(No Model.)

W. MASON.

BREECH LOADING FIRE ARM.

No. 264,727. Patented Sept. 19, 1882.

fig. 1

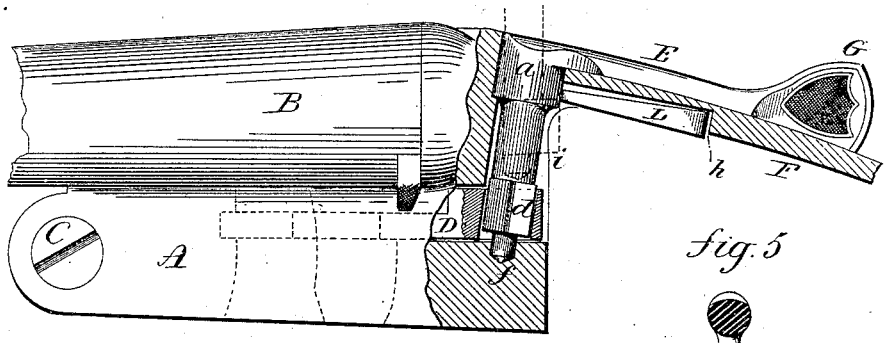


fig. 5

fig. 2

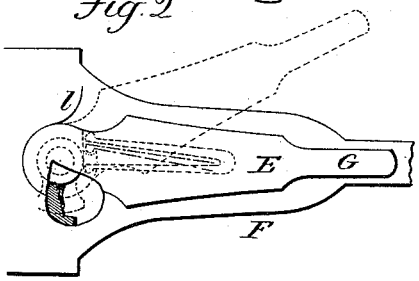


fig. 3

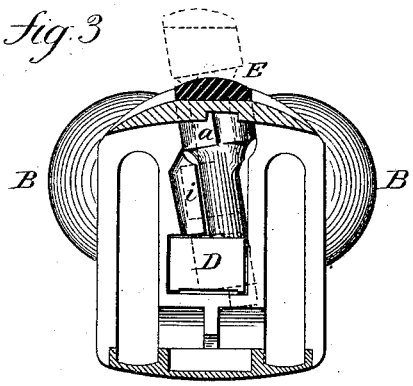


fig. 4

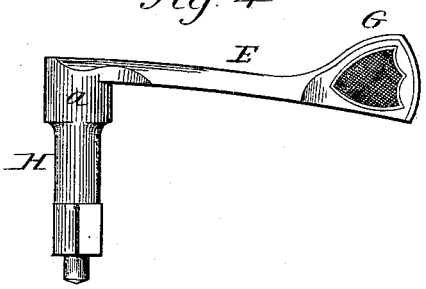


fig. 6

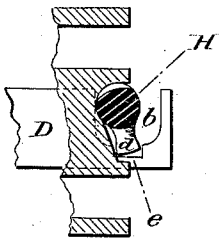
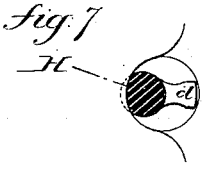


fig. 7



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UNITED STATES PATENT OFFICE.

WILLIAM MASON, OF HARTFORD, CONNECTICUT, ASSIGNOR TO THE COLTS PATENT FIRE-ARMS MANUFACTURING COMPANY, OF SAME PLACE.

BREECH-LOADING FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 264,727, dated September 19, 1882.

Application filed March 25, 1882. (No model.)

To all whom it may concern:

Be it known that I, WM. MASON, of Hartford, in the county of Hartford and State of Connecticut, have invented a new Improvement in Breakdown Fire-Arms; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters 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 sectional side view; Fig. 2, a sectional plan view; Fig. 3, a sectional rear view; Figs. 4, 5, 6, and 7, detached views.

This invention relates to an improvement in that class of fire-arms in which the barrel or barrels are pivoted to the frame forward of their breech end, and so as to be raised at the breech to open the barrels for the insertion of cartridges, commonly called "breakdown arms," and particularly to that class in which the barrels are locked in their closed position by a bolt arranged longitudinally in the frame, operated by a lever on the upper side of the frame, and from which a shaft extends down into connection with the bolt, so that by swinging the said lever to one side the bolt is withdrawn to permit the opening of the barrels, but when the lever is turned back over the tang then the bolt is thrown forward into its locking position.

In the usual construction the shaft and lever are made in separate pieces, the lever secured to the shaft after the shaft has been set in position in the frame. It is difficult to make such a connection between the lever and shaft as will remain firm after use, the strain on the lever and bolt tending to loosen the connection.

The object of my present invention is to overcome the difficulties existing in the separable lever and shaft, and to construct the two in one and the same piece, and so that the shaft, with its operating-cam, may be readily removed from the frame; and it consists in the construction of the shaft, lever, and frame, whereby the object is accomplished, as more fully hereinafter described, and particularly recited in the claims.

A represents the frame; B, the barrels, hinged thereto upon a pivot, C; D, the bolt, arranged for longitudinal movement in the frame, and so as to lock the barrels in their closed position or release them therefrom in the usual manner.

E is the lever, constructed and arranged to lie upon the upper side of the tang F of the frame, in its usual position, and constructed with the usual thumb-piece, G, by which the lever is conveniently moved. At the forward end of this lever is the shaft H, the upper or head end, *a*, constructed to fit a corresponding seat in the frame. The shaft H stands diagonally to the plane of the under side of the lever, as seen in Fig. 3, because it is desirable that the lever E should rest upon the center of the tang F, as seen in Fig. 2. The bolt necessarily lies in a longitudinal central position, and as it cannot be of sufficient size for the cam to work within it the cam must be arranged so as to work at one side and stand in an opening, *b*, in the bolt, that its cam *d* may work in a recess, *e*, in the bolt. Hence the shaft is arranged diagonally, so that its head stands in a central position at the tang; but its lower end, *f*, takes a seat prepared for it in the frame below, as seen in Fig. 3, so as to bring the cam one side of the bolt. Upon the under side of the tang is a recess, *h*, extending back from the shaft, in which a V-shaped spring, L, is arranged, as seen in broken lines, Fig. 2, one end taking a bearing in a seat prepared for it on the head of the shaft, the other end taking a seat on the opposite side of the recess in the tang, so that the tendency of the spring is to hold the shaft and lever in their normal condition, as seen in Fig. 2, or bring them to that position if turned away.

In order to work easily and effectually, the cam *d* must be of the greatest possible length, so that the body of the shaft H, plus the cam, is considerably greater in diameter than the diameter of the head end *a* of the shaft. In order to insert the cam through the seat for the head, therefore, it is necessary to cut away the body of the shaft on the side opposite the cam, as seen in Fig. 5, so as to make the diameter through that portion slightly less than the seat prepared for the head, as seen in Fig. 7. Because of this reduction the cam end of

the shaft is readily passed down through the opening above until the cam comes below the tang. Then the cam may be turned backward and passed down through an opening, *i*, at the rear of the frame until it reaches its seat and stands within the recess in the bolt, as seen in Fig. 6. Then the lever is turned to carry the cam forward into the recess in the frame in which the bolt works and the bolt into its place. This done, the spring L is introduced into its place upon the under side of the tang and the parts are in position for operation. When the lever is turned, as for withdrawing the bolt, the spring L is pressed until its two legs are brought together, as seen in broken lines, Fig. 2, and this closing of the spring occurs before the cam will have reached the recess *i* above the bolt, so that when at that extreme turned position the cam is prevented from upward movement by the top of the recess in the frame in which the bolt works, or may be a shoulder or stop independent of the recess beneath which the cam will pass, and which will hold the shaft down in place, and as seen in Fig. 3. Hence while the spring is in its place the lever and its shaft cannot be removed; but when the spring is removed, then the lever may be turned farther around, because there will be nothing to stop it, say, until it reaches the shoulder *l* on the top of the tang. At that time the cam has been turned so far around, as seen in Fig. 6, as to come outside the shoulder which held it down, or into the recess *i* in the rear end of the frame. Then the lever, with its shaft, may be raised until the cam leaves the bolt, as seen in Fig. 3, at which time the lever will have escaped from the shoulder *l*, against which it was stopped. In this position the lever may be turned farther forward to bring the cam to the extreme rear, as seen in broken lines, Fig. 1, at which time the reduced part of the shaft has passed into the seat for the head of the shaft, and then the shaft, with its cam, will pass freely out through the opening at the top.

By this construction I am enabled to make a cam of very considerable projection upon the shaft H, and also to make the shaft and its cam in one and the same piece with the lever. The longer the cam the shorter the throw of the lever. Hence by being enabled to make a long cam I am also enabled to operate the bolt by a short swing of the lever. The recess *i* at the rear is formed by cutting directly in at the rear end of the frame, as seen in Figs. 1 and 3, and this cutting away at the rear end leaves also the open space into which to turn the cam for its final removal, as before described.

I claim—

1. In that class of arms in which the barrels are locked in position by a longitudinal bolt, the combination, with said bolt, of the lever E and shaft H, the said shaft provided with a cam, *d*, the shaft and lever made in one and the same piece, recess *h* beneath the lever, the V-shaped spring L in said recess, and the shoulder *l* on the frame, substantially as and for the purpose described.

2. In that class of arms in which the barrels are locked in position by a longitudinal bolt, the combination, with said bolt, of the lever E and shaft H, the said shaft provided with a cam, *d*, the shaft and lever made in one and the same piece, the frame constructed with a recess, *i*, at the rear, through which the cam may be turned for the introduction or removal of the shaft and its lever, substantially as described.

3. In that class of arms in which the barrels are locked in position by a longitudinal bolt, the combination, with said bolt, of the lever E, shaft H, and its cam, *d*, all made in one and the same piece, the body of the shaft cut away upon the side opposite the cam to reduce the diameter through the cam to less than the diameter of the head *a* of the shaft, whereby the said cam part of the shaft will pass in through the seat in the receiver for the head, substantially as and for the purpose described.

4. In that class of arms in which the barrels are locked in position by a longitudinal bolt, the combination, with said bolt, of the lever E, shaft H, and its cam *d*, all made in one and the same piece, the spring L, arranged in a recess beneath the lever, shoulder *l* on the frame, and a shoulder or stop in the frame, extending from the recess in which the cam works, and beneath which the cam works, but from engagement with which it is turned before removal, substantially as described.

WILLIAM MASON.

Witnesses:
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