(No Model.)

2 Sheets—Sheet 1.

R. S. CHAFFEE.

BREECH LOADING FIRE ARM.

No. 342,328. Patented May 25, 1886.

Fig. 1.

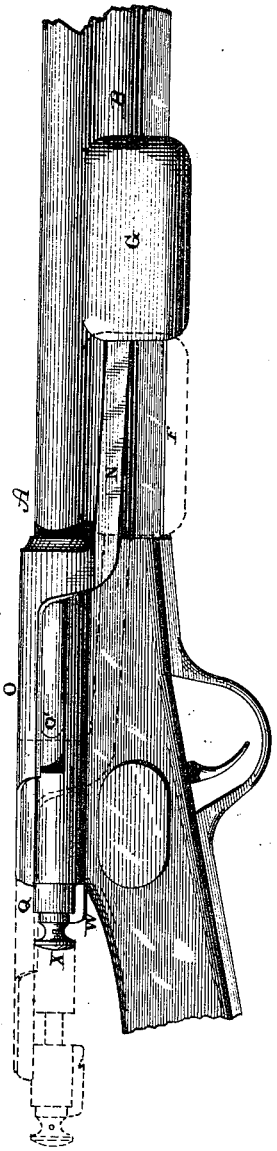


Fig. 2.

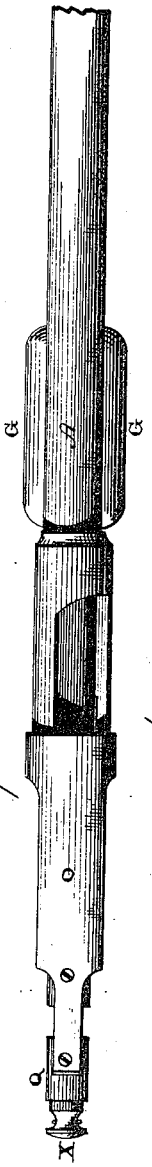
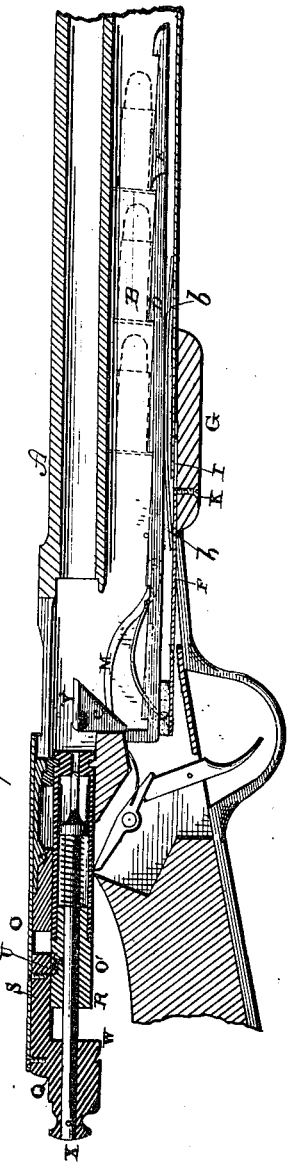


Fig. 3.



Witnesses.

L. T. Gardner

Jno. E. Prosperi

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R. S. Chaffee,

per

F. A. Lehmann,

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(No Model.) 2 Sheets—Sheet 2.

R. S. CHAFFEE.

BREECH LOADING FIRE ARM.

No. 342,328. Patented May 25, 1886.

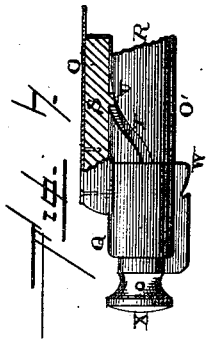

Fig. 4.

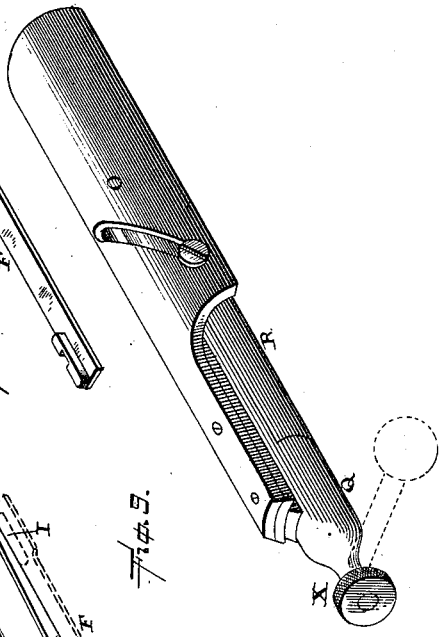

Fig. 3.

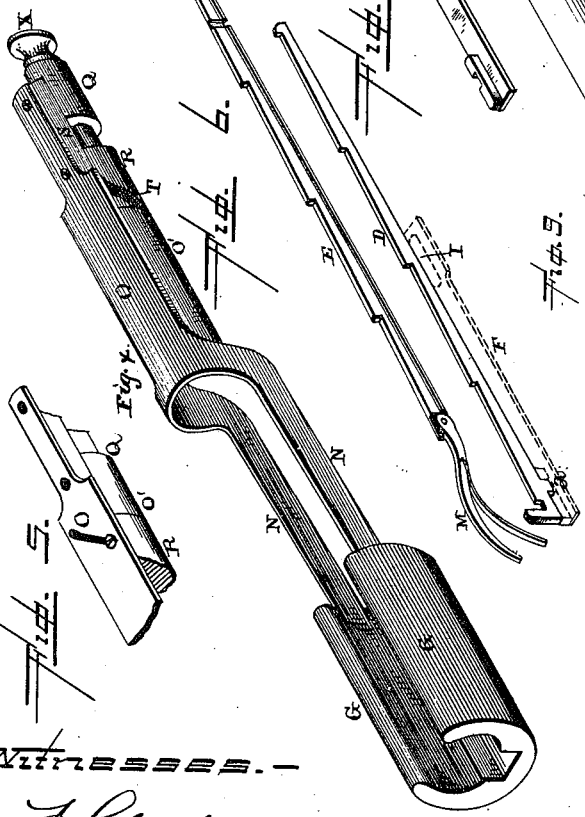

Fig. 1.

Fig. 2.

Fig. 5.

Witnesses.

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UNITED STATES PATENT OFFICE.

REUBEN SHIPLEY CHAFFEE, OF SPRINGFIELD, ILLINOIS, ASSIGNOR, BY MESNE ASSIGNMENTS, OF ONE-TENTH TO THE WINCHESTER REPEATING ARMS COMPANY, OF NEW HAVEN, CONNECTICUT.

BREECH-LOADING FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 342,328, dated May 25, 1886.

Application filed June 24, 1885. Serial No. 169,649. (No model.)

To all whom it may concern:

Be it known that I, REUBEN SHIPLEY CHAFFEE, of Springfield, in the county of Sangamon and State of Illinois, have invented certain new and useful Improvements in Breech-Loading Fire-Arms; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in breech-loading fire-arms, and is intended especially to be used as a magazine-shotgun, but is also adapted for rifles and revolvers; and it consists in, first, the combination of the magazine, which is placed under the barrel, loading-bars which are placed therein, a hand-hold which is connected to one of the loading-bars for the purpose of operating it, a plate connected to the hand-hold, and the firing-bolt, which is moved back and forth with the plate; second, the combination of the hand-hold, the loading-bars, the magazine, and the firing-bolt, which is connected to the plate, one of the parts of the firing-bolt being grooved, and the other part provided with a stud or projection to catch in the groove, for the purpose of turning the bolt when pushed forward in position; third, a covering-plate which extends over the firing-bolt and the top of the receiver, for the purpose of protecting the bolt from the weather, dust, and dirt, all of which will be more fully described hereinafter.

The object of my invention is to provide a covering-plate which will both cover and operate the firing-bolt, and to move the cartridges from the magazine into the receiver by means of a hand-hold which moves upon the under side of the rear end of the barrel, and thus enable the gun to be fired repeatedly without lowering it from the shoulder.

Figure 1 is a side elevation of a gun embodying my invention. Fig. 2 is a plan view of the same, the firing-bolt being moved back. Fig. 3 is a longitudinal vertical section of the fire-arm. Figs. 4, 6, 7, 8 are detail views of the same. Figs. 5 and 9 show a modification of my invention.

A represents a fire-arm, which will either be a revolver, shotgun, or rifle, and which has the magazine B formed under the barrel. This magazine will be of a length proportioned to the number of times the fire-arm is to be fired without reloading. In this magazine are placed two loading-bars, D E, both of which are notched along their top edges, for the purpose of holding the cartridge in position, and thus preventing them from striking one upon the other. The bar E is stationary, while the one, D, is movable back and forth, being connected by means of the slotted rod F with the hand-hold G. This connecting-rod has a notch formed in its rear end, to engage with a projection, *a*, upon the under side of the rear end of the movable bar D, and has a slot, I, formed through its front end, where it is connected to the hand-hold G. The slot I is of a length proportioned to the movement of the hand-hold in moving the firing-bolt for the purpose of turning it down when the bolt is moved forward to close the receiver, or when the bolt is being turned upward for the purpose of being forced backward. A set-screw, K, passes through the hand-hold into the slot I, and this screw K allows the hand-hold to move back and forth the whole length of the slot without operating the loading-bars, both of which are held pressed upward in the magazine B by means of the spring *b*, which is applied to their under sides. These springs keep the bars in contact with the cartridges, and thus prevent the cartridges from loosely moving about in the magazine with the movements of the gun.

Upon the rear end of the stationary bar E is pivoted a curved spring-actuated arm, M, which serves to force the cartridge upward in the receiver after it has been carried backward by the movement of the hand-hold and the movable loading bar D. As each cartridge reaches the receiver, it is forced upward by the spring-actuated curved arm, the rear end being raised higher than the front one, so that when the rear end of the cartridge is struck by the front end of the bolt the cartridge is forced directly into the barrel. As the cartridge is forced back into the receiver, it is forced upon the top of the curved arm M, and

this arm serves to raise it in the receiver sufficiently high to have its front end point directly toward the barrel, and its rear end raised just high enough to be struck by the front end of the bolt as it is forced forward into position. The rear end of the cartridge is caused to rise upward by means of inclines *c*, formed inside of the receiver, as is fully shown and described in a patent formerly granted to me.

Connected to the hand-hold G by means of the two parallel arms or rods N, which extend along upon the opposite sides of the magazine, is the covering-plate O, which serves both to cover over the top of the firing-bolt for the purpose of protecting it from dampness, dust, or dirt and for the purpose of operating it. This bolt O′ moves back and forth with the hand-hold G, and at no other time.

The firing-bolt is formed of two pieces, Q R, the one, Q, having a projection, S, which is rigidly fastened to the rear end of the plate O, and which projection extends over the rear end of the part R. In the rear end of this part R is made a spiral groove, T, in which a stud or projection, U, on the under side of the projection S, catches for the purpose of causing the part R of the bolt to partially revolve when the bolt is moved forward, ready to be fired. In forcing the bolt forward the stud or projection catching in the spiral grooves does not effect any turning movement in the part R of the bolt until the bolt has been moved its full distance forward, and then a continued pressure upon the hand-hold, and through it upon the plate O, and the rear part of the bolt causes the part R of the bolt to turn down in the usual manner. When the hand-hold is forced backward, the first movement effected thereby is to cause the rear portion of the bolt, through the stud or projection which catches in the groove in the part R, to turn the part R partially around, and then the whole bolt moves backward in a straight line. When the bolt is forced forward, ready to be fired, the sear catches against the front end of the flange W, which is connected to the firing-bolt, and stops all further forward movement of the bolt. The spring in the bolt is then compressed and the firing-pin is then held backward, ready to be fired. The forward movement of the two parts Q R of the bolt continues to their full extent while the bolt is being held stationary. When the trigger is pulled, the bolt is forced forward by the spring, so as to explode the cartridge. Also formed in the flange W is the half-cock notch, so that the bolt can be held back out of contact with the cartridge. As the handle X is formed upon the rear end of the firing-bolt, and as the bolt has a movement of its own independently of the other two parts of the bolt, the firing-bolt can be operated by hand independently of them. When the firing-bolt is forced forward and turned down, the whole top of the receiver and the greater portion of the bolt are entirely covered by the plate O, thus protecting these parts from dirt and moisture.

In Fig. 9, in addition to the handle X, is shown an additional handle in dotted lines, such as is used with the ordinary firing-bolts. In this case the plate O is slotted, as shown in Fig. 5, and when the handle is forced either forward or back, carrying the plate O with it, the slot in the plate causes the bolt to partially revolve, either for the purpose of closing the breech or opening it, as may be desired. This plate O serves as a most perfect protector for the bolt and the receiver, and may be used either in connection with the hand-hold G or with any gun in which a firing-bolt is employed. The same effect can be produced in partially revolving the bolt by forming a stud or projection upon the part R of the bolt and forming a diagonal groove in the covering-plate O. Either manner of operating the bolt may be used; but I prefer the one here shown, because the parts are more perfectly protected.

The plate O need not be connected to the hand-hold, for the bolt can be operated by hand in the usual manner. While it is thought preferable to use it in connection with the hand-hold, it serves every use and function when used with the bolt alone.

By means of the construction here shown it will readily be seen that it is only necessary to operate the hand-hold by moving it back and forth and pulling the trigger to fire in rapid succession without lowering the gun or revolver so as to spoil the aim.

The shell of the cartridge is ejected, as rapidly as fired, by the spring Y, which is fully shown and described in the patents heretofore granted to me.

This improvement is especially adapted as a magazine-shotgun, as it enables a person to fire a number of shots in rapid succession without in the least spoiling his aim.

Having thus described my invention, I claim—

1. The combination, with a fire-arm provided with a magazine, of the loading-bars which are placed in the magazine for moving the cartridges, a hand-hold which is located under and slides upon the gun-barrel, and which hand-hold is connected to one of the loading-bars and the firing-bolt, the hand-hold being connected to the firing-bolt by suitable connections which extend backward from the hand-hold and are connected to the top of the firing-bolt, substantially as shown.

2. The combination of the fire-arm provided with a magazine in which loading-bars are placed with an endwise-moving hand-hold which is connected to one of the loading-bars, and a covering-plate which is connected to the hand-hold, and which extends backward, and is connected to and covers over the firing-bolt, substantially as described.

3. The combination of the covering-plate, which is moved back and forth with the bolt, the bolt, which is formed of two pieces, the

rear one of which is provided with a handle to which the covering-plate is secured, and a pin and groove for connecting the covering-plate to the front end of the bolt, which has a partially-revolving motion, whereby when the rear end of the bolt is moved the covering-plate causes the front end of the bolt to partially rotate, substantially as set forth.

4. The combination, with the firing-bolt, which is formed of two parts, with the covering-plate, which is rigidly secured to the rear portion of the bolt, and a pin and groove for connecting the plate to the front portion of the bolt, the plate serving to operate the front portion of the bolt and as a covering for the receiver and bolt, substantially as specified.

5. The combination, with the magazine-tube, the loading-bars D E, placed therein, the hand-hold G, connecting-rod F, the spring-actuated arm M, the firing-bolt, and a connection between the hand-hold and the bolt, substantially as shown.

6. In a magazine-loading fire-arm, the combination of the hand-hold, the magazine, the loading-bars placed in the magazine, a connecting-rod between the hand-hold and one of the loading-bars, the spring-actuated arm for raising the cartridge upward in the receiver, the firing-bolt, and the connections N O between the hand-hold and the bolt, substantially as described.

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

REUBEN SHIPLEY CHAFFEE.

Witnesses:
J. F. BRINKERHOFF,
E. S. ELKIN.