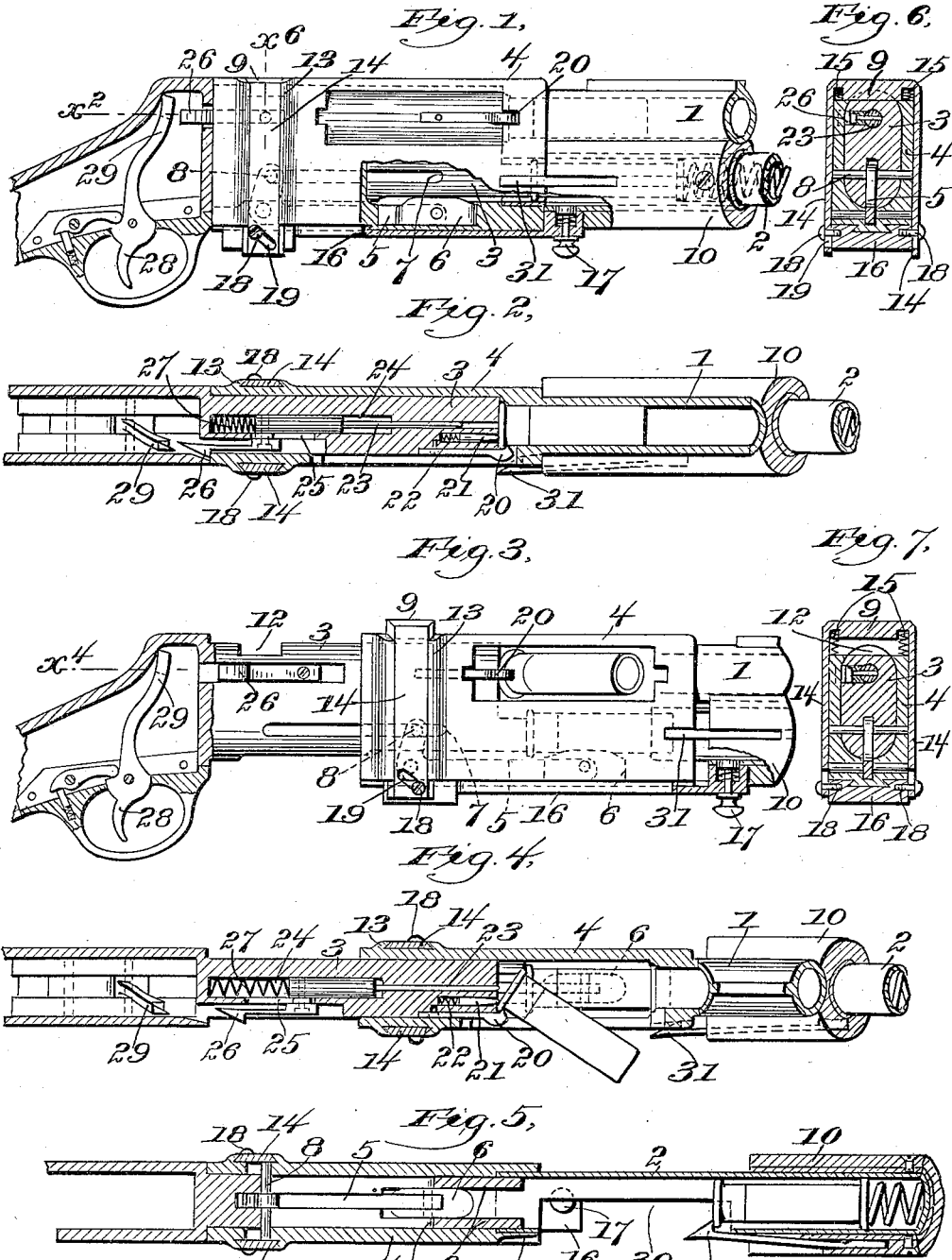


J. H. WESSON.
 MAGAZINE FIREARM.
 APPLICATION FILED MAY 25, 1914.

1,179,881.

Patented Apr. 18, 1916.



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UNITED STATES PATENT OFFICE.

JOSEPH H. WESSON, OF SPRINGFIELD, MASSACHUSETTS.

MAGAZINE-FIREARM.

1,179,881.

Specification of Letters Patent.

Patented Apr. 18, 1916.

Application filed May 25, 1914. Serial No. 840,668.

To all whom it may concern:

Be it known that I, JOSEPH H. WESSON, a citizen of the United States, residing in Springfield, in the county of Hampden and State of Massachusetts, have invented an Improvement in Magazine-Firearms, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

The present invention relates to a repeating fire-arm and is embodied in a fire-arm of that type known as a "pump gun" in which the ejection of the spent shell and the re-loading action are accomplished by a forward and backward movement of the fore-stock or some equivalent part.

While the invention may be embodied in a fire-arm of any type, it is herein shown as consisting of a repeating shot gun, and the construction chosen for illustration embodies the general characteristics of a gun which is set forth in a prior application filed by me March 15, 1914, Serial Number 754,453. In the gun shown in said prior application, the magazine is located below the barrel and the said magazine and barrel are in one piece and together bodily movable with relation to the breech block, this movement providing for the ejecting and loading action, as follows: The breech-block is adapted in response to the movement above described to cooperate with a lifting device located behind and below the magazine and movable with the magazine and barrel; the said lifting device being operated to lift a loaded shell at the end of the forward movement of the barrel, so that the said shell will be inserted in the chamber when the barrel is moved back to its original position. The barrel and magazine are provided with a rearwardly extending sleeve which fits over and slides on the breech block, there being a locking device by means of which the barrel and breech block are securely fastened together when the gun is loaded and ready to be fired.

In a gun constructed as above described, it is necessary to provide means for locking the breech-lock to the barrel and this was provided for in accordance with my prior invention by a slight oscillation of the barrel with relation to the stock.

The present invention relates mainly to novel means for locking the barrel and stock so that in operating the gun the pump mo-

tion can be more rapidly and easily accomplished.

In accordance with this invention the locking and unlocking are accomplished by a slight movement of the fore-stock with relation to the barrel so that in ejecting and loading, a forward push on the forestock first unlocks the barrel and magazine, while the continued forward movement of the forestock carries the barrel and magazine with it, thereby opening the gun and ejecting the shell. The rearward movement of the forestock then closes, loads and locks the gun, so that it is in condition to fire. In connection with this part of the invention, I have provided novel means for opening the magazine and filling it with new cartridges.

A further feature of the invention consists in novel means for cocking and firing the gun, the cocking of the firing pin, or its equivalent, being accomplished in response to the rearward movement of the barrel and magazine toward the stock, the releasing means or trigger also being of novel construction and arrangement.

Figure 1 is a side elevation of a gun embodying the invention with parts broken away and shown in section, the gun being shown as loaded and ready to fire; Fig. 2 is a horizontal section on line x^2 of Fig. 1; Fig. 3 is a view similar to Fig. 1 showing the parts in the position assumed when the spent shell is being ejected; Fig. 4 is a horizontal section, on line x^4 of Fig. 3; Fig. 5 is a horizontal section showing the magazine in the loading position; Fig. 6 is a transverse section on the line x^6 of Fig. 1; and Fig. 7 is a similar view showing the gun unlocked, but not opened.

In the gun embodying the invention the barrel 1, and magazine 2 form a unit independent of the breech-block 3, and are provided at the rear with a sleeve 4 which fits over and slides upon the breech-block 3. In the under part of the sleeve 4 below and behind the magazine 2 there is a lifting device 5, which is shown as an elbow lever having a lifting shoe 6; the said shoe being moved forward with the sleeve and traveling under the loaded shell which remains stationary owing to the action of the magazine spring as the barrel moves forward, as indicated in dotted lines, Fig. 3. The said elbow lever is acted upon by an engaging portion 7 of the breech-block, said engaging portion being shown as the end of a slot into

which projects a pin 8 which constitutes a projection from the elbow lever. The construction thus far described is substantially the same as that in the prior application above referred to, to which reference may be made for a clear understanding of the loading device.

In order to lock and unlock the gun and to hold the breech-block and the barrel firmly together, when the gun is loaded, the sleeve 4 is provided with a locking bar 9 which is arranged to be operated by means of a slight longitudinal movement of the forestock 10 with relation to the magazine 2 on which it is sleeved.

In the construction shown, the breech-block 3 is provided at the top with a transverse recess 12; and the sleeve 4 at the rear of the barrel and magazine is provided at the top with a corresponding recess; and at the outside with vertical guideways 13 which receive the legs 14 of a yoke the top member of which constitutes, in its cooperation with the recess 12 in the breech-block, the locking bar 9 aforesaid. The said yoke is lifted and lowered by means of a slide member 16 which is longitudinally movable with relation to the sleeve. The said slide member is shown as dovetailed on the bottom of the sleeve 4 and detachably connected with the forestock 10, as by means of a spring-pressed latch or button 17, the purpose of which will be hereinafter described. The said slide member is provided at opposite sides with the projecting pins 18 which engage in inclined slots 19 formed in the opposite legs 14 of the vertically movable yoke so that a forward movement of the slide 16 will lift the yoke and unlock the barrel, while a rearward movement thereof will lower the yoke and lock the barrel. The operation may be readily understood by reference to Figs. 1 and 3.

Referring to Fig. 1, it will be seen that if the user of the gun pushes the forestock 10 forward with relation to the barrel 1 the slide 16 will move forward with relation to the barrel, since the latter is locked to the breech-block 3, and in such relative movement the projecting pins 18 cooperating with the inclined slots 19 will lift the locking yoke thus disconnecting the barrel part from the breech-block; and after the said parts are disconnected the pins 18 will engage the lower ends of the slots 19 and thereby prevent any further movement of the forestock with relation to the locking device. A continued movement of the forestock, therefore, will carry the barrel and magazine with it, carrying the parts to the ejecting and loading position shown in Figs. 3 and 4.

In closing the gun by pulling back the forestock the magazine and barrel are pulled back until the sleeve engages the stock at

the rear of the breech-block portion after which the slight continued movement of the forestock relative to the magazine and barrel will draw down the locking yoke so that the parts are once more in the position shown in Fig. 1.

In order to overcome any friction, or binding of the parts, when the gun is being opened or closed, light springs 15, are interposed between the locking bar 9 and the top of the sleeve 4 as best shown in Figs. 6 and 7.

For the purpose of positively ejecting a spent shell, I employ, in cooperation with the ordinary extractor hook 20, a spring actuated movable ejector 21 which is so located as to act on the breech end of the shell at a point close to that part of the flange which is engaged by the extractor hook. The spring 22 which cooperates with the said ejector 21 is continually under tension while the shell is being withdrawn from the barrel and, therefore, continually tends to push the breech end of the shell forward, such tendency being resisted by the extractor hook which prevents the shell from moving straight forward so long as it is not free to turn, and the wall of the barrel which prevents the shell from turning, so long as the body of the shell remains in the barrel. As soon, therefore, as the end of the shell is fully withdrawn from the barrel the ejector 21 will spring forward, causing the shell to turn on the extractor hook 20, as a pivot, thus giving the shell a sudden twist which kicks it free from the loading space, as best shown in Fig. 4. This construction insures a positive and uniform ejector action regardless of the rapidity with which the gun is opened.

A further feature of the invention consists in the means for cocking the gun which is accomplished in response to the rearward movement of the barrel, the breech-block 3 being provided with a spring actuated firing pin 23, or its equivalent, the said firing pin being herein shown as located in a bore 24 in the breech-block, the said bore having a lateral recess 25 through which extends a spring latch 26 which is connected to the firing pin and adapted to be caught by the rear end of the sleeve 4, as shown in Fig. 2, so that the firing pin is pulled back and held by the said spring latch 26 when the barrel is moved back to the closed position. The said firing pin 23 is acted upon by a compression spring 27 located in the back of the bore 24, so that said spring is compressed when the firing pin is pulled back as described, to the position shown in Figs. 1 and 2.

In order to fire the gun, it is necessary to release the firing pin and I have herein shown, for this purpose, a trigger 28 provided with an extension 29 which is adapted,

when the trigger is pulled to engage laterally with the spring latch 26 so as to unhook the same from the rear end of the sleeve 4 which releases the firing pin, so that said firing pin springs forward to the position shown in Fig. 4 and fires the gun.

For the purpose of loading the magazine the forestock 10 is arranged to be disengaged from the locking slide 16, the fastening button 17, above referred to, being utilized for this purpose. When this fastening button is disengaged, the forestock can be moved forward with relation to the magazine as shown in Fig. 5, exposing a lateral opening 30 therein, through which the cartridges can be inserted and pushed forward against the magazine spring, each cartridge being caught and held by means of a yielding retaining device 31 as soon as it has been pushed into place. The said retaining device is shown as a spring fastened to the side of the magazine tube, having a beveled projection which yields to the muzzle end of the cartridge which is being pushed in, and with a flat shoulder behind said beveled projection which catches over the flange to hold the cartridge as shown in Fig. 5.

When the magazine has been filled the forestock 10 is restored to its original position, being fastened by the button 17, to the lock actuating slide, so as to operate as above described as the actuator for opening and closing the gun when in use. After the magazine has been fully charged and the forestock moved back to close the lateral opening, the retaining device 31 is pushed out of the way by its engagement with an inclined shoulder 32 formed on the side of the sleeve 4, so that it does not interfere with the movement of the cartridges out of the magazine.

What I claim is:

1. In a fire arm, the combination with a breech-block, of a barrel and magazine movable with relation to said breech-block; a lifting device located behind the magazine and movable with the barrel and magazine; a locking device to hold said barrel and breech-block together; a forestock; and means whereby a movement of the forestock relative to the barrel operates said locking device.

2. In a fire arm, the combination with a breech-block provided with a spring actuated firing pin; of a spring latch connected with said firing pin; a barrel having a rearward extension sleeved on said breech-block, said extension being adapted to engage said spring latch when the gun is being closed; and a trigger adapted to disengage said latch from said sleeve to fire the gun.

3. In a fire arm, the combination of a breech block, a barrel having a rearward

extension mounted to slide on said breech block, a spring-actuated firing pin in the breech block, a spring latch connected with said firing pin and projecting into engagement with a portion of said rearward extension, such portion and spring latch being relatively arranged whereby the closing movement of the gun displaces the spring latch and firing pin to cocked position, and a trigger having means for disengaging said spring latch from such extension to fire the gun.

4. In a fire arm, the combination with a barrel and magazine longitudinally movable with relation to the breech-lock of the fire arm; of a forestock longitudinally movable with relation to the breech-block of the firing device operated by the movement of said forestock to engage and disengage the barrel and breech-block.

5. In a fire arm, the combination with a stock and breech-block, of a barrel and magazine longitudinally movable with relation to said breech-block; a forestock longitudinally movable with relation to the barrel and magazine, said forestock constituting a cover for a lateral opening to the magazine; a locking device to hold the barrel and breech-block together, said locking device being adapted to be operated by a movement of the forestock; and means for disengaging said forestock from said locking device, substantially as and for the purpose described.

6. In a fire arm, the combination with a magazine provided with a lateral opening for loading, of a forestock constituting means for covering and uncovering said opening; a yielding retaining device connected with said forestock to engage and hold the ends of the cartridges when they are inserted in the magazine; and means stationary with relation to the magazine for holding said retaining device out of the path of the cartridges when the forestock is in position to cover said lateral opening.

7. In a repeating fire arm, the combination with a magazine located below the barrel and having a lateral opening for the insertion of the cartridges; of a forestock longitudinally movable on the magazine and constituting a cover for said opening; a spring retaining device connected with said forestock adapted to engage the ends of the cartridges when said opening is uncovered; and an engaging surface at the outside of the gun to cooperate with said spring retaining device and move it out of the path of the cartridges when the said opening is covered, substantially as described.

8. In a repeating fire arm, the combination with a stock and breech-block; of a longitudinally movable barrel and magazine, having a rearward extension sleeved on said breech-block; a forestock sleeved on the magazine; a locking device to hold

the breech-block portion and the barrel and magazine portion together, said locking device being detachably connected with the forestock and being operated thereby when
 5 connected thereto, and the magazine being provided with a lateral opening adapted to be uncovered by a further movement of the forestock when disconnected from the locking device; a spring retaining device con-
 10 nected with the forestock and adapted to move into the path of the cartridges inserted in the magazine; and an inclined surface formed on the outside of the sleeve to en-
 15 gage said spring retaining device when the forestock is moved back to close the opening in the magazine substantially as described.

9. In a repeating fire arm, the combination with a longitudinally movable barrel and magazine; of a stock and breech-block
 20 on which said barrel and magazine are sleeved; a spring actuated firing pin located in a bore in the breech-block and having a spring latch projecting through a lateral opening in the bore, said spring latch being
 25 adapted to be engaged by the end of the sleeve when the barrel and magazine are moved backward with relation to the breech-block; and a pivoted trigger having a restoring spring and an upward extension
 30 adapted to disengage the said spring latch from the end of the sleeve, substantially as described.

10. In a repeating fire arm, the combination with a stock and breech-block; of a
 35 barrel and magazine provided with a rearwardly extending sleeve adapted to slide on said breech-block, said breech-block being provided with a transverse slot at the top; a locking bolt vertically movable with re-
 40 lation to the sleeve and adapted to cooperate with said slot in locking and unlocking the sleeve; downwardly extending legs at opposite sides of said bolt provided with inclined

slots; a longitudinally movable actuating device provided with lateral extensions en- 45 gaging said slots; and a forestock longitudinally movable on the magazine and connected with said actuating device substantially as described.

11. In a repeating fire arm, the combina- 50 tion with a stock and breech block; of a barrel provided with a rearwardly extending sleeve adapted to slide on said breech block, said breech block being provided with a transverse recess at the top; a locking bar 55 vertically movable with relation to the sleeve, and adapted to cooperate with said recess in locking and unlocking the sleeve; springs interposed between said bar and said sleeve; downwardly extending legs at oppo- 60 site sides of said bolt provided with inclined slots; and a longitudinally movable actuating device provided with lateral extensions engaging said slots.

12. In a repeating fire arm, the combina- 65 tion with a stock and breech block, said breech block being provided with a transverse recess across the top; of a barrel provided with a rearwardly extending portion adapted to be moved back and forth on said 70 breech block; a locking bar vertically movable with relation to the barrel and adapted to cooperate with the recess in the breech block for locking and unlocking the barrel; 75 downwardly extending legs at opposite sides of said bar provided with inclined slots; and a longitudinally movable actuating device provided with lateral extensions engaging said slots.

In testimony whereof, I have signed my 80 name to this specification in the presence of two subscribing witnesses.

JOSEPH H. WESSON.

Witnesses:

GEO. P. CHAPIN,
 EVERETT A. KINNEY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."