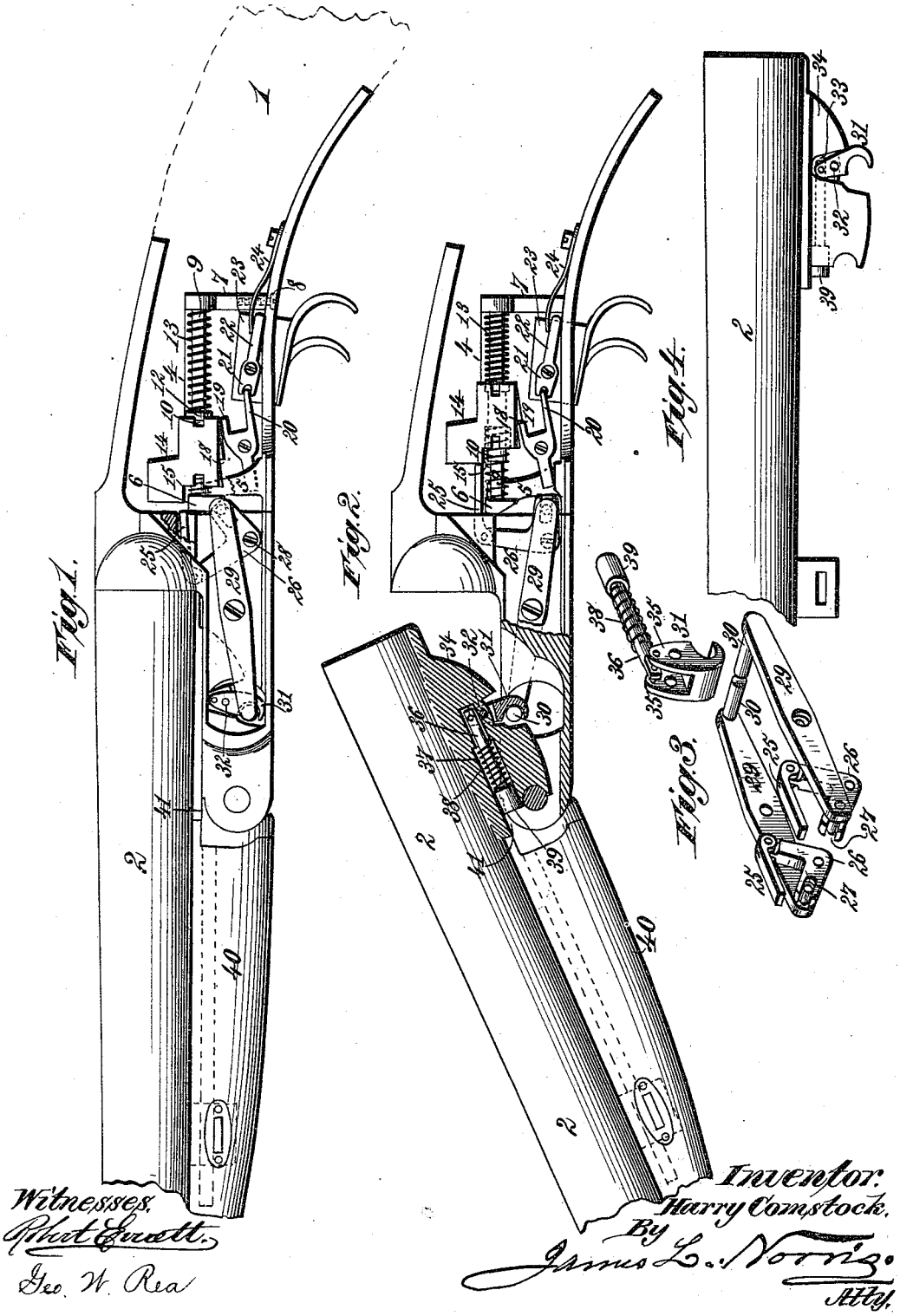
(No Model.)

H. COMSTOCK.

FIRE ARM.

No. 422,731. Patented Mar. 4, 1890.



Witnesses.
Rhet Arnett.
Geo. W. Rea

Inventor.
Harry Comstock.
By James L. Norris.
Atty.

UNITED STATES PATENT OFFICE.

HARRY COMSTOCK, OF FULTON, NEW YORK.

FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 422,731, dated March 4, 1890.

Application filed October 22, 1889. Serial No. 327,773. (No model.)

To all whom it may concern:

Be it known that I, HARRY COMSTOCK, a citizen of the United States, residing at Fulton, in the county of Oswego and State of New York, have invented new and useful Improvements in Fire-Arms, of which the following is a specification.

My invention relates to that class of guns which are opened or broken at the breech to discharge the empty shells and receive loaded cartridges, and in which the hammers or strikers are concealed and act upon firing-pins, which explode the primers.

In the Letters Patent granted me the 13th day of August, 1889, No. 409,017, the strikers or hammers are cocked by side cocking-levers having their ends connected to a cross-shaft, which is carried by a clevis or yoke lying in a slot in the frame, and with the upper end of which a hook on the barrels engages, whereby the clevis is lifted when the gun is broken, and the cocking-levers are operated and caused to cock the hammers. It is the purpose of my present invention to simplify and improve this construction and organization of parts to provide means whereby the hook on the barrels is immediately and automatically released from connection with the cocking-levers when the barrels are detached or the gun taken apart and positively engaged therewith when the gun is put together without the necessity of cocking the hammers if they are snapped or lowering them if cocked. It is my purpose, also, to provide a construction whereby the side cocking-levers shall be integral with the shafts or bars engaging with the hook on the barrels instead of being formed in separate parts and united pivotally, and to combine with a hook having pivotal adjustment or movement on the barrels means for automatically locking said hook on the shaft when the fore-end of the gun is placed in position and unlocking it when the fore-end is removed. It is also my purpose to combine with the cocking-levers and hammers novel and simple means for retracting the hammers to full-cock.

The invention consists in the several novel features of construction and new combinations of parts hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation showing the barrels mounted on the stock. Fig. 2 is a sectional view of the lug of the barrels, showing its connection with the pivot, and showing, also, the hook holding the shaft or lift of the cocking-levers. Fig. 3 is a detail view of the cocking-levers removed from the gun. Fig. 4 is a detail view showing the position of the hook when the fore-end is removed.

In the said drawings, the reference-numeral 1 designates the stock, and 2 denotes the barrels of the gun, these parts being connected substantially in the same manner as in my patent of August 13, 1889, already referred to. The barrels are provided with shell-extractors of any approved pattern, and the general construction of the piece, aside from the definitive points of improvement covered hereby, is substantially in accordance with the parts shown in my application for Letters Patent filed the 12th day of June, 1889, Serial No. 313,983.

The frame of the lock consists, substantially, of a base-plate of ordinary construction, having a central longitudinal plate 4 rising vertically from the base-plate. At or near the forward end of the plate 4 and upon each side of the latter is a standard or lug 5, parallel with and at a short distance from the central plate 4. Between these standards is arranged a cross-head 6, the ends of which abut against the standards. At the rearward end of the central plate 4 is arranged a T-plate 7, having its upright section attached to the base-plate by a screw 8. Through openings in the ends of the horizontal section of said plate are passed spindles 9, the threaded extremities of which are tapped into the ends of the cross-head 6, said spindles thus lying upon opposite sides of the central plate 4 and nearly flush with the upper edge thereof. Upon the spindles 9 are mounted sleeves 10, so constructed as to slide freely thereon and having upon their rear ends flanges or collars 12, against which rest strong spiral springs 13, coiled upon said spindles and abutting at their rearward ends against the ends of the T-plate 7. Mounted upon the sleeves 10 are the strikers or hammers 14, each consisting of a substantially L-shaped block of metal, having an aperture formed in the longer arm which receives the sleeve 10, the parts fitting

so closely as to prevent rattling, while allowing free movement of the striker upon its sleeve. The flange or collar 12 of the latter is received within a countersunk recess in the end of the striker, and the flat face of each sliding block rests against the face of the central longitudinal plate 4, thereby preserving the same in proper position. At the forward end of each striker a portion of the metal is cut away, forming a recess 15, whereby the end of the striker is enabled to pass over the cross-head 6. Within the forward end of the striker and surrounding the sleeve 12 is a countersink which receives the end of a light coiled spring surrounding the sleeve and bearing against the cross-head 6. These springs are of small tension as compared with those impelling the strikers or hammers and serve to cause the rebound of the latter after the firing-pin has been driven. Upon the lower surface of each striker is formed a transverse notch or shoulder 18, with which the sear 19 engages when the gun is cocked. The sear consists of a block having a forked end, one branch of the fork being shorter than the other and engaging the shoulder or notch on the striker, while the other arm or branch 20 of the fork extends rearward and engages the notched point 21 of the lever 22, mounted upon the trigger-plate 23. A U-shaped spring 24, mounted upon the base-plate in rear of and straddling the central plate, rests upon the rearward ends of the levers 22 and lifts the sears to their engagement when the gun is cocked.

The foregoing is a description of the parts which are common to the present application and to the prior application filed by me upon the 12th day of June, 1889, already alluded to.

Immediately above the cross-head to which the spindles are connected are formed openings or recesses in the frame, in which slide bars 25, parallel with the spindles on which the hammers move. The rear ends of these bars abut against the hammers, and their forward ends are connected to the arms of bell-crank levers 26. The other arms of these bell-cranks are provided with slots 27, and the bell-cranks are pivoted at their angles on fulcrum-pins 28.

Upon the frame of the gun on each side thereof is fulcrumed a cocking-lever 29. These levers consist of strong bars of steel, each provided at its forward end with an inwardly-projecting shaft 30, which may be integral with the levers. Immediately in rear of the lug of the barrels is arranged a hook 31, pivotally mounted on a pin 32, which has bearing in a web 33, which lies between the lug of the barrels and a pillow-block 34, the latter being a little in rear of said lug of the barrels, an angular recess being left between them for the pivotal vibration of the hook. Pivotally connected to the side portions 35 of the hook which project below the pin 32 is a spindle 36, lying in a recess 37, formed in the base of the web 33 on the barrels. A spring 38, coiled on this spindle and bearing at one end against a collar or cross-pin 39 on the spindle, throws the latter toward the muzzle of the piece, rocking the hook on its pivot 32 and throwing its back against the pillow-block 34, immediately in rear of the hook. Upon the fore-end 40 of the arm is a shoulder or lug 41, which, when the parts are assembled, abuts against the end of the spindle 36, which projects from the front of the web 33 of the barrels. By simply adjusting the fore-end in proper position this spindle is retracted, compressing the spring 38 and rocking the hook upon the pivot-pin 32, throwing it toward and against the rearward end of the lug of the barrels. As the hook is half-round in form with its opening facing the lug, this movement brings the open portion close to or against the lug and practically closes the hook. As the bar or shaft 30, integral with the forward end of each of the cocking-levers, lies normally in position to be inclosed by the hook as it springs forward, it is seized thereby as the fore-end is mounted in place and a positive engagement is effected between it and said hook, the bar or shaft being locked against escaping from the hook by the rear end of the lug 33, against which the open hook is thrown by the retraction of the spindle.

It will readily be seen that the engagement described can be made as readily when the hammers are down or snapped as when they are cocked. In the former position it is only necessary to throw the breech down into the frame, whereupon the hook passes behind the shafts or bars on the cocking-levers, and by simply setting the fore-end in place the hook engages the shafts instantly. When the hammers are cocked, the same result is effected by merely throwing the breech up after the barrels have been hooked upon the pivot-pin on the frame. I am thus able to take the barrels off without cocking the hammers and to replace the barrels, also, with the hammers in either position, which has not heretofore been possible in "breakdown" guns.

The release of the cocking-levers by the hook is wholly automatic, the spring-pressed spindle 36 throwing the hook back and wholly disengaging from the shafts or bars 30 on the cocking-levers the instant the fore-end is removed and the spindle released. In like manner, also, the hook automatically locks upon said shafts as the fore-end is swung into place, the latter effecting a retraction of the spindle by which the hook is caught upon the bars or shafts and thrown against the lug of the barrels, as already explained.

The rearward ends of the cocking-levers 29 are provided with pins 42, which enter the slots 27 in the bell-cranks. It will be seen, therefore, that the opening of the breech will swing these cocking-levers 29, drawing the rearward ends downward, rocking the bell-crank levers and driving the slide-bars 25 against the hammers, retracting the latter

upon their spindles until the sears engage and hold them at full-cock.

What I claim is—

1. In a fire-arm, the combination, with barrels pivoted on the frame, of cocking-levers fulcrumed thereon and having their forward ends provided with rigid shafts or bars, a hook pivoted on the barrels behind the lug and between it and a rearward pillow-block, and a spring-pressed spindle pivoted to the hook and having its forward end projecting beyond the lug to engage the fore-end, substantially as described.

2. In a fire-arm, the combination, with the frame, of barrels pivoted thereon, an open hook pivoted behind the lug on the barrels, a spring-pressed spindle lying in a recess in the base of the lug and having its forward end projecting in front of it, while its rearward end is pivoted to the hook below its bearing, cocking-levers pivoted on the frame and having their forward ends provided with integral shafts or bars, and a fore-end abutting against the projecting end of the spindle and closing the hook upon said bar, substantially as described.

3. In a fire-arm, the combination, with the frame having parallel spindles, of hammers mounted thereon and having rearward springs, cocking-levers fulcrumed on the frame, the forward ends of the levers being provided with integral shafts or bars, a hook pivoted on the barrels behind the lug, a spindle pivotally connected to that portion of the hook projecting below its pivot, a spring coiled on the spindle and pressing against a collar or pin thereon and thereby projecting the spindle forward and throwing the hook rearward against a pillow-block, a fore-end abutting against the end of the spindle which projects in front of the lug and closing the hook upon the latter, and bell-crank levers pivoted on the frame and having slide-bars connected to one arm, while the other arm is connected to one of the cocking-levers, substantially as described.

4. In a fire-arm, the combination, with the hammers, of side cocking-levers fulcrumed on the frame and having their forward ends provided with inwardly-projecting shafts or bars, a hook pivoted upon a web lying behind the lug of the barrels and between said lug and a pillow-block, a spindle pivotally connected to the sides of the hook which drop below its pivotal bearing, a spring coiled on the spindle and pressing it forward in a recess in the base of the lug of the barrels to project its end in front of said lug, a fore-end holding the spindle retracted, slide-bars moving in recesses in the frame to abut against the hammers, and bell-crank levers pivoted on the frame and connected to said slide-bars by one arm and to the cocking-levers by the other arm, substantially as described.

In testimony whereof I have affixed my signature in presence of two witnesses.

HARRY COMSTOCK.

Witnesses:

JAMES L. NORRIS,

JAMES A. RUTHERFORD.