C. W. SNEIDER.

Breech-Loading Fire-Arm.

No. 227,135. Patented May 4, 1880.

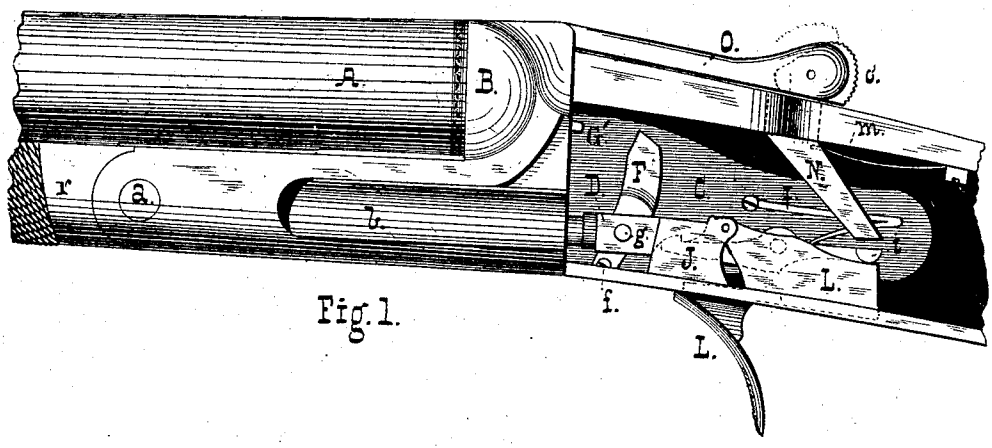


Fig. 1.

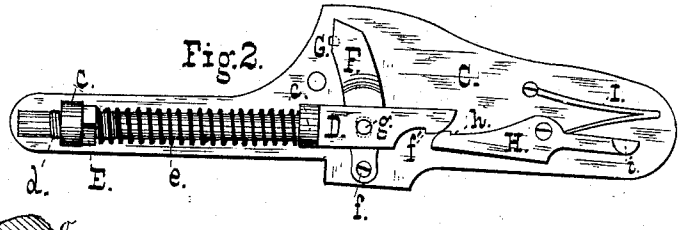


Fig. 2.

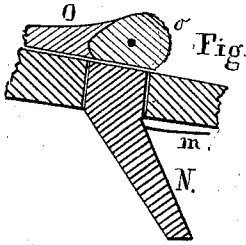


Fig. 4.

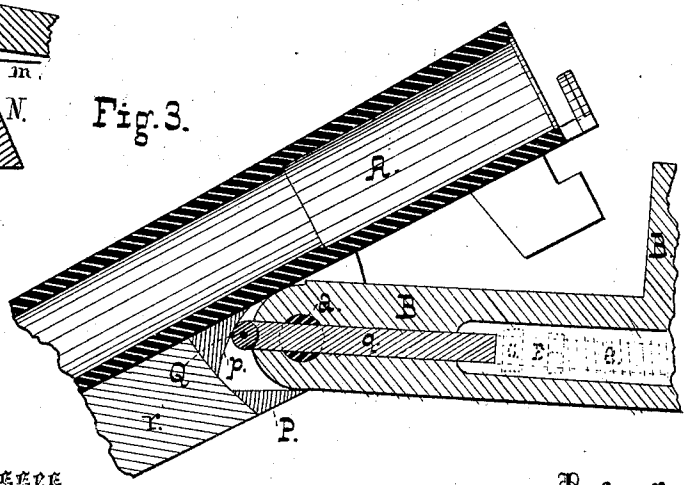


Fig. 3.

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# UNITED STATES PATENT OFFICE.

CHARLES W. SNEIDER, OF BALTIMORE, MARYLAND.

## BREECH-LOADING FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 227,135, dated May 4, 1880.

Application filed January 21, 1880.

*To all whom it may concern:*

Be it known that I, CHARLES W. SNEIDER, of Baltimore city, State of Maryland, have invented certain new and useful Improvements in Fire-Arms; and I hereby declare the same to be fully, clearly, and exactly described as follows, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of that part of a fire-arm to which my invention relates; Fig. 2, a similar view of the lock detached; Fig. 3, a sectional view of the breech-pin and barrel, illustrating the cocking mechanism; and Fig. 4 is a central sectional view, showing the mechanism for locking the lever and sear.

My invention relates, in particular, to what are generally known as "hammerless guns," in which the striker is located on the inside of the lock-plate; and it consists in certain mechanism for cocking the weapon, in the construction of the lock, and in the safety-catch for preventing the accidental discharge of the weapon, the parts being constructed and operating substantially as hereinafter set forth.

Considered as a sporting weapon, the so-called "hammerless gun" possesses certain indubitable advantages over the ordinary gun in point of immunity from danger of accidental discharge by the catching of the hammers in underbrush or the clothing of the user, which have led to its rapid growth in general favor. To these advantages may be added the minor ones arising from the entire concealment of the hammers and firing-pins, and the thereby diminished liability of, or, indeed, entire immunity from, danger of access of water to the working parts of the locks and pins. These advantages have, however, heretofore been in a great measure offset by the fact that the gun, being always, when in use, at full-cock, was liable to be discharged by careless handling, and the safety-catches used to prevent this were inefficient and clumsy, and in that class of hammerless guns in which the cocking is effected other than by the dropping of the barrels the user could not readily tell whether his gun was cocked or not.

I have devised a weapon which when loaded is certain to be full-cocked, and have provided it with a simple and convenient safety-catch that positively locks the sear in engagement with the striker-bolt. This catch is so constructed as to render it evident at a glance that the catch is in engagement with the sear or not, and—a most important point—the catch is released by the natural movement of the thumb in cocking an ordinary gun.

In the accompanying drawings, A are the barrels, pivoted at *a* to the breech-piece B. Longitudinally through the latter, under each barrel, (or, if the piece be single, then centrally,) is bored a hole extending into the lock-cavity *b*, within which hole a bar, *q*, carrying at its forward end a roller, Q, slides freely. The fore end, *r*, is provided in front of the bars *q* with cam-faces *p*, so arranged that as the barrels are tilted they act upon the rollers Q and repress the bars *q*.

The lower edge, P, of the fore end fits snugly against the front of the breech-piece, as shown.

The lock is shown in detail in Fig. 2, in which C is the lock-plate, of the usual shape, and secured to the piece in the usual way.

To the plate is pivoted, at *f*, a hammer or striker, F, that passes through a bar, D, slotted for the purpose. A pivot, *g*, passes through the bar or bolt D and through a hole in the striker, which latter hole is somewhat elongated, as shown in dotted lines, to admit of the bolt D moving in a right line while the hammer moves in the arc of a circle. The bolt passes freely through lugs *c c*, secured to or integral with the lock-plate, and around it is coiled a spiral mainspring, *e*, which is compressed between the rear lug and a nut, E, near the front end of the bolt, which is threaded, as shown at *d*. The object of this is to afford facility for increasing the tension of the mainspring as occasion requires.

The rear end of the bolt D has a notch or catch, *f'*, which engages with a similar catch or notch, *h*, on the front end of the sear H as the bolt is repressed.

The sear is provided with the usual lateral extension *i* and spring I.

J is the housing, within which the trigger L is pivoted.

A lug, G, is secured to the lock-plate, as shown, and is designed to receive the blow of the hammer, should the same be snapped when the gun is empty, as otherwise the firing-pin would be liable to become jammed or its spring

to be broken. The lug is so situated, however, as not to interfere with the delivery of the blow of the hammer on the firing-pin G′, and to admit of the latter being depressed far enough to insure the explosion of the cartridge-cap.

The safety-catch consists of a bar, N, sliding vertically through the top strap in the grasp and adapted to bear upon the lateral pieces *i* of both sears H when it is depressed. The catch is normally lifted out of engagement with the sears by means of a spring, *m*, but is depressed, when desired, by means of a cam, *o*, having a serrated thumb-piece, as shown.

In case the piece be a "top-lever" breech-loader, (if not, it ought to be,) this cam is pivoted in the end of the lever O, whereby the lever and locks are secured by one and the same catch as the latter is tilted forward. If the gun be other than a top-lever, the catch is pivoted in the strap.

The operation of the parts is as follows: As the barrels are caused to drop down, the cam-faces *p*, acting on the rollers Q in the ends of the rods *q*, repress the latter within the breech-piece B. The inner ends of the rods or bars *q* bear on the ends of the bolts D and force them back, causing the catches *f′* to engage with the sear-catches *h*, as shown in dotted lines, Fig. 1, and tilting the hammers to the position therein shown, both barrels being thereby full-cocked. As the triggers L are retracted the sears are drawn out of engagement with the bolts D, when the springs *e*, reacting against the lugs *c* and nuts E, cause the bolts to fly forward, carrying with them the hammers, which strike the firing-pins G′.

To lock the sears in engagement with the bolts D the cam *o* is tilted forward, bringing its serrated portion uppermost, as shown in dotted lines, Fig. 1, whereby the bar N is depressed upon the pieces *i i* of the sears. To release the locks the cam is simply tilted back, as in cocking an ordinary gun, the motion being the natural and usual one. By these means, while shooting in cover, the piece may be locked beyond the possibility of accidental discharge, while facility is afforded for releasing both locks by the natural motion of cocking as the piece is brought to the shoulder.

While in the accompanying drawings I have illustrated my invention as embodied in a gun having a "front-action" lock, it is clear that it is equally applicable to "back-action" locks, the bar *q* in that case extending into engagement with the hammer itself or with the end of the bolt D just in front of it, while the mainspring is transferred to the rear of the hammer.

It will be noticed that the described construction of parts admits of the ready and convenient alteration of an ordinary breech-loader into a hammerless gun, it being only necessary to pierce the breech-piece for the bars *q*, supply them and the cam-faces *p*, and attach the hammer and bolt to the inside of the lock-plate, the same lock-plates being used, if desired, and fitted in their original mortises without change. The breech-piece would also need to be bored for the firing-pins to enter the locks.

I am fully aware that it is not new, broadly, in "drop-down" guns to lift the hammer into engagement with a catch as the barrel is tilted, and, further, that this has been effected by means of a push-rod repressed by a cam at the barrel-pivot and against the hammer, such construction being shown in Letters Patent No. 47,755, granted to Charles E. Sneider, May 16, 1865; but I do not know nor believe that the following has ever before been known or used, and

I therefore claim—

1. In a drop-down gun, a fore end carrying a cam-face, arranged, as described, to actuate a sliding bar beneath the barrel, which said bar encounters the striker-bolt and represses it into engagement with the sear, as set forth.

2. In a breech-loading gun, a reciprocating bar, N, located in the top strap of the frame, in combination with a pivoted cam above the bar, the whole so arranged relatively to the sear that the tilting of the cam depresses the bar upon the sear and locks the latter, as set forth.

3. In a top-lever breech-loader, a safety-catch consisting of a pivoted cam located in the lever, and adapted at once to lock the sear and lever by means of mechanism substantially as set forth.

4. In a top-lever breech-loader, a safety-catch pivoted within the top lever, and arranged, as described, to enter a slot in the strap and depress a bar into engagement with the sear, substantially as set forth.

5. In a breech-loader, a bar reciprocating vertically through the strap and upon the sear, the same being normally lifted by means of a spring, and depressed by means of a pivoted cam, as set forth.

6. The combination, substantially as set forth, of the cam-face *p*, secured to the fore end, and rod *q*, having roller Q, with the bolt D, lying in a right line with the rod *q* and actuating the hammer, as described.

7. In combination with the rod D and sear H, the bar N, spring *m*, and cam *o*, carried by the lever, as set forth.

Witness my hand this 16th day of January, 1880.

CHAS. W. SNEIDER.

Witnesses:
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