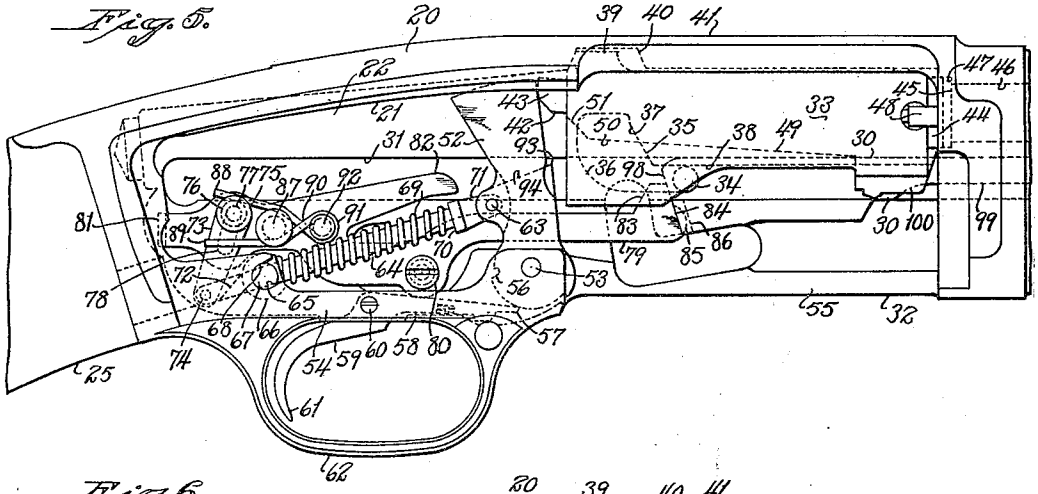


Fig. 6.

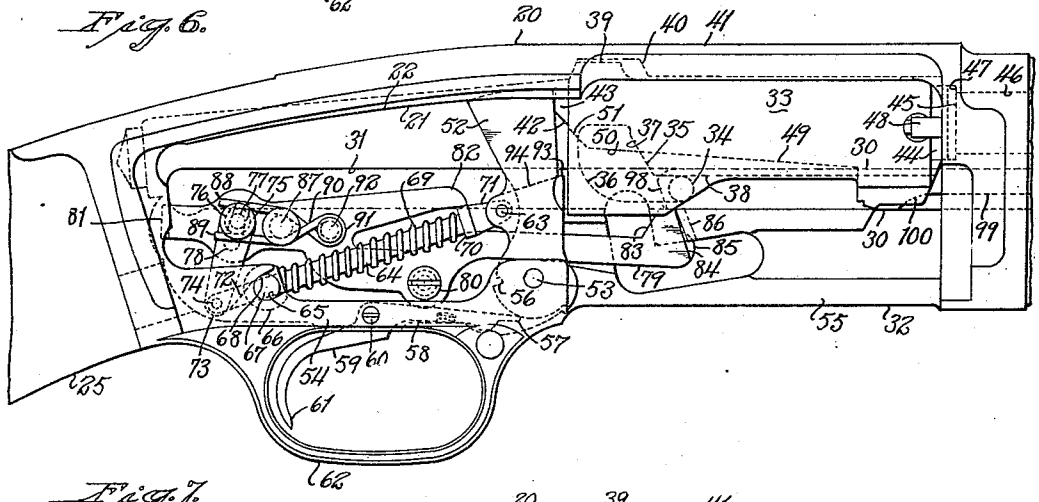
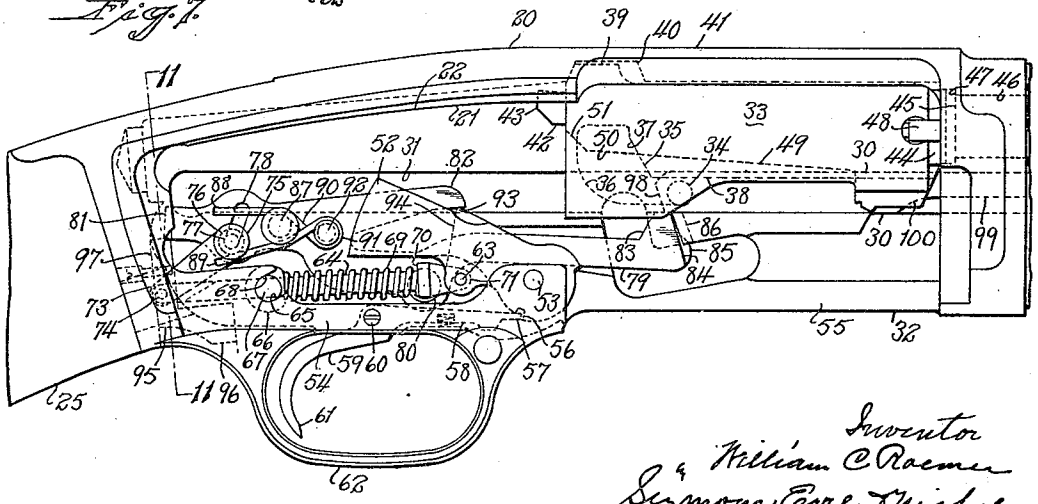


Fig. 7.



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UNITED STATES PATENT OFFICE

WILLIAM C. ROEMER, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO WINCHESTER REPEATING ARMS COMPANY, OF NEW HAVEN, CONNECTICUT, A CORPORATION OF MARYLAND

SLIDE-ACTION FIREARM

Application filed August 19, 1932. Serial No. 629,413.

This invention relates to an improvement in firearms and particularly to that class of firearms which are manually operated by means of a reciprocating slide, and are, for that reason, commonly known as "slide-action firearms."

One of the main objects of my present invention is to provide a firearm of the type referred to with simple, reliable and effective means for holding the manually-operable slide-handle or equivalent member against displacement during the interval between the closing of the bolt and the firing of the gun, to thus prevent the unintentional partial retirement of the bolt during such interval and the consequent failure of the gun to properly fire when the trigger is pulled.

Another object of my present invention is to provide a firearm of the type referred to in which reliable and effective automatic means is provided for preventing a premature release of the bolt after the same has been moved into and locked in its breech-closing position to thus guard against accidents due to hang-fires.

A further object of my present invention is to provide simple, reliable and effective means, whereby the hammer is automatically prevented from firing the gun until such time as the bolt has been moved fully into its breech-closing position.

With the foregoing and other objects in view as will appear from the following, my invention consists in a slide-action firearm having certain combinations and arrangements of parts as will more fully appear from the following and be finally claimed.

In the accompanying drawings:

Fig. 1 is a broken view mainly in side elevation of a slide-action firearm constructed in accordance with my invention, the slide-handle and immediately associated parts being shown in vertical longitudinal section;

Fig. 2 is a broken view in side elevation of the receiver portion thereof, with the receiver cover-plate removed, and the butt-stock, barrel and magazine broken away, the parts being shown in the positions which they assume when the bolt is moved into its fully open or retracted position;

Fig. 3 is a corresponding view but showing the parts in the positions which they assume when the bolt is about midway in its forward travel toward its closed position;

Fig. 4 is a similar view but showing the parts in the positions which they assume after the bolt has been moved from the position in which it is shown in Fig. 3 into its fully closed position;

Fig. 5 is a similar view showing the parts in the positions which they assume at the instant the hammer strikes the firing-pin;

Fig. 6 is a similar view showing the parts in the positions which they assume after the gun has been fired and after the recoil has taken place;

Fig. 7 is a similar view showing the bolt in its closed position and the hammer in its fully cocked position, and the slide-locking member manually tilted by means of the release-plunger to permit the retraction of the bolt without having previously released the hammer from its cocked position;

Fig. 8 is a vertical transverse sectional view taken on the line 8—8 of Fig. 2;

Fig. 9 is a similar view taken on the line 9—9 of Fig. 2;

Fig. 10 is a vertical transverse sectional view taken on the line 10—10 of Fig. 4;

Fig. 11 is a vertical transverse sectional view taken on the line 11—11 of Fig. 7;

Fig. 12 is a broken detail sectional view taken on the line 12—12 of Fig. 2;

Fig. 13 is a perspective view of the hammer detached;

Fig. 14 is a similar view of the slide-locking member detached, together with its operating-spring and the mounting-studs for the latter;

Fig. 15 is a broken perspective view of the rear end of the operating slide bar;

Fig. 16 is a perspective view of the oscillating plunger-guide detached;

Fig. 17 is a similar view of the tensioning-link detached;

Fig. 18 is a similar view of the plunger or hammer-spring guide-rod detached; and

Fig. 19 is a similar view of the manually-operable release-plunger detached.

The particular slide-action firearm herein

said tensioning-link is laterally offset and has secured to it a spool-like tensioning-stud 75 formed with an annular groove 76 and having a shank 77 extending beyond the said arm for entry into a sloping guide-slot 78 formed in an oscillating sheet-metal slide-locking member 79 which is mounted for rocking movement in a vertical plane upon a transverse pin 80 mounted in the receiver 20 before referred to.

The extreme rear end of the slide-locking member 79 is transversely bent to form a releasing-finger 81 and is formed about midway of its length with an upwardly-and-forwardly-sloping guard-finger 82 for the purpose as will hereinafter appear. At its forward end the said member 79 is provided with an upwardly-extending wedge-shaped slide-locking nose 83. The sloping forward end 84 of the slide-locking member 79 is adapted to act as a locking-abutment, as will hereinafter appear, and is formed with a forwardly-offsetting semicircular retaining-lip 85 adapted to slide within an undercut groove 86 formed in the left side wall 32 of the receiver 20.

Projecting laterally from the right hand side of the slide-locking member 79 just forward of the guide-slot 78 therein is a stud 87 across which extend the complementary rearwardly-projecting arms 88 and 89 of a slide-lock operating-spring generally designated by the numeral 90 and including a looped portion 91 encircling a mounting-stud 92 projecting laterally from the right side of the said slide-locking member 79 immediately forward of the stud 87 thereon. The arms 88 and 89 of the operating-spring 90 may be respectively described as an unlocking arm and a locking arm inasmuch, as will appear from the following, they respectively discharge the functions ascribed to them when alternately tensioned as will appear. The free end of the arm 88 normally engages with the groove 76 in the stud 75 carried by the tensioning-link 73 and normally presses downwardly upon the said stud. Similarly the free end of the arm 89 is normally engaged with the groove 76 in the said stud and normally presses upwardly upon the latter.

The guard-finger 82 of the slide-locking member 79 is adapted under certain conditions to be moved over the upper forward corner 93 of a guard-ledge 94 formed upon the left side of the hammer 52 when the same is in its rearwardly-swung position and is adapted to be engaged by the corner 93 of the said ledge to guard against the movement of the said hammer prior to the movement of the bolt 33 into its fully closed and locked position, as will more fully appear from the following.

For the purpose of enabling the user of the gun to unlock the bolt 33 and move the same into its fully retired position, as shown in Fig. 2, without first requiring the release of the hammer 52, I provide manually-operable means for rocking the slide-locking member 79 to withdraw its slide-locking nose 83 from the path of the operating slide-bar 30 and out of engagement with the rear end 98 of the said slide-bar 30, which is sloped to correspond to the slope of the forward end 84 of the said member 79 for the purpose of securing a frictional engagement between the two said surfaces, as will hereinafter appear. The means referred to as herein shown in Figs. 7, 11 and 19 consists mainly of a vertically-reciprocating releasing-member 95 which includes a finger-button 96 and a cylindrical upwardly-extending shank 97 adapted to engage the under surface of the releasing finger 81 extending laterally from the rear end of the slide-locking member 79, as before described.

As shown particularly well in Fig. 15, the operating slide-bar 30 is formed in its right under corner with a longitudinal groove 99 terminating at its rear end in a downwardly-curved cam-surface 100 adapted to cam the slide-locking nose 83 of the slide-locking member 79 downward as the said slide-bar is moved forward from its rearmost position for the purpose as will hereinafter appear.

For the purpose of normally maintaining the rear end 98 of the operating slide-bar 30 in frictional engagement with the similarly-sloped forward end 84 of the slide-locking member 79 when the breech is in its fully closed position, I employ a sheet-metal spring 101 which encircles the tubular magazine 27 and has its respective ends laterally offset in opposite directions, as shown in Fig. 1. One of the laterally-offset ends of the said spring 101 engages the forward end of a collar 102 soldered, brazed, or otherwise secured to and within the sleeve 29 of the slide-handle 28 and adapted to slide freely upon the said magazine 27. The complementary oppositely-offset end of the spring 101 is adapted to abut against the rear edge of a collar 103 encircling the magazine 27 and to which it is secured by solder, brazing, or otherwise, and upon the outer periphery of which the sleeve 29 of the slide-handle 28 is adapted to freely slide.

For the purpose of making clear the operation and functioning of the slide-action firearm herein chosen for illustration, let it be presumed that the slide-handle 28 has been manually moved to the limit of its rearward movement, with the effect of moving the parts into the positions in which they are shown in Fig. 2, in which figure it will be noted that the bolt is fully retired, so that a cartridge may be introduced into the chamber 46 either directly or from the magazine

27 by means of suitable mechanism (not shown).

If, now, the slide-handle 28 is moved forwardly so as to move the bolt from the position in which it is shown in Fig. 2 into the position in which it is shown in Fig. 3, the cam-surface 100 on the operating slide-bar 30 will have engaged the nose 83 of the slide-locking member 79 with the effect of depressing the same and thereby rocking the entire slide-locking member about its pin 80 in a clockwise direction, with the effect of causing the guard-nose 82 of the said member 79 to move into camming engagement with the corner 93 of the guard-ledge 94 of the hammer 52 to thus further depress the said hammer and cause its sear-abutment 56 to move slightly out of contact with the sear-nose 57 of the trigger 59, though the said sear-nose remains in the path of the said abutment, as will clearly appear by reference to Fig. 3.

The clockwise rocking of the slide-locking member 79 by the cam-surface 100 of the operating slide-bar 30, as just above described, will serve to further tension the arm 89 of the operating-spring 90, so that the said arm will be exerting a constant effort to swing the locking-member 79 in a counterclockwise direction.

The continued forward movement of the slide-handle 28 to the limit of its forward movement, in which the spring 101 is placed under tension, will move the bolt bodily forward and rock the same upwardly into its locked position, as shown in Fig. 4. During the forward travel of the operating slide-bar incident to the movement of the bolt into its fully closed position, as just described, the rear end 98 of the said slide-bar 30 will be moved forwardly of the forward end 84 of the slide-locking member 79 and thus permit the already tensioned arm 89 of the spring 90 to rock the member 79 in a counterclockwise direction and move the nose 83 thereof upwardly into the path of the said slide-bar 30.

Upon the release of the forward manual thrust upon the slide-handle 28 the spring 101 will assert itself and cause the rear end 98 of the slide-bar 30 to frictionally engage with the forward end 84 of the slide-locking member 79 to frictionally hold the same in the position in which it is shown in Fig. 4 for the purpose as will hereinafter appear. As the slide-locking member 79 is rocked in a counterclockwise direction, as just described, its guard-nose 82 will thereby be moved out of engagement with and out of the path of the corner 93 of the guard-ledge 94 and thus permit the hammer 52 to swing to a slight degree in a clockwise direction to reengage its sear-abutment 56 with the sear-nose 57.

As the operating slide-bar 30 is moved forwardly from the position in which it is shown in Fig. 3 into the position in which it is shown in Fig. 4, its stud 34 will have engaged the closing-and-lifting cam-surface 37 of the bolt 33 so as to first move the said bolt to the limit of its forward movement and subsequently tilt the rear end of the same upwardly to engage the rear surface of its locking-lug 39 with the rear wall of the locking-recess 40. After the bolt has been moved forwardly and tilted, as just described, the stud 34 will under-ride the locking-surface 38 thereof and support the bolt in its locked position.

With the parts in the positions shown in Fig. 4, the gun is in condition for firing, which may be effected in the usual manner by a rearward draft upon the finger-piece 61 of the trigger 59.

The rearward draft upon the finger-piece 61 of the trigger will disengage the sear-nose 57 from the sear-abutment 56 and thus permit the hammer-spring 69 to drive the hammer 52 in a clockwise direction and cause the upper portion of its forward face to impinge against the rear end 43 of the firing-pin 42, as shown in Fig. 5, which illustrates the position of the parts at the instant the said hammer engages with the said firing-pin and just prior to the forward travel of the latter to fire the cartridge.

As the hammer 52 is swung in a clockwise direction as just above described, the plunger 64 will have moved bodily forward in the passage 65 of the guide-member 66 and will, at the same time, have been rocked slightly in a counterclockwise direction, as may be observed by comparing Fig. 4 with Fig. 5. This movement of the plunger 64 will serve to "erect," so to speak, the tensioning-link 73 and cause the stud 75 thereof to move upward, out of engagement with the arm 89 of the operating-spring 90 and to further tension the arm 88 thereof. The last mentioned arm will, as thus tensioned, exert an effort to swing the slide-locking member 79 in a clockwise direction and, therefore, tend to move the locking-nose 83 out of the path of the operating slide-bar 30. However, owing to the rearward pressure exerted upon the said slide-bar 30 by the spring 101, the frictional engagement between the rear end 98 of the said slide-bar and the forward end 84 of the member 79 will be sufficient to prevent the tension of the arm 88 of the spring 90 from effecting the clockwise turning of the member 79 just referred to until such time as recoil takes place, as will be presently described.

As the hammer 52 drives the firing-pin 42 forwardly from the position shown in Fig. 5 to that shown in Fig. 6 (which movement requires but a fractional part of a second), the gun will be fired, with the effect of causing the same to recoil and, owing to the fact that the slide-handle 28 is slidably mounted upon

the magazine 27, the said slide-handle and its rigidly connected parts including the operating slide-bar 30 will, due to their inertia, and despite the tension of the spring 101, not immediately partake of the rearward movement of the remainder of the firearm under the action of the recoil just referred to, but will, despite the tension of the spring 101, lag behind, with the effect that the slide-locking member 79 (which immediately partakes of the recoil action) will move rearwardly relative to the said slide-bar 30 and disengage the forward end 84 of the former from the rear end 98 of the latter, whereupon the slide-locking member will immediately turn in a clockwise direction under the urge of the arm 88 of the operating-spring 90, so that the slide-locking nose 83 will be fully retired out of the path of the operating slide-bar 30.

The operating slide-bar 30 having been unlocked, as above described, may now be moved rearwardly by means of the slide-handle 28 and effect the retirement of the bolt 33 for the purpose of extracting the now fired cartridge from the chamber 46 and to permit the introduction of a fresh cartridge thereinto.

As the slide-bar is moved rearwardly for the purpose just above described, the stud 34 thereof will move rearwardly out from under the bolt-locking surface 38 of the L-shaped cam-grove 35 of the bolt and into engagement with the depressing-and-retracting cam-surface 36 thereof, with the effect of first rocking the rear end of the said bolt downwardly to disengage its locking-lug 39 from the locking-recess 40 and then moving the said bolt bodily rearward and ultimately into the position in which it is shown in Fig. 2.

As the bolt 33 is moved rearwardly, as above described, the rear end 43 of the firing-pin 42 will first be engaged with the hammer 52, with the effect of starting the swinging movement of the same in a counterclockwise direction against the tension of the spring 69. As the hammer rocks rearwardly, as described, it will subsequently be engaged by the chamfered surface 51 and ultimately by the top wall 50 of the hammer-receiving groove 49 in the said bolt, with the effect of tilting the said hammer sufficiently to cause its sear-abutment 56 to move over the sear-nose 57 and slightly past the forward end thereof.

As the hammer 52 is swung in a counterclockwise direction as just above described, the spring 69 will be further compressed and the plunger 64 will be moved rearwardly through the passage 65 in the guide-member 66, with the effect of canting the tensioning-link 73 and drawing its stud 75 downwardly. As the stud 75 is moved downwardly as just described, it will ride away from the upper arm 88 of the operating-spring 90 and will place additional tension on the lower arm 89 thereof to thus tend to rock the slide-locking member 79 in a counterclockwise direction. At substantially the same time that the rear end of the guard-ledge 94 of the hammer 52 reaches the forward end of the guard-finger 82, the rear end of the groove 99 in the slide-bar 30 will have been brought into line with the locking-nose 83 of the member 79, whereupon the said nose will rise under the tension of the arm 89 and the said member 79 will turn in a counterclockwise direction to a degree sufficient to retire the guard-finger 82 out of the path of the said ledge 94 and thus permit the hammer to pass rearwardly and downwardly into its fully retired position.

The parts will now have reassumed the positions in which they are shown in Fig. 2, preparatory to another cycle of operations corresponding to that already described.

In the event that after the gun is cocked and the breech closed, it should for any reason be desired to move the bolt into its fully retired position such, for instance, as to extract an unfired shell from the cartridge chamber, this may be accomplished without releasing the hammer by an upward pressure exerted upon the finger-piece 96 of the releasing member 95 to cause its shank 97 to engage the under face of the releasing-finger 81 of the slide-locking member 79 and thus rock the latter member in a clockwise direction to forcibly depress its locking-nose 83 and move the same out of the path of the operating slide-bar 30, as shown in Figs. 7 and 11. With the locking-nose of the member 79 retired as just above described, the slide-handle 28 may be moved rearwardly and through the intermediary of the operating slide-bar 30 effect the unlocking and retirement of the bolt 33 into the position in which it is shown in Fig. 2.

Particular attention is called to the fact that by employing what amounts to a plunger and a toggle-like tensioning-link for causing the hammer to shift the slide-locking member into and out of its slide-locking positions through the intermediary of the operating-spring 90 or equivalent yielding means, substantially the entire swing of the hammer may be utilized to effect the shift referred to, which latter is effected, as already described, by the energy stored in the said operating-spring. Thus, a smoothness of action is obtained and a minimum impedance to the movement of the hammer is imposed at any given position thereof throughout its full swing.

It will be understood by those skilled in the art that my invention may assume varied physical forms without departing from my inventive concept, and I, therefore, do not limit my invention to the specific embodiments herein chosen for illustration, but only as indicated in the appended claims.

I claim:

1. In a slide-action firearm, the combina-

tion with the reciprocating bolt and swinging hammer thereof; of manual operating means for reciprocating the said bolt; a locking member for locking the said manual operating means; and means for causing the said hammer to shift the said locking member into and out of its locking positions including a plunger operatively connected to the said hammer, a tensioning-link operatively connected to the said plunger and yielding spring means operatively interposed between the said tensioning-link and the said locking member.

2. In a slide-action firearm, the combination with the operating slide, slide-locking member and hammer thereof; of operating means for causing the said hammer to shift the said slide-locking member into and out of its slide-locking positions, including a plunger pivotally connected to the said hammer, a tensioning-link pivotally connected to the said plunger, and yielding spring means operatively interposed between the said tensioning-link and the said slide-locking member.

3. In a slide-action firearm, the combination with the operating slide, oscillating slide-locking member and hammer thereof; of operating means for causing the said hammer to rock the said slide-locking member into and out of its slide-locking positions, including a plunger pivotally connected to the said hammer, a tensioning-link pivotally connected to the said plunger, and yielding spring means operatively interposed between the said tensioning-link and the said oscillating slide-locking member.

4. In a slide-action firearm, the combination with the operating slide, slide-locking member and hammer thereof; of operating means for causing the said hammer to shift the said slide-locking member into and out of its slide-locking positions, including a reciprocating and oscillating plunger pivotally connected to the said hammer, a tensioning-link pivotally connected to the said plunger, and yielding spring means operatively interposed between the said tensioning-link and the said slide-locking member.

5. In a slide-action firearm, the combination with the operating-slide, oscillating slide-locking member and hammer thereof; of operating means for causing the said hammer to rock the said slide-locking member into and out of its slide-locking positions, including a reciprocating and oscillating plunger pivotally connected to the said hammer, a tensioning-link pivotally connected to the said plunger, and yielding spring means operatively interposed between the said tensioning-link and the said oscillating slide-locking member.

6. In a slide-action firearm, the combination with an operating slide, slide-locking member and hammer thereof; of operating means for causing the said hammer to shift the said slide-locking member into and out of its slide-locking positions, including a reciprocating and oscillating plunger pivotally connected to the said hammer, an oscillating guide member for the said plunger, a tensioning-link pivotally connected to the said plunger, and yielding spring means operatively interposed between the said tensioning-link and the said slide-locking member.

7. In a slide-action firearm, the combination with an operating slide, oscillating slide-locking member and hammer thereof; of operating means for causing the said hammer to rock the said locking member into and out of its slide-locking positions, including a reciprocating and oscillating plunger pivotally connected to the said hammer, an oscillating guide member for the said plunger, a tensioning-link pivotally connected to the said plunger, and yielding spring means operatively interposed between the said tensioning-link and the said oscillating slide-locking member.

8. In a slide-action firearm, the combination with the operating slide, slide-locking member and hammer thereof; of operating means for causing the said hammer to shift the said slide-locking member into and out of its slide-locking positions, including a plunger pivotally connected to the said hammer, a tensioning-link pivotally connected to the said plunger, and yielding spring means carried by the said slide-locking member and operatively interposed between the same and the said tensioning-link.

9. In a slide-action firearm, the combination with the operating slide, oscillating slide-locking member and hammer thereof; of operating means for causing the said hammer to rock the said slide-locking member into and out of its slide-locking positions, including a plunger pivotally connected to the said hammer, a tensioning-link pivotally connected to the said plunger, and yielding spring means carried by the said oscillating slide-locking member and operatively interposed between the same and the said tensioning-link.

10. In a slide-action firearm, the combination with the operating slide, slide-locking member and hammer thereof; of operating means for causing the said hammer to shift the said slide-locking member into and out of its slide-locking positions, including a plunger pivotally connected to the said hammer, a tensioning-link pivotally connected to the said plunger, a stud carried by the said tensioning-link, and yielding spring means operatively interposed between the said stud and the said slide-locking member.

11. In a slide-action firearm, the combination with the operating slide, slide-locking member and hammer thereof; of operating means for causing the said hammer to shift

the said slide-locking member into and out of its slide-locking positions, including a plunger pivotally connected to the said hammer, a tensioning-link pivotally connected to the said plunger, a grooved stud carried by the said tensioning-link, and yielding spring means carried by the said slide-locking member and operatively interposed between the same and the said grooved stud.

12. In a slide-action firearm, the combination with the operating slide, slide-locking member and hammer thereof; of operating means for causing the said hammer to shift the said slide-locking member into and out of its slide-locking positions, including a plunger pivotally connected to the said hammer, a tensioning-link pivotally connected to the said plunger, and unitary double-armed spring-means interposed between the said tensioning-link and the said slide-locking member.

13. In a slide-action firearm, the combination with the operating slide, slide-locking member and hammer thereof; of operating means for causing the said hammer to shift the said slide-locking member into and out of its slide-locking positions, including a plunger pivotally connected to the said hammer, a tensioning-link pivotally connected to the said plunger, and unitary double-armed spring-means carried by the said slide-locking member and operatively interposed between the same and the said tensioning-link.

14. In a slide-action firearm, the combination with the operating slide, slide-locking member and hammer thereof; of operating means for causing the said hammer to shift the said slide-locking member into and out of its slide-locking positions, including a plunger pivotally connected to the said hammer, a tensioning-link pivotally connected to the said plunger, a grooved stud carried by the said tensioning-link, and unitary double-armed spring-means carried by the said slide-locking member and having complementary arms respectively normally engaged with the said grooved stud.

15. In a slide-action firearm, the combination with the operating slide, slide-locking member and hammer thereof; of operating means for causing the said hammer to shift the said slide-locking member into and out of its slide-locking positions, including a plunger pivotally connected to the said hammer, a tensioning-link pivotally connected to the said plunger and having sliding connection with the said slide-locking member, and yielding spring means operatively interposed between the said tensioning-link and the said slide-locking member.

16. In a slide-action firearm, the combination with the operating slide, slide-locking member and hammer thereof; of operating means for causing the said hammer to shift the said slide-locking member into and out of its slide-locking positions, including a plunger pivotally connected to the said hammer, a tensioning-link pivotally connected to the said plunger and having sliding connection with the said slide-locking member, and unitary double-armed spring-means carried by the said slide-locking member and operatively interposed between the same and the said tensioning-link.

17. In a slide-action firearm, the combination with the operating slide, slide-locking member and hammer thereof; of operating means for causing the said hammer to shift the said slide-locking member into and out of its slide-locking positions, including a reciprocating hammer-spring guide-rod, a spring encircling the said guide-rod for moving the same together with the said hammer, a tensioning-link pivotally connected to the said guide-rod, and yielding spring means operatively interposed between the said tensioning-link and the said slide-locking member.

18. In a slide-action firearm, the combination with the operating slide, slide-locking member and hammer thereof; of operating means for causing the said hammer to shift the said slide-locking member into and out of its slide-locking positions, including a reciprocating hammer-spring guide-rod, a spring encircling the said guide-rod for moving the same together with the said hammer, a tensioning-link pivotally connected to the said guide-rod, and unitary double-armed spring-means carried by the said slide-locking member and operatively interposed between the same and the said tensioning-link.

19. In a slide-action firearm, the combination with the operating slide, slide-locking member and hammer thereof; of operating means for causing the said hammer to shift the said slide-locking member into and out of its slide-locking positions, including a reciprocating hammer-spring guide-rod pivotally connected to the said hammer, a spring encircling the said guide-rod for moving the same together with the said hammer, a tensioning-link pivotally connected to the said guide-rod, a grooved stud carried by the said tensioning-link, and unitary double-armed spring-means carried by the said slide-locking member and having complementary arms normally engaged with the said grooved stud.

20. In a slide-action firearm, the combination with the operating slide, slide-locking member and hammer thereof; of operating means for causing the said hammer to shift the said slide-locking member into and out of its slide-locking positions, including a reciprocating and oscillating hammer-spring guide-rod pivotally connected to the said hammer, an oscillating guide member for the said guide-rod, a spring encircling the said guide-rod and bearing against the said oscillating guide member, a tensioning-link pivot-

ally connected to the said guide-rod, and double-armed spring-means carried by the said slide-locking member and operatively interposed between the same and the said tensioning-link.

In testimony whereof, I have signed this specification.

WILLIAM C. ROEMER.