No. 741,506. PATENTED OCT. 13, 1903.

O. KIRMSE.

LOCK MECHANISM FOR BREAKDOWN GUNS.

APPLICATION FILED MAY 6, 1903.

NO MODEL.

Fig. 1

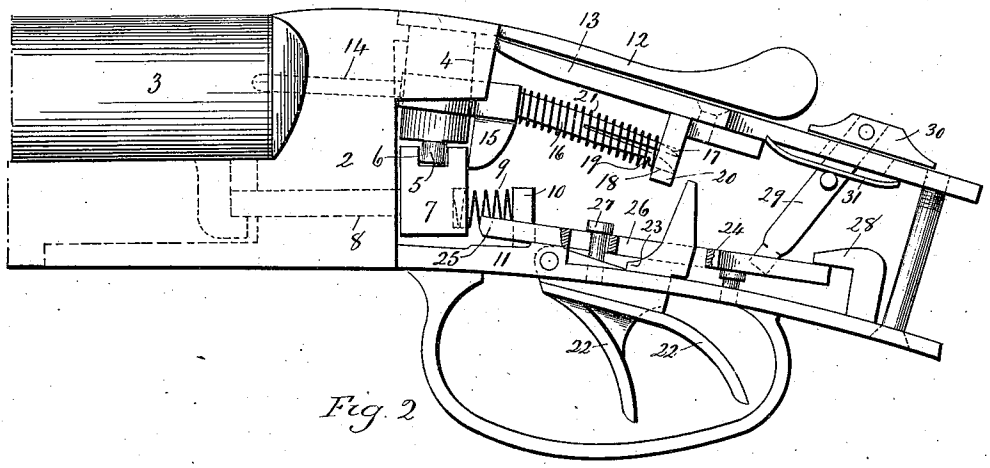


Fig. 2

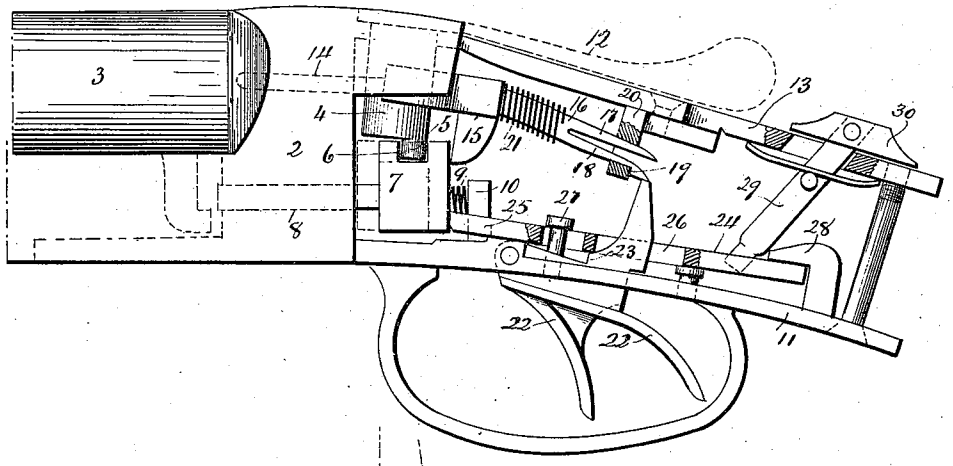


Fig. 3

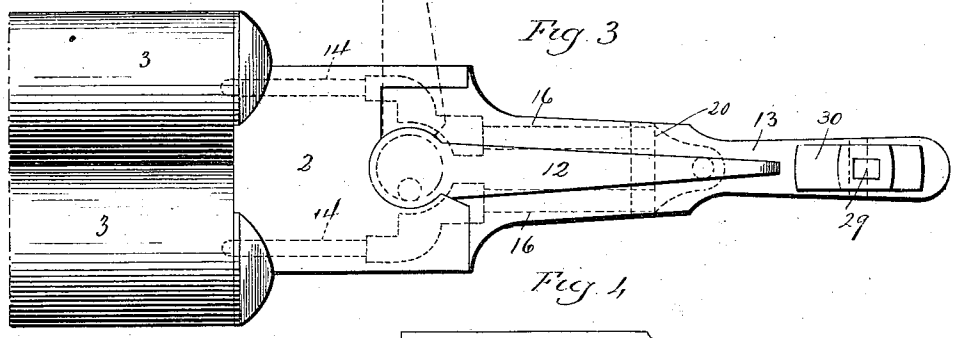
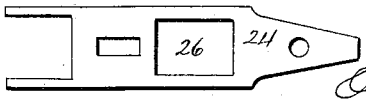


Fig. 4



Witnesses.
J. F. Thumm
Clara L. Reed.

Oscar Kirmse.
Inventor.
By Attys. Seymour & Earle

No. 741,506. Patented October 13, 1903.

UNITED STATES PATENT OFFICE.

OSCAR KIRMSE, OF WHITNEYVILLE, CONNECTICUT, ASSIGNOR OF ONE-THIRD TO HERMAN H. SCHULZ, OF NEW HAVEN, CONNECTICUT.

LOCK MECHANISM FOR BREAKDOWN GUNS.

SPECIFICATION forming part of Letters Patent No. 741,506, dated October 13, 1903.

Application filed May 6, 1903. Serial No. 155,807. (No model.)

To all whom it may concern:

Be it known that I, OSCAR KIRMSE, of Whitneyville, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Breech-Loading Firearms; and I do hereby declare the following, when taken in connection with the accompanying drawings and the numerals of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a broken side view of an arm constructed in accordance with my invention with the butt-stock removed and the parts in a fired position; Fig. 2, a similar view with the firing-pins in a cocked position and the triggers locked; Fig. 3, a top or plan view of the same; Fig. 4, a plan view of the safety locking-slide detached.

This invention relates to an improvement in that class of breech-loading firearms in which the barrel is hinged to the frame and tilts upward at the breech end for the insertion into or removal from the barrels of cartridges, and particularly to guns of that class in which the barrels are unlocked and the firing-pins retracted by the operating-lever mounted in the top of the frame and adapted to be turned laterally forward, the object of the invention being a simple arrangement of parts whereby by the single operation of the lever the barrels are unlocked, the firing-pins are retracted, and the triggers locked against accidental firing; and it consists in further details of construction and combinations of parts, as will be hereinafter described, and particularly recited in the claims.

The frame 2 of the gun is of substantially usual construction, to which the barrels 3 are pivoted so as to swing upward at the rear for the insertion or removal of cartridges. In the frame in rear of the barrels is a vertically-arranged plug 4, provided at its lower end with an eccentric stud 5, which sets into a transverse groove 6, formed in the upper end of a longitudinally-movable barrel-locking block 7, which is provided with a barrel-locking arm 8, which extends forward into engagement with the barrels, this barrel-locking block being normally forced to its forward or locking position by a spring 9, inserted between the rear face of the barrel-locking block and a post 10, mounted in the lower tang 11 of the frame, the plug 4 being turned by a lever 12, which normally stands in line with the upper tang 13 of the frame. The firing-pins 14 are bowed to extend around the plug 4 and are provided with depending lugs 15, which extend into the path of the barrel-locking block 7. The tails 16 of the firing-pins are bifurcated so as to form spring-jaws 17 18, the lower one, 18, being formed with a notch 19. These bifurcated tails pass through a holdback-plate 20, with the rear edge of which the notch 19 will engage to hold the firing-pins in a retracted position. Upon the tails of the firing-pins are spiral springs 21, which bear between the lugs 15 and the holdback-plate 20, the tendency being to force the firing-pins forward. A further function of these springs is also to force the barrel-locking block 7 forward should the spring 9 employed for that purpose become broken. The triggers 22 are pivoted in tang 11 in the usual manner and extend upward into line with the tails of the firing-pins. These triggers are formed with shoulders 23. Above the lower tang 11 is a safety locking-slide 24, the forward end 25 of which is in position to be engaged by the barrel-locking block 7, by the rearward movement of which the safety locking-slide is moved rearward. This safety locking-slide has a clearance-opening 26, through which the triggers extend, and it is held against upward movement by a headed stud 27, the rear end of the safety locking-slide extending beneath a hook 28. Secured to the rear end of the safety locking-slide and projecting upwardly and rearwardly therefrom is an arm 29, which projects through the upper tang 13 and is provided at its outer end with a thumb-piece 30, by the movement of which the safety locking-slide may be forced forward or drawn rearward, a friction-spring 31 being arranged beneath the tang 13 to hold the thumb-piece in position. The gun being in a fired position, as shown in Fig. 1, the lever 12 is turned, rotating the plug 4 and causing the eccentric stud 5 to move the barrel-locking block 7 rearward. This rearward movement of the barrel-locking block by en-

gaging the lug 15 of the firing-pin retires the firing-pins and forces them to their cocked position. At the same time it releases the barrels and permits them to be turned upward for the removal of spent shells and the insertion of loaded ones. At the same time the rearward movement of the barrel-locking block 7 moves the safety locking-slide 24 rearward and forces the forward edge of the clearance-slot 26 over the shoulder 23 of the triggers and so as to prevent the triggers being pulled to release the firing-pin, and this safety locking-slide cannot be moved forward until the barrel-locking block 7 has been moved forward into its locking position, at which time the barrels will be locked by the return movement of the locking-lever 12. Although the gun is thus closed, locked, and cocked, it cannot be fired until the safety locking-slide 24 has been moved forward, which is readily accomplished by the forward movement of the thumb-piece 30. When it is moved forward, the triggers can be pulled, and the upward movement of the trigger will lift the notch 19 out of engagement with the rear wall of the locking-plate 17 and permit the firing-pin to fly forward.

While I have shown a double-barrel gun, it will be evident that the invention is equally applicable for single-barrel guns. After one barrel has been fired the safety locking-slide may be forced rearward by the movement of the thumb-piece, so as to lock the firing-pin, or, indeed, the safety locking-slide may be moved back and forth at will to lock both triggers, if after loading and cocking the gun it is desired to do so; but each time the gun is opened the triggers are positively locked.

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

1. In a firearm, the combination with the frame thereof, of a vertically-arranged plug, an operating-handle at the upper end thereof, said plug formed with an eccentric stud at its lower end, a longitudinally-movable barrel-locking block formed with a groove into which said stud extends, a firing-pin formed with a lug extending into the path of the said barrel-locking block, said firing-pin having a rearwardly-extending bifurcated tail the lower member of which is notched, a holdback-plate through which said tail extends and with which the notch engages, a trigger adapted to lift said notch out of engagement with the holdback-plate and formed with a shoulder, a safety locking-slide having an opening through which said trigger extends said slide adapted to be moved rearward by the rearward movement of said barrel-locking block whereby the forward edge of said opening is passed over the shoulder on the trigger, an arm extending upward and rearward from said slide through the upper tang, and a thumb-piece on the upper end of said arm whereby the slide may be moved forward and backward to lock or release the trigger when the barrel-locking block is moved forward, substantially as described.

2. In a firearm, the combination with the frame thereof, of a vertically-arranged plug, an operating-handle at the upper end thereof, said plug formed with an eccentric stud at its lower end, a longitudinally-movable barrel-locking block formed with a groove into which said stud extends, a spring forcing said block forward, a firing-pin formed with a lug extending into the path of the said barrel-locking block, said firing-pin having a rearwardly-extending bifurcated tail the lower member of which is notched, a holdback-plate through which said tail extends and with which the notch engages, a trigger adapted to lift said notch out of engagement with the holdback-plate and formed with a shoulder, a safety locking-slide having an opening through which said trigger extends said slide adapted to be moved rearward by the rearward movement of said barrel-locking block whereby the forward edge of said opening is passed over the shoulder on the trigger, an arm extending upward and rearward from said slide through the upper tang, and a thumb-piece on the upper end of said arm whereby the slide may be moved forward and backward to lock or release the trigger when the barrel-locking block is moved forward, substantially as described.

3. In a firearm, the combination with the frame thereof, of a vertically-arranged plug, an operating-handle at the upper end thereof, said plug formed with an eccentric stud at its lower end, a longitudinally-movable barrel-locking block formed with a groove into which said stud extends, firing-pins bowed around said block and formed with lugs extending into the path of said barrel-locking block, said firing-pins having rearwardly-extending bifurcated tails the lower members of which are notched, a holdback-plate through which said tails extend and with which the notches engage, triggers adapted to lift said notches out of engagement with the holdback-plate and formed with shoulders, a safety locking-slide having an opening through which said triggers extend, said slide adapted to be moved rearward by the rearward movement of said barrel-locking block whereby the forward edge of said opening is passed over the shoulders on the triggers, an arm extending upward and rearward from said slide through the upper tang, and a thumb-piece on the upper end of said arm whereby the slide may be moved forward and backward to lock or release the barrel when the barrel-locking block is moved forward, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

OSCAR KIRMSE.

Witnesses:
JOHN HUGO,
A. McC. MATHEWSON.