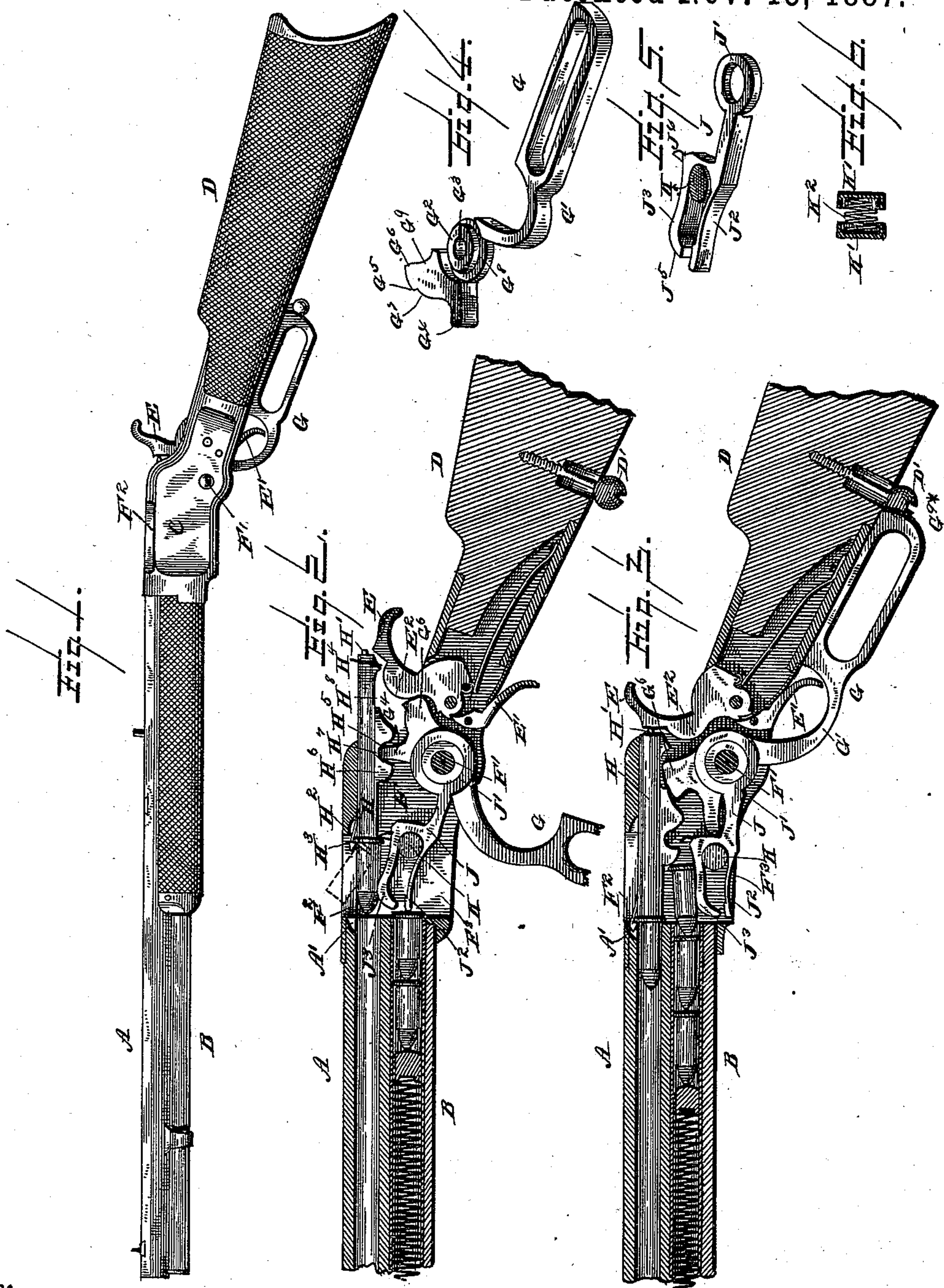


(No Model.)

J. W. MULLINS.
REPEATING GUN OR FIRE ARM.

No. 373,410.

Patented Nov. 15, 1887.



Witnesses:
S. C. Mills,
W. J. Durrall

Inventor:
John W. Mullins.
by *E. B. Stocking*
Attorney.

UNITED STATES PATENT OFFICE.

JOHN W. MULLINS, OF LONDON, KENTUCKY.

REPEATING GUN OR FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 373,410, dated November 15, 1887.

Application filed July 23, 1887. Serial No. 245,548. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. MULLINS, a citizen of the United States, residing at London, in the county of Laurel, State of Kentucky, have invented certain new and useful Improvements in Repeating Guns or Fire-Arms, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention has relation to improvements in magazine fire-arms; and among the objects of the invention are to reduce the number of parts, simplify the construction, and thus lighten the weight of the gun and reduce the
15 cost of its manufacture, and render the same less liable to get out of order.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be particularly pointed
20 out in the claims.

Referring to the drawings, Figure 1 is a side elevation of a magazine fire-arm constructed in accordance with my invention. Fig. 2 is a substantially central longitudinal section of the
25 same, the stock and barrel being broken away, and the parts being in position assumed when in the act of elevating a cartridge to the breech. Fig. 3 is a similar view, the parts being shown in the position assumed after the cartridge has
30 been placed in the breech and the piece ready for firing. Figs. 4, 5, and 6, the first two being in perspective and the latter in section show details hereinafter referred to.

Like letters refer to like parts in all the
35 figures of the drawings.

In the drawings, A represents the barrel, B the magazine, C the lock-plate, and D the stock, all of which are of ordinary construction.

40 E and E' represent the hammer and trigger, respectively, the latter taking into the dog of the former, and being actuated by the usual spring. A bolt, F', is passed through the lock-chamber F, said bolt being provided with
45 screw-threads at one end for connection with the lock-plate, and formed with a bearing intermediate its ends.

G represents the operating-lever, which comprises the guards G' at its rear end, and
50 the boss of hub G², having the perforation G³, extending entirely through the same. The lever G is mounted and freely swings upon

the bolt F', said bolt passing through the aperture G³. The thickness of the lever is such as to loosely fit the lock-chamber, and in this
55 way the lever G has a bearing along the entire bearing-surface of the bolt and at each side of the chamber, by which construction the life of the gun is increased, the parts being less
60 liable to become loose on said bolt. The forward end of the lever G is formed with the finger G⁴, the shoulders G⁵ G⁶, and the intermediate recess, G⁷, all as shown in Fig. 4.

H represents the firing-bolt, which is mounted in the usual breech-bore in line with the
65 barrel and provided with the ordinary firing-pin, H'. Any shell-extractor may be mounted on the firing-bolt H; but in this instance I have provided a flat spring-latch, H², seated in a longitudinal groove and provided with a
70 latch end, H³, adapted to pass within a notch, A', in the barrel, and over the rim of the shell (see Fig. 3,) the operation of said extractor being hereinafter described.

Upon the under side of the bolt H is formed
75 the shoulders H⁴ H⁵ H⁶ and the intermediate recesses, H⁷ H⁸, by which shoulders and recesses and those on the lever the bolt is reciprocated in the act of loading and extracting
80 the shell.

Surrounding the boss G² on the lever G is formed an annular recess, G⁸, into which and
85 loosely fitting the boss is seated an annular ring, J', said ring being of such a thickness as to bring the same flush with the surface of the lever. Integral with the ring J' and projecting therefrom is a bifurcated arm, J, the lower
90 bifurcation being formed as a spring-finger, J², and the upper bifurcation being formed as a cartridge-hoist, J³, the end of which is grooved and bent, as at J⁵, for a purpose hereinafter described. A lug, J⁴, projects upwardly from
95 the rear end of the hoisting-finger J³ and supports the front end of the bolt in a horizontal position when the same is withdrawn for the purpose of ejecting and loading.

This being the construction, the operation is as follows: The magazine being filled in the usual manner, and supposing the piece to have
100 been discharged, I will proceed to describe the operation of withdrawing the shell, ejecting the same, and loading the piece. The lever G is grasped by the guard and swung down and forward, and in the act of so doing the shoul-

der G^6 first comes in contact with the shoulder H^4 of the bolt H and draws said bolt to the rear. At the same time that this takes place the curve G^7 in the front end of the lever and in the rear of the shoulder G^6 comes in contact with and rides upon a rounded protuberance, E^2 , formed on the front of the hammer E , and slightly raises the latter, which raising thereof is caused by the shoulder G^6 coming in contact after it passes by the shoulder on the bolt, and in this manner is the hammer brought to a full-cock. Now as the shoulder G^6 passes the shoulder H^4 of the bolt the finger G^4 of said hammer comes in contact with the shoulder H^5 and completes the backward reciprocation of the bolt, the firing-pin of which comes in contact with the face of the hammer just before it reaches full-cock. As the lever is swung downward, the end of the guard formed by the annular recess G^8 comes in contact with the under side of the arm J —this, however, not until the operation just described has taken place, leaving the bolt in the position shown in Fig. 2. As the guard comes down, the bifurcated arm J is raised from its lowest position (in which the hoist J^3 is in a horizontal line with the magazine B , and from which it has received a cartridge) to a point in which the hoist is in a line with the barrel. As the bolt H is thrown back it of course extracts the empty shell from the barrel and carries it to the rear and in a line with the opening F^2 in the top of the lock-chamber, and the firing-pin coming in contact with the face of the hammer just before it reaches full-cock forces the shell slightly to the front. At this juncture the lug J^4 on the hoist J^3 is brought in contact with the rear end of the shell and produces a farther upward tilt of the same, at which time the new cartridge comes in contact with the under side of the shell. The latter is forced out of the opening F^2 . By swinging the lever G to the rear, in which position it is locked—in this instance by means of a spring-screw, D' , seated in the stock, taking into a recess, G^{9x} , by the rear end of the lever—the operation just described is reversed, the bolt H first being forced to the front by means of the finger G^4 and shoulder G^6 acting against the shoulders H^5 H^6 , and by this forward movement of the bolt the cartridge is firmly held pressed into the breech of the barrel. At the time the cartridge is partly entered in the barrel and the bolt is completing the operation the front face of the shoulder H^6 comes in contact with the lug J^4 , and the bifurcated arm is thus forced down to its lowest position to receive a new cartridge from the magazine. The hammer having been left at a full-cock, the piece may be discharged or let down to a safety-cock.

By the operation described the piece may be discharged and the shell extracted and ejected, the hammer cocked, and the piece reloaded all by operation by the lever G .

It will be noticed that when the hoist is elevated to the barrel, and by the time that the curved end J^5 leaves the magazine, the spring-

arm J^2 is raised to a line with said magazine and prevents the cartridge from being forced out by the spring until the hoist is returned empty.

To load the magazine the piece is turned over from the position shown in drawings and the lever G swung as if to load when the parts are in position, as shown in Fig. 2. Now, by placing cartridges through the opening F^3 in the under side of the lock-plate upon the spring-arm J^2 and pressing the same down said arm will be forced by the opening in the magazine and the cartridge may be inserted. This operation is repeated until the magazine has been filled.

Now, in order to prevent the wear of the bifurcated arm J against the inner surface of the locking-chamber, and also to provide sufficient friction between those parts to maintain the former in an elevated position in the act of loading to overcome the momentum by reason of sudden movements of the lever, I insert a cork, K , between the two arms J^2 J^3 , which has contact at each side of the chamber F .

If desired, other suitable yielding devices may be substituted for the cork—as, for instance, as shown in Fig. 6, two friction-caps, K' , of metal may be joined by a light spring, K^2 , and inserted between said arms.

Having described my invention and its operation, what I claim is—

1. In a magazine fire-arm, the combination of a firing-bolt and a hammer with a lever pivoted in the locking-chamber and adapted to come in contact with the firing-bolt to reciprocate the same longitudinally, and with the hammer to raise said hammer when swung on its pivot, substantially as specified.

2. In a magazine fire-arm, the combination, with a lever formed with a boss perforated and surrounded by an annular groove, of a hoisting-arm formed with an annular ring seated in said recess and adapted to be raised by the lever, substantially as specified.

3. In a magazine fire arm, the combination, with a pivoted lever formed with a perforated boss and surrounded by an annular recess, of a bifurcated hoisting-arm provided with a ring seated in said recess and with cartridge-hoisting and magazine spring-closing arms, substantially as specified.

4. In a magazine fire-arm, the combination of a lever pivoted in the lock-plate thereof and having bearing entirely across the same and formed with shoulders at its forward end, with a firing-bolt arranged above said lever and provided with shoulders and recesses adapted to be operated and locked in a firing position by those on the lever, substantially as specified.

5. In a magazine fire-arm, the combination of a pivoted bifurcated hoisting-arm, of a cork or equivalent inserted between said bifurcations, and having frictional contact with the sides of the lock chamber, substantially as specified.

6. In a magazine fire-arm, a firing bolt and hammer, and an operating-lever provided with

cams or shoulders adapted to come into contact with cams on the bolt and hammer, whereby the former is retracted, returned, and locked and the latter cocked, substantially as specified:

7. In a magazine fire arm, a firing-bolt and hammer provided with cams or shoulders, in combination with a lever pivoted and carrying a hoist, and provided with cams or shoulders adapted to come in contact with those of the bolt and hammer, whereby when the same is swung forward the hammer is cocked, the bolt retracted and the hoist elevated, and when swung rearwardly the bolt is thrown forward and the hoist lowered, the operation taking place in the order named, substantially as specified.

8. The lever G, having boss G², perforated as at G³, rounded by the annular recess G³, in combination with the arm J, having the ring J' seated in said recess and formed with the

curved hoisting-arms J³, and the resilient arms J², substantially as specified.

9. In a magazine fire-arm, and in combination with the barrel and magazine thereof, a hoist-block having an integral spring-arm arranged below the same and mounted in rear of said barrel and magazine to retain a cartridge within the magazine when the block is elevated and permit the insertion of cartridges therein by compressing the said spring-arm upwardly toward the block, substantially as specified.

10. A hoist-block provided with a friction-pad arranged to take bearing in the walls of the lock-chamber, substantially as specified.

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

JOHN W. MULLINS.

Witnesses:

J. W. JONES,
M. C. WEBB.