July 12, 1949. F. L. HUMESTON 2,476,196

SLIDE-ACTION FIREARM

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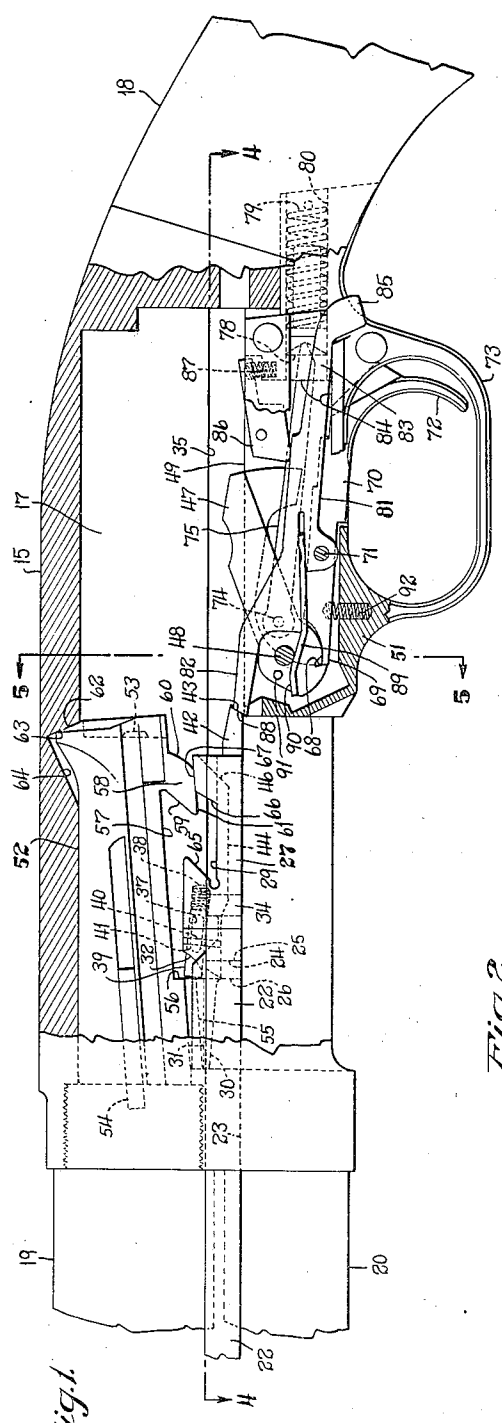


Fig. 1.

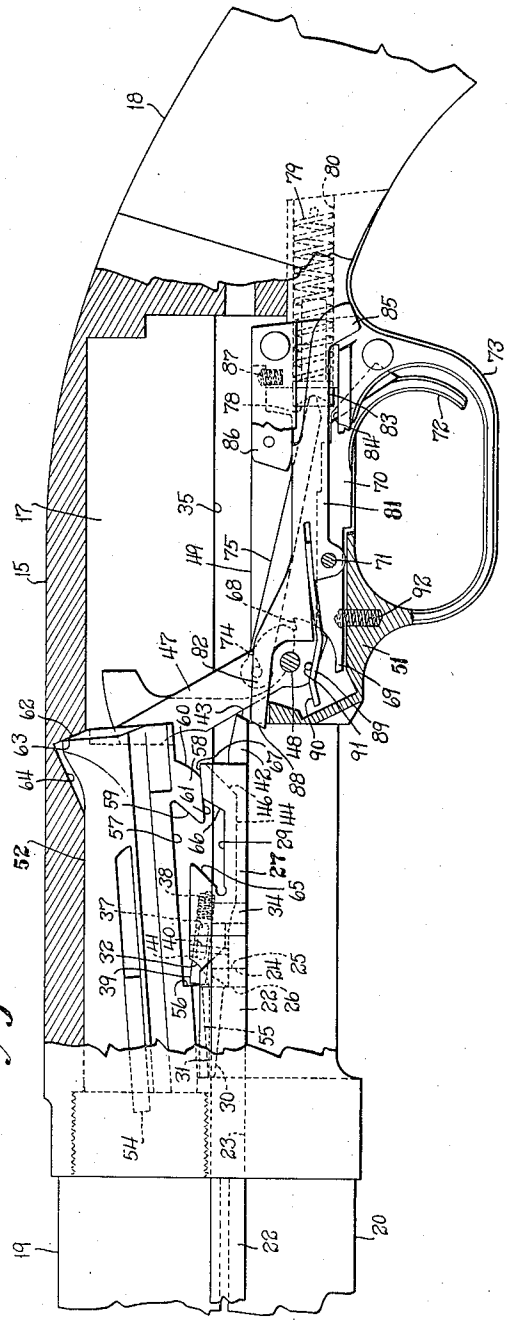


Fig. 2.

Inventor
Frederick L. Humeston
By
Seymour, Earle & Nichols
Attorneys

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Fig. 3.

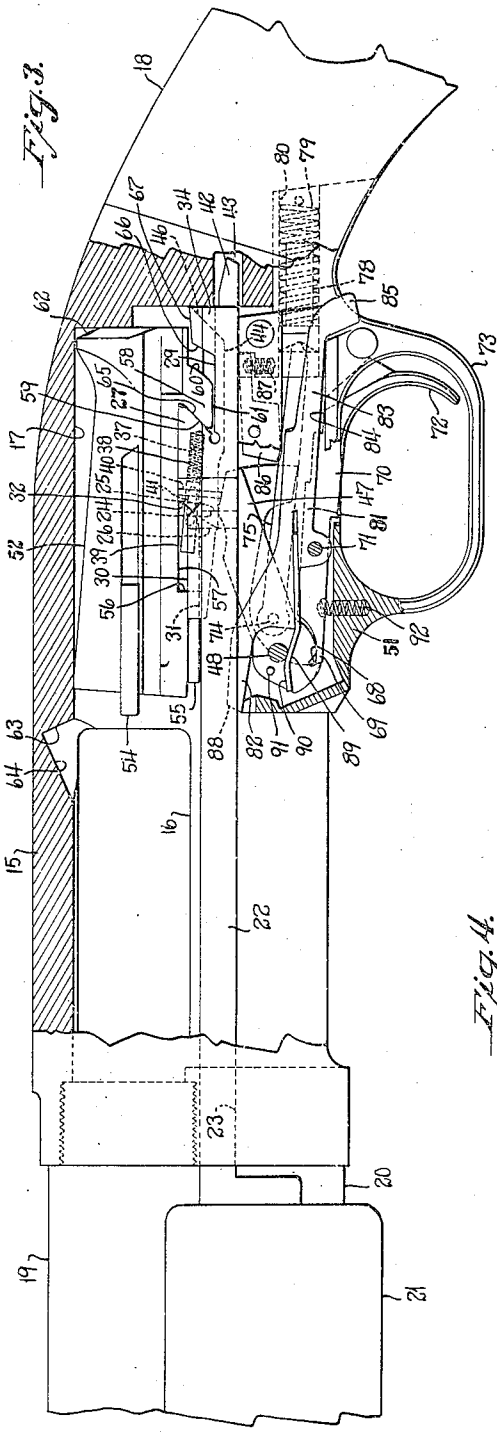


Fig. 5.

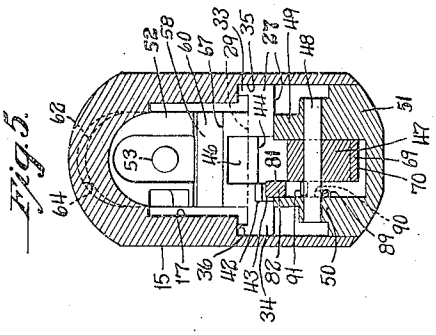
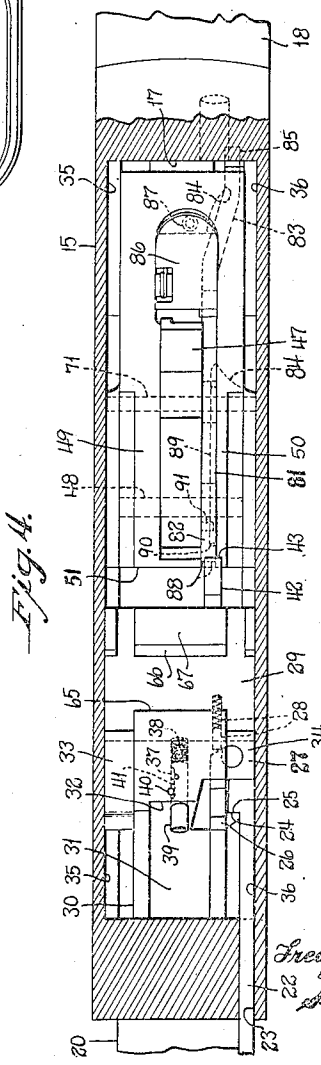


Fig. 4.



Inventor
Frederick L. Humeston
By Seymour, Earle & Nichols
Attorneys

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Fig. 9.

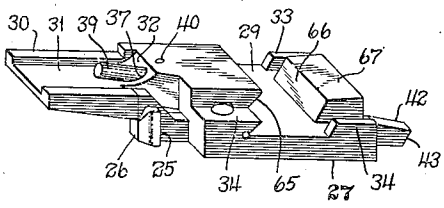


Fig. 8.

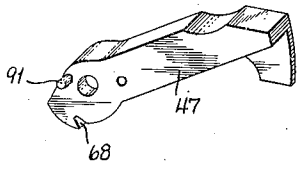


Fig. 6.

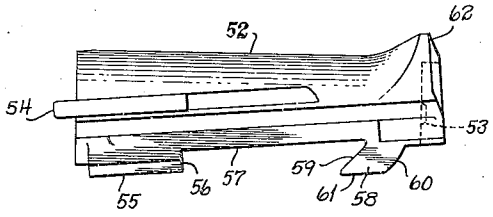


Fig. 7.

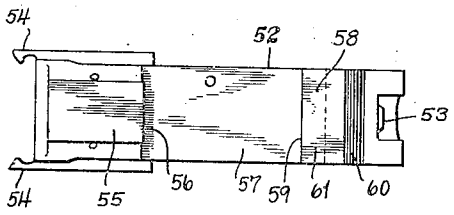
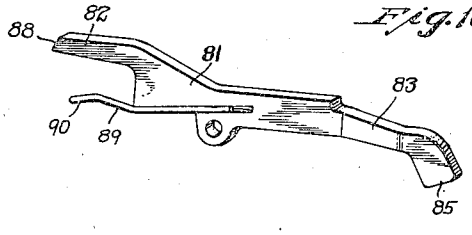


Fig. 10.



Inventor
Frederick L. Humeston
By Seymour, Berk & Nichols
Attorneys

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UNITED STATES PATENT OFFICE

2,476,196

SLIDE-ACTION FIREARM

Frederick L. Humeston, Orange, Conn., assignor of one-half to The High Standard Manufacturing Corporation, Hamden, Conn., a corporation of Connecticut, and one-half to Sears, Roebuck and Co., Chicago, Ill., a corporation of Illinois

Application May 25, 1948, Serial No. 28,989

4 Claims. (Cl. 42—20)

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The present invention relates in general to firearms and more especially to the action-locking mechanism of that class of firearms in which the firearms are manually operated by means of a reciprocating slide and are, for that reason, commonly known as "slide-action firearms".

An object of the present invention is to provide a superior firearm of the type referred to with simple, reliable and effective means for holding the manually-operable fore-end, or equivalent member of the action-slide, against displacement after the breechblock has been closed and prior to the firing of the gun so as to prevent inadvertent partial retirement of the breechblock and the consequent failure of the gun to properly fire when the trigger is pulled.

A further object of the invention is to provide a superior firearm of the type referred to with improved automatic means for preventing premature unlocking of the breechblock after the same has been locked in its breech-closing position and following the release of the trigger.

A still further object of the invention is to provide a firearm of the type referred to with superior means for holding the action-slide mechanism in its forward locked position when the breechblock is in breech-closing position, and for automatically unlocking the action-slide mechanism only upon the discharge and subsequent recoil of the firearm to thus guard against accidents due to hang fires.

With the above and other objects in view, as will appear to those skilled in the art from the present disclosure, this invention includes all features in the said disclosure which are novel over the prior art.

In the accompanying drawings, in which certain modes of carrying out the present invention are shown for illustrative purposes:

Fig. 1 is a broken side elevation partly in section of the receiver portion of the slide-action firearm of this invention with the buttstock, barrel and magazine broken away and the elements of the action and fire-control mechanism shown in the positions which they assume when the breechblock is moved into its forward locked position in the receiver;

Fig. 2 is a broken side elevation partly in section of the firearm of Fig. 1, but showing the position of the action-slide locking-means after the hammer has been released and the firearm discharged;

Fig. 3 is a view corresponding to Figs. 1 and 2, but showing the parts of the action- and fire-control mechanism in the positions which they

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assume when the breechblock is moved into its fully opened or retracted position;

Fig. 4 is a plan elevation partly in section of the action- and fire-control mechanism of the firearm on line 4—4 of Fig. 1;

Fig. 5 is an end elevation partly in section of the firearm on line 5—5 of Fig. 1;

Fig. 6 is a side elevation of the breechblock of the firearm;

Fig. 7 is a bottom plan view of the breechblock shown in Fig. 6;

Fig. 8 is a perspective view of the hammer of the firearm;

Fig. 9 is a perspective view of the breechblock-carriage showing the resiliently-mounted pin therein for effectively holding the action-slide locking-member in operative position after the hammer has been released, but prior to discharge of the firearm; and

Fig. 10 is a perspective view of the action-slide locking-lever.

The particular slide-action firearm herein chosen for illustrating the invention includes a receiver 15 provided in its right-hand face with an opening 16 (see Fig. 3) for ejecting spent cartridges from the chamber 17 of the receiver in which is mounted the action-mechanism and fire-control mechanism of the firearm, as hereinafter described.

The carrier-actuating mechanism for automatically transferring a fresh shell from the tubular magazine into the chamber of the barrel is of well-known construction, and for the sake of avoiding unwarranted confusion of lines, such as to obscure the elements of the present invention, has not been shown.

Secured in any approved manner to the rear end of the receiver 15 is a buttstock 18, while projecting from the forward end of the receiver is the usual gun barrel 19, below which is mounted a tubular magazine 20 adapted in the usual manner to successively feed cartridges into the lower forward end of the chamber 17 of the receiver 15.

The tubular magazine 20 serves as a guide and support for a reciprocating action-slide handle or fore-end 21, which is preferably formed from wood and slidably mounted upon the tubular magazine in any satisfactory manner. Fastened to the rear end of the fore-end 21 is an action-slide bar 22 which extends rearwardly into the chamber 17 of the receiver through a guide-aperture 23 formed in the front wall of the receiver adjacent the left-hand edge thereof.

Referring especially to Figs. 4 and 9 the rear end of the action-slide bar 22 is provided with a

substantially-square forwardly-facing shoulder 24 on its inner face adapted to releasably engage a substantially-square rearwardly-facing outwardly-projecting shoulder 25 of a latch-member 26 which is pivotally secured at its rear end opposite its shouldered end in a substantially-vertical recess adjacent the left-hand edge of a breechblock-carriage, indicated generally at 27, the latch-member of the latter being held normally resiliently in position for coacting with the shoulder of the action-slide bar 22 by means of the spring and spring-plunger assembly, indicated generally at 28, and shown clearly in Fig. 4. It will be appreciated, however, that by swinging the latch-member inwardly, its shoulder 25 may be disengaged from the shoulder 24 of the action-slide bar to disengage the latter from the breechblock-carriage 27.

As shown especially well in Fig. 9, the carriage 27 comprises a substantially-rectangular metal block having a breechblock cam-groove 29 in its upper face extending transversely thereof; and a forwardly-projecting tongue 30 provided with a relatively wide breechblock guide-groove 31 in its upper face extending longitudinally thereof, the rear end of the groove 31 making a shoulder 32 with the forward end of the carriage. The right- and left-hand edges 33 and 34 respectively of the carriage constitute flanges which are adapted to make sliding engagement in longitudinal grooves 35 and 36 formed in the corresponding walls of the chamber 17 of the receiver, the groove 36 in the left-hand wall of the receiver being in alignment longitudinally with the guide-aperture 23 in the front wall of the receiver, so that the action-slide bar 22 may extend through the guide-aperture rearwardly into the carriage-supporting groove 36 of the chamber 17 of the receiver. Thus, by connecting the carriage to the action-slide bar 22 by means of the aforementioned carriage latch-member 26, the carriage may be reciprocated longitudinally in the chamber of the receiver by sliding the fore-end 21 back and forth on the tubular magazine 20.

Referring again to Fig. 9, the shoulder 32 at the rear end of the breechblock-guide groove 31 of the carriage-tongue 30 is intersected by an aperture 37 which extends longitudinally of the tongue and rearwardly into the body-portion of the carriage, the longitudinal axis of the aperture making a slight angle vertically with the horizontal plane of the carriage. Mounted in the aperture 37 is a spring 38 and spring-seated plunger 39, the latter being adapted to slide longitudinally in the aperture 37 and to be held outwardly therein normally by the force of the compressed spring 38, a suitable retaining-pin 40 being provided, as shown especially well in Fig. 4, which intersects the aperture 37 transversely of and in juxtaposition to a longitudinal recessed flat 41 of the spring-seated plunger 39 and intermediate the forward and rearward shoulders of the flat to limit the reciprocable movement of the plunger in its aperture 37. Extending from the rear end of the carriage in the plane of its bottom and adjacent the left-hand edge thereof, is a rearwardly-projecting finger 42 which is substantially rectangular in cross section, the rear end of the finger 42 having a downwardly-and-forwardly-inclined bevel surface 43 for the purpose hereinafter described. The underface or bottom of the carriage is formed centrally with a longitudinal groove 44 having a longitudinal upwardly-and-rearwardly-sloping clearance-recess 46 at its rear end, the latter being adapted to engage and override a pivotal hammer 47, in the manner hereinafter described. The said hammer 47 is pivotally mounted upon a pin 48 which extends transversely through the spaced-parallel substantially-vertical side walls 49 and 50 respectively of a trigger-plate, indicated generally at 51, adapted to be detachably secured in a vertical aperture in the bottom of the receiver.

Turning again to the action-mechanism of the firearm, the breechblock thereof is indicated generally at 52 and has a reciprocable firing-pin 53 mounted therein with its rear end normally projecting beyond the rear end of the block so as to be struck by the aforesaid hammer 47, as will hereinafter appear. The breechblock 52 is also provided with the usual complementary extractors 54 which are adapted to engage the rim of a cartridge and extract the same from the chamber of the barrel when the breechblock is moved rearwardly in the chamber 17 of the receiver. As shown especially well in Figs. 6 and 7, the breechblock is provided on its underside adjacent its forward end with a relatively wide longitudinally-extending substantially-rectangular shoe 55 which is adapted to slidingly engage in the groove 31 of the carriage-tongue 30 to guide the front end of the breechblock longitudinally relative thereto. The rear end of the shoe 55 constitutes the forward substantially-vertical rearwardly-facing shoulder 56 of a clearance-recess 57 formed in the underside of the breechblock at the rear end of which is provided a cam-lug, indicated generally at 58. The latter consists of rearwardly-and-upwardly-sloping front and rear cam-faces 59 and 60 respectively, and a substantially-flat horizontal bottom face 61. Formed integrally with the upper rear edge of the breechblock is a forwardly-and-upwardly-inclined locking-shoulder 62 which is adapted to engage with the forwardly-and-upwardly-sloping shoulder 63 of a locking-notch 64 formed in the top wall of the chamber 17 of the receiver for positively locking the breechblock in its forward breech-closing position. To this end, the cam-lug 58 of the breechblock is adapted to engage in the transverse cam-groove 29 of the carriage 27, the latter being considerably wider as measured from its transverse front and back walls 65 and 66 respectively, than the corresponding distance between the front cam-face and rear cam-face 59 and 60 respectively of the cam-lug 58, as shown especially well in Fig. 3. In accordance with this construction, the carriage as well as the fore-end 21 detachably secured thereto by the slide-bar 22, as hereinabove described, are operatively connected to the breechblock with freedom for limited relative movement longitudinally with respect thereto, as will hereinafter appear. The front wall 65 of the cam-groove 29 slopes rearwardly and upwardly so as to serve as a depressing-and-retracting cam-surface adapted to cooperatively engage with the cam-face 59 of the breechblock cam-lug 58 to pull the locking-shoulder 62 of the breeckblock 52 downwardly out of locking engagement with the shoulder 63 of the receiver and thereafter to carry the breechblock rearwardly in the chamber 17, as disclosed in Fig. 3. On the other hand, the back wall of the cam-groove 29 comprises a rearwardly-and-upwardly-sloping cam-surface 66 which may be identified as a closing-and-lifting cam-surface and which is adapted to cooperate with the rear cam-face 60 of the cam-lug 58, both to move the breechblock forwardly from its rearmost posi-

tion in the chamber 17 of the receiver and to elevate the rear end of the breechblock upwardly vertically so as to engage its shoulder 62 with the locking-shoulder 63 of the recess 64 in the chamber 17 of the receiver for locking the breechblock in breech-closing position. Further, the upper end of the back wall 66 of the cam-groove 29 intersects a substantially-flat surface 67 which has a very slight inclination upwardly and rearwardly and is adapted to engage with the bottom face 61 of the cam-lug 58 of the breechblock when the latter is elevated, as shown in Figs. 1 and 2, to positively hold the locking-shoulder of the breechblock up in the locking-recess 64 of the receiver, mutual engagement of the inclined surface 67 and the bottom face 61 of the cam-lug 58 taking place by movement of the carriage forwardly relative to the breechblock in closing the action.

Turning again to the fire-control mechanism, the hammer 47 is provided upon its rounded lower end with a trigger-abutment 68 adapted to be engaged by the forwardly-projecting nose 69 of a trigger 70 pivotally mounted upon a transverse pin 71 adjacent the bottom of the trigger-plate, the finger-piece 72 of the trigger operating within a trigger-guard 73 formed integrally with the trigger-plate.

Pivotally connected to the hammer 47, immediately above its pivot-pin 48 by means of a transverse pin 74, is the forward end of a hammer-link 75. Thrusting against the rear end of the hammer-link 75 is a plunger 78 urged forwardly by a hammer spring 79 mounted in an aperture 30 in the rear wall of the receiver.

Referring particularly to Figs. 1, 2 and 10, pivotally mounted in the trigger-plate 51 on the transverse trigger-pin 71 adjacent the hammer 47, is a slide-locking member 81 which is adapted to nest in a longitudinal slot of the trigger-plate substantially parallel to the hammer-link 75, the over-all length of the slide-locking member 81 being such that its forward reach 82 terminates substantially flush with the forward end of the trigger-plate, while its rearwardly-extending reach 83 is disposed immediately to the rear of the trigger-guard 73. In this connection, it will be noted that the rearwardly-extending reach 83 of the slide-locking member is bent outwardly laterally slightly with respect to the forward reach of the slide-locking member (see Fig. 10) so as to project through a lateral opening 84 of the trigger-plate and to make its rear extremity 85 accessible adjacent the underside of the trigger-plate for operation manually, as hereinafter described, the rearwardly-extending reach 83 of the slide-locking member being resiliently held down in position for manual operation by means of a pivoted dog 86, the forward end of which is adapted to be resiliently held in engagement with the upper edge of the slide-locking member 81 rearwardly of its pivot-pin 71 by means of a helical spring 87.

In the normal position of the slide-locking member 81, the forward end thereof is disposed substantially behind the rearwardly-extending finger 42 of the carriage 27, the forward end of the slide-locking member 81 having a beveled surface 88 corresponding to and adapted to engage with the bevel 43 at the rear end of the carriage-finger 42 to prevent the carriage from moving rearwardly in the chamber 17 until such time as the forward end of the slide-locking member is deflected below the rear end of the carriage-finger, in the manner described below. Moreover,

the angle of each of these respective mutually-engaging beveled surfaces is such that the forward end 88 of the slide-locking member will not be deflected downwardly out of engagement with the rear end 43 of the carriage-finger by a force acting on the carriage-finger 42 continuously to move the latter rearwardly in the chamber of the receiver, as hereinafter described, but is such as to insure immediate separation of the carriage-finger and the slide-locking member when the force acting to hold the beveled ends of the two members together is momentarily released.

Referring to Fig. 10, in order to depress the forward end of the slide-locking member 81, the latter is provided with a resilient tensioning-finger 89, the rear end of which is firmly secured in a slot in the forward end of the slide-locking member. The forward reach 90 of the tensioning-finger 89 extends forwardly of the transverse pivot of the slide-locking member and is spaced vertically beneath the forward reach 82 thereof. Thus, when the slide-locking member 81 is assembled in the trigger-plate, the tensioning-finger 89 lies immediately beneath the transverse pivot-pin 48 of the hammer, the forward reach 90 of the tensioning-link extending forwardly of the hammer pivot-pin. Secured to the lower end of the hammer and projecting laterally therefrom immediately above the forward reach 90 of the tensioning-finger 89, is a tensioning-pin 91 which is of sufficient length to overlie the forward reach 90 of the tensioning-finger. When the hammer is in its cocked position, as shown in Fig. 1, the aforesaid tensioning-pin 91 is located a relatively short distance vertically above the forward reach 90 of the tensioning-finger. However, when the hammer is released, as shown in Fig. 2, the pin 91 will be rotated in a counter-clockwise direction to engage the forward reach 90 of the tensioning-finger 89 and exert a force thereon to depress the tensioning-finger to the position shown in Fig. 2, the stiffness of the tensioning-finger 89 being sufficient normally, i. e., during momentary release of said continuously acting force, to pivot the forward reach 82 of the slide-locking member 81 downwardly, or in a counter-clockwise direction out of engagement with the rear end 43 of the carriage-finger and against the restraining force of the pivoted dog 86. On re-cocking the hammer, which occurs when the breechblock is moved to its rearmost position in the chamber of the receiver, the transverse tensioning-pin 91 of the hammer will be rotated in a clockwise direction back to its original position, as shown in Fig. 1, whereupon the force exerted on the tensioning-finger 89 of the slide-locking member is released and the force exerted by the pivoted spring-loaded dog 86 on the rearwardly-extending reach 83 of the slide-locking member will elevate its beveled end 88 up into its normal position for re-engagement with the beveled end 43 of the finger of the carriage thereby to again positively hold the latter from moving rearwardly in the chamber. In order to unlock the carriage from its forward breech-locking position and move it into its fully-retired position, as shown in Fig. 3, without first requiring the discharge of the firearm, the shooter may manually engage and elevate the rearwardly-depending end 85 of the slide-locking member thereby to positively depress the forward end 88 thereof out of engagement with the finger of the carriage, whereupon the latter, including the breechblock, is free to move rearwardly in the chamber.

The aforementioned force acting substantially continuously to maintain the rear end 43 of the finger of the breechblock-carriage in frictional engagement with the beveled forward end 88 of the slide-locking member when the breech is in its fully-closed position, is produced by the spring-plunger 39, the forward end of which is adapted to abut against the rearwardly-facing shoulder 56 of the clearance-recess 57 in the underside of the breechblock when the carriage is assembled therewith, as shown. Thus, with the rear end of the breechblock elevated into locking engagement with the receiver, the force of the spring 38 acting on the plunger 39 is transmitted by the latter to the movable carriage so as to urge the latter rearwardly relative to the breechblock, and hence to hold the beveled end 43 of the carriage-finger resiliently in engagement with the forward beveled end 88 of the slide-locking member.

For the purpose of making clear the operation and function of the slide-action firearm herein chosen for illustration, let it be presumed that the fore-end 21 has been manually moved to the limit of its rearward movement with the effect of moving the breechblock and fire-control mechanism into the positions in which they are shown in Fig. 3, in which positions the breechblock is fully retired so that a cartridge may be introduced into the chamber of the barrel, either directly through the opening 16 in the side wall of the receiver or from the tubular magazine 20 by the aforementioned carrier mechanism (not shown).

If the fore-end is now moved forwardly so as to move the breechblock from the position in which it is shown in Fig. 3 into the position in which it is shown in Fig. 1, the forward movement of the carriage relative to the breechblock will move the rear wall 66 of its cam-groove 29 into engagement with the cam-face 60 of the cam-lug 58, thereby initially to carry the breechblock forwardly in the chamber 17 of the receiver and thereafter to elevate the rear end of the breechblock into locking engagement with the locking-shoulder 63 thereof, in which position the breechblock is positively held by engagement of the bottom face 61 thereof with the inclined flat surface 67 of the carriage. During the forward travel of the carriage and breechblock, the upwardly-projecting forward end 82 of the slide-locking member 81 will have been held down by engagement with the underside of the carriage. However, as the carriage is moved into its foremost position in the chamber 17, the reach 82 of the slide-locking member will be released, whereby its beveled end 88 is free to swing into alignment with the beveled rear end 43 of the carriage-finger. Since in the act of advancing and locking the breechblock in breech-closing position, the forward draft on the fore-end 21 moves the breechblock-carriage forwardly relative to the breechblock as provided for by the clearance of the cam-groove 29 of the carriage, the spring 38 will be compressed by the concurrent rearward movement of the plunger 39. Hence, upon releasing the fore-end 21, the force of the compressed spring 38, acting through the spring-seated plunger 39, will move the carriage rearwardly slightly relative to the locked breechblock, as shown in Figs. 1 and 2, and bring the beveled end 43 of the carriage-finger into frictional engagement with the forward beveled end 88 of the slide-locking member.

With the parts in the position shown in Fig. 1, the gun is in condition for firing, which may be

effected in the usual manner by a rearward draft upon the finger-piece 72 of the trigger 70.

The rearward draft upon the finger-piece of the trigger will disengage the trigger-nose 69 from the trigger abutment 68 of the hammer and thus permit the force of the compressed hammer-spring 79 to swing the hammer 47 in a counterclockwise direction, as seen in Fig. 1, and cause the upper portion of its forward face to impinge against the rear end of the firing-pin 53. The parts will now have assumed the positions shown in Fig. 2.

Moreover, as the hammer 47 is swung in a counterclockwise direction, as described above, the tensioning-pin 91 projecting laterally from the lower end of the hammer will move into engagement with the forward reach 90 of the tensioning-finger 89 of the slide-locking member 81, thereby exerting a downwardly-directed force thereon tending to pivot the slide-locking member in a counterclockwise direction about its pivot-pin 71 and to move the forward end 88 of the slide-locking member out of engagement with the beveled end 43 of the finger of the breechblock-carriage 27. However, owing to the rearwardly directed force acting continuously upon the carriage by engagement of the spring-seated plunger 39 against the shoulder 56 of the locked breechblock, frictional engagement of the beveled end 43 of the carriage-finger with the beveled end 88 of the slide-locking member will suffice to prevent the force acting downwardly on the tensioning-finger 89 from effecting counterclockwise rotation of the slide-locking member and consequent disengagement of the slide-locking member and carriage-finger. It will be appreciated, moreover, that a rearward draft is being exerted upon the action-slide bar and its associated carriage by the shooter when holding the firearm firmly against his shoulder in position for firing and that this rearward draft upon the carriage augments the frictional engagement between the mutually-engaging beveled surfaces of the carriage-finger and the slide-locking member. Consequently, assuming that the hammer has been released as described above and that the shooter is pulling rearwardly on the fore-end as is normally done in holding the firearm firmly against his shoulder, then in the event that the cartridge is defective or produces a hang fire such that the cartridge does not explode to effect recoil, frictional contact of the carriage-finger and slide-locking member will hold the carriage 27 from moving rearwardly. Hence, the action remains locked even though the hammer has been released to strike the firing-pin.

If, on the other hand, the cartridge fires so as to cause the gun to recoil, then owing to the fact that the fore-end 21 is slidably mounted on the tubular magazine 20, the fore-end and its connected parts, including the action-slide bar 22 and the breech-block-carriage 27, will, due to their inertia and the restraining effect of the shooter's grip on the fore-end, not immediately partake of the rearward movement of the remainder of the firearm, but will lag behind the latter, with the result that the slide-locking member 81 (which immediately partakes of the recoil movement) will move rearwardly relative to the carriage 27 and thereby withdraw its forward beveled end from engagement with the beveled end of the finger of the carriage. Thereupon, the slide-locking member 81 will be immediately rotated in a counter-clockwise direction, due to the downwardly-acting force exerted on the tensioning-

link 83 by the tensioning-pin 91 of the hammer, as hereinabove described, the beveled nose 88 of the slide-locking member being retired below the beveled end 43 of the finger of the breechblock-carriage, as indicated in Fig. 2, so as to enable the breechblock-carriage 27 to move rearwardly in the chamber of the receiver. Its rearward movement is accompanied by the unlocking of the breechblock from the locking-recess of the receiver and the rearward excursion of the breechblock into its rearmost position therein, as shown in Fig. 3, for the purpose of extracting the fired cartridge from the chamber of the barrel and to permit the introduction of a fresh cartridge therein. More particularly, as the carriage 27 is moved rearwardly, its inclined surface 67 will be moved rearwardly relative to the locked breechblock out from beneath the bottom face 61 of the breechblock cam-lug 58, so that the latter may be free to move down into the cam-groove 29 of the carriage. Subsequently, the front wall 65 of the cam-groove 29 moves into engagement with the depressing-and-retracting cam-surface 59 of the cam-lug 58 initially to pull the rear end of the breechblock downwardly positively out of locking engagement with the locking-shoulder 63 of the receiver and then to move the breechblock rearwardly in the receiver into its position shown in Fig. 3.

As the breechblock moves rearwardly in the chamber 17, engagement of the rear end of the breechblock with the upper end of the hammer will swing the same in a clockwise direction against the compression force of the hammer-spring 79. When the hammer is rotated into its position shown in Fig. 3, its trigger-abutment 68 will be engaged by the nose 69 of the trigger, which is urged upwardly into position for engagement with the trigger-abutment of the hammer by a trigger-spring 92 seated in a recess in the forward end of the trigger-plate and adapted to engage the underside of the forward end of the trigger. The hammer is thus held in its cocked position by the nose of the trigger. Moreover, in moving to its rearmost position in the chamber of the receiver, the carriage 27 moves rearwardly out of engagement with the upper edge of the forward reach 82 of the slide-locking member, as a consequence of which the latter springs upwardly due to the force of the spring-loaded dog 86 acting to swing the opposite end of the slide-locking member downwardly, as shown in Fig. 3. The parts will now have assumed the positions in which they are shown in Fig. 3, preparatory to another cycle of operations corresponding to those already described.

In the event that the gun has been cocked and the breechblock moved forwardly into breech-closing position and it should become desirable for any reason to unlock the breechblock and move it into its fully-retired position in the receiver, as for instance, to extract an unfired cartridge from the chamber of the barrel, this may be accomplished without releasing the hammer by exerting upward pressure on the manually-operable finger-piece 85 of the slide-locking member, whereby the forward end 88 of the slide-locking member 81 is moved downwardly positively out of engagement with the rear end 43 of the carriage-finger to release the carriage, whereupon the carriage and the breechblock may be moved rearwardly together by pulling rearwardly on the fore-end 21.

By providing the breechblock-carriage with a finger for engaging the slide-locking member,

and with a spring-loaded plunger adapted to cooperatively engage with the breechblock to hold the finger of the carriage in frictional engagement with the slide-locking member, a relatively compact and rigid structure is provided which occupies a minimum of space, is free from a tendency from lateral deflection and permits the use of elements of high structural strength. Thus, the reliability, durability and efficient operation of the mechanism is assured.

The invention may be carried out in other specific ways than those herein set forth without departing from the spirit and essential characteristics of the invention, and the present embodiments are, therefore, to be considered in all respects as illustrative and not restrictive, and all changes coming within the meaning and equivalency range of the appended claims are intended to be embraced therein.

I claim:

1. In a slide-action firearm, the combination with a receiver; a reciprocable breechblock and a swinging hammer; of a reciprocable carriage arranged to support said breechblock, manually-operating means arranged to reciprocate said carriage thereby to move said breechblock to and from breech-closing position in said receiver, a locking-member arranged normally to extend into the path of movement of said carriage so as to prevent movement thereof rearwardly in said receiver by said manually-operating means, actuating-means on said hammer arranged to engage said locking-member on release of said hammer to urge said locking-member out of the path of movement of said carriage; and resilient means supported on said carriage and arranged to cooperatively engage said breechblock to hold said carriage in frictional engagement with said carriage-locking member to prevent said locking-member from being moved out of the path of movement of said carriage by said actuating-means.

2. In a slide-action firearm, the combination with a receiver; a reciprocable breechblock and a swinging hammer; of a reciprocable carriage arranged to support said breechblock, manually-operating means arranged to reciprocate said carriage thereby to move said breechblock to and from breech-closing position in said receiver, a locking-member comprising an arm arranged normally to extend into the path of movement of said carriage so as to prevent movement thereof rearwardly in said receiver by said manually-operating means and a resilient link on said arm, actuating-means on said hammer arranged to engage said resilient link on release of said hammer to urge the said arm of said locking-member out of the path of movement of said carriage; and resilient means supported on said carriage and arranged to cooperatively engage with said breechblock to hold said carriage in frictional engagement with said arm of said locking-member thereby to prevent said arm from being moved out of the path of movement of said carriage by said actuating-means.

3. In a slide-action firearm, the combination with a receiver; a reciprocable breechblock and a swinging hammer; of a reciprocable carriage arranged to support said breechblock, manually-operating means arranged to reciprocate said carriage thereby to move said breechblock to and from breech-closing position in said receiver, a locking-member arranged normally to extend into the path of movement of said carriage so as to prevent movement thereof rearwardly in

said receiver by said manually-operating means, actuating-means on said hammer arranged to engage said locking-member on release of said hammer to urge said locking-member out of the path of movement of said carriage; and resilient means comprising a spring-seated plunger mounted on said carriage and arranged to abut a shoulder of said breechblock to hold said carriage in frictional engagement with said carriage-locking member thereby to prevent said locking-member from being moved out of the path of movement of said carriage by said actuating-means.

4. In a slide-action firearm, the combination with a receiver; a reciprocable breechblock and a swinging hammer; of a reciprocable carriage arranged to support said breechblock, manually-operating means arranged to reciprocate said carriage thereby to move said breechblock to and from breech-closing position in said receiver, a locking-member comprising an arm arranged

normally to extend into the path of movement of said carriage so as to prevent movement thereof rearwardly in said receiver by said manually-operating means and a resilient link on said arm, actuating-means on said hammer arranged to engage said resilient link on release of said hammer to urge the said arm of said locking-member out of the path of movement of said carriage; and resilient means comprising a spring-seated plunger mounted in said carriage and projecting forwardly therefrom, the forward end of said plunger being arranged to engage a rearwardly-facing shoulder of said breechblock thereby to hold said carriage in frictional engagement with the said arm of said locking-member thereby to prevent said arm from being moved out of the path of movement of said carriage by said actuating-means.

FREDERICK L. HUMESTON.

No references cited.