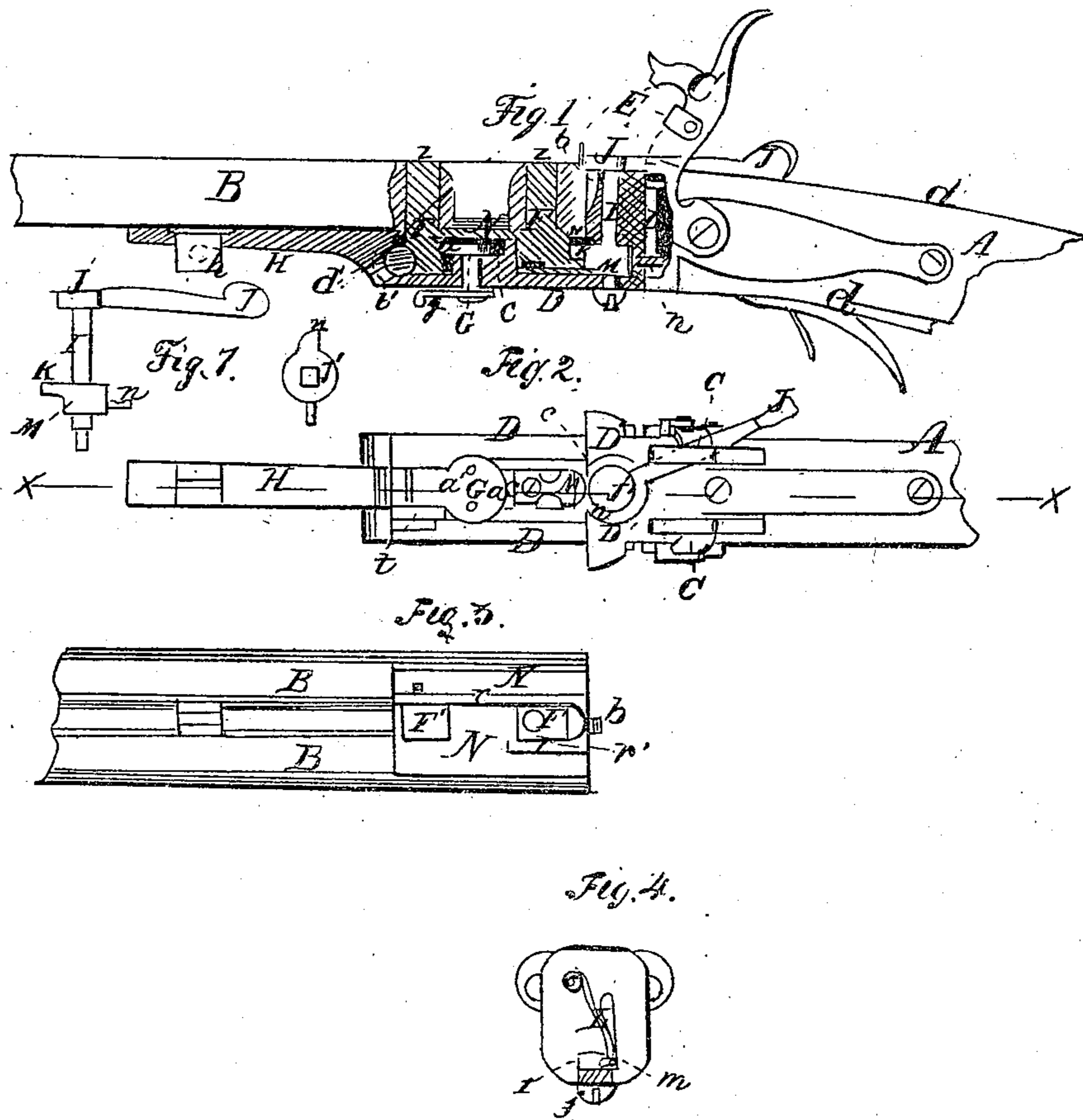


# C. E. Sneider, Breech Loader

No. 85,252.

Patented Dec. 22, 1868



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Fig. 5.

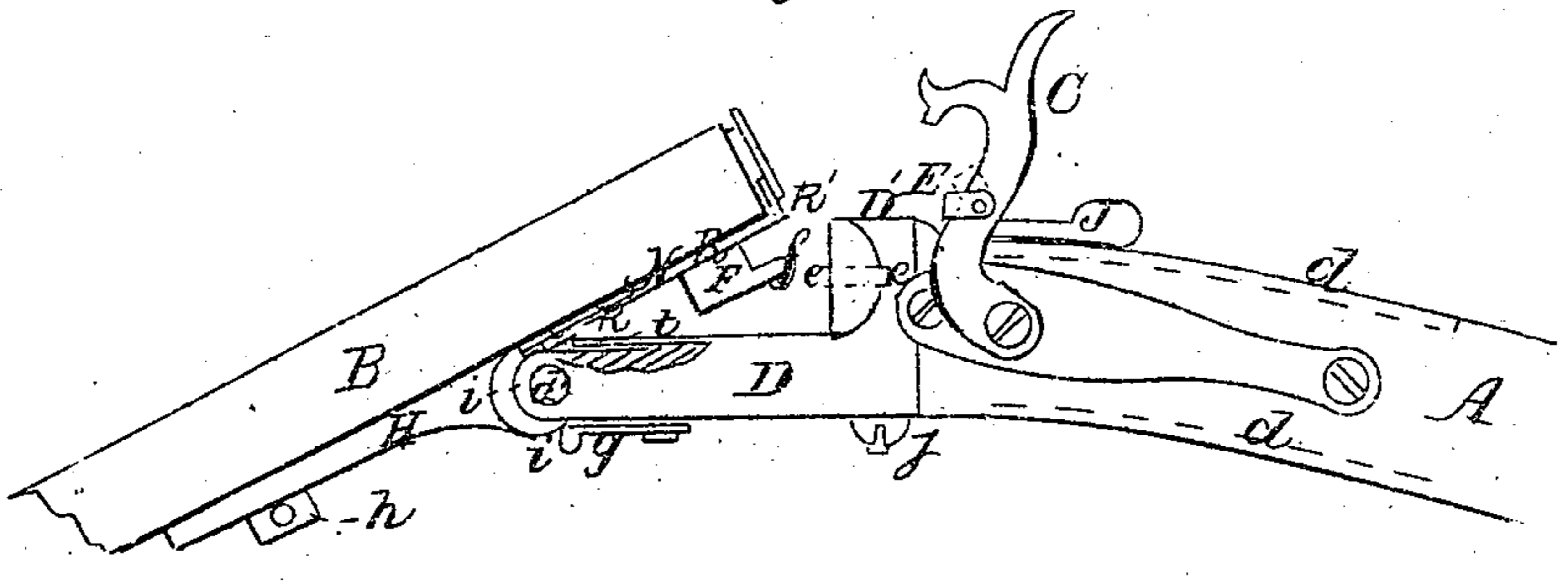
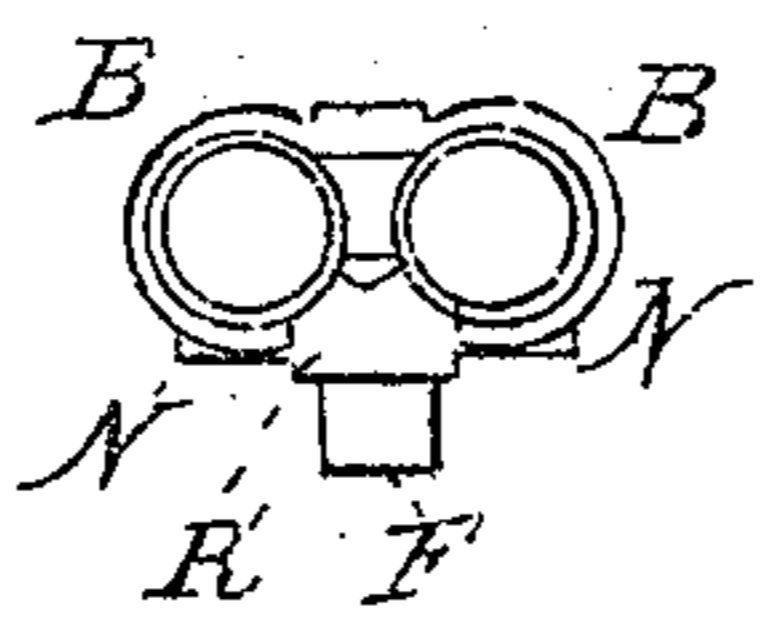


Fig. 6.



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C. E. SNEIDER, OF BALTIMORE, MARYLAND.

Letters Patent No. 85,252, dated December 22, 1868.

## IMPROVEMENT IN BREECH-LOADING ARMS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, C. E. SNEIDER, of the city and county of Baltimore, and State of Maryland, have invented a new and improved Double-Barrel Shot-Gun; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side elevation of a gun and stock, showing a portion of my invention in section, taken along the line *x x* of fig. 2.

Figure 2 is a top view of the breech of a double-barrel gun constructed with my improvements, the barrels being removed, and shown in

Figure 3, where they appear bottom side up.

Figure 4 shows the rear end of the breech-block in elevation.

Figure 5 is a side elevation of the gun, the blue lines indicating where a small portion is broken away, to show the operation of the cartridge-retractor, and the red lines indicating the but of the cartridge.

Figure 6 is a rear elevation of the barrels, with the stock-plate and cartridge-retractor, the cartridges being shown in red lines.

Figure 7, detached view of the locking-device.

The object of this invention is to improve the apparatus for locking the breech, so that it will operate with less friction, and so that the barrels will not start forward at the moment of firing; and to provide an improved device for actuating the cartridge-retractor.

In the drawings—

A indicates the stock;

B B, the barrels;

C C, the hammers; and

D, the breech-piece, firmly attached to the stock at *d d*, and hinged to the barrels at *d'*.

This piece is provided with a raised block or ledge, *D'*, near its middle, which serves as a breech-block.

The rear end of the barrels rests upon the part marked D, abutting against the part *D'*.

From the part *D'*, arms *d d* extend back, being countersunk in the upper and under surfaces of the neck of the stock, and attached thereto by screws, in the usual manner.

For the purpose of using centre-fire cartridges, needles *e e* extend through the breech-block, and are struck and forced forward against the cartridge by an adjustable block or head, E, affixed to the shank of the hammers by a pivot, and having a friction-spring under or behind them, partially countersunk in said shank, to hold them in place. By turning this head up or down on its pivot, as seen in red and black lines in fig. 5, it can be made to strike the needle and explode the cartridge, or to strike the bulge of the breech-block above the needle, and protect the cartridge from explosion.

The same device may be used as a guard when pin-

fire cartridges are employed, allowing the hammer to descend upon the pin when the pivoted-block is in one position, and preventing it when in another. By this simple expedient, therefore, the cartridges may be perfectly protected, and the gun rendered safe from the danger of accidental discharge.

From the side view in fig. 5, and the section in fig. 1, it will be seen that there is a longitudinal depression or cavity in the upper surface of the breech-piece, along the part D, which is bridged by a solid piece, *c*, near its centre.

Two stout blocks, F F', attached to the stock-plate, between the barrels, sink into this cavity, one, F', before the bridge, and the other, F, behind it.

The block F' is provided with a hook or shoulder at its rear lower corner, which, when the breech of the barrels is thrown up, as in fig. 5, comes up against the projecting head of a bolt, G, attached to the breech-piece, and prevents the breech from being opened to any further extent, the object of this device being to take up a great part of the strain and shock of arresting the motion of the barrels, and to that degree to save the pivot *d'* from strain and danger of breaking or starting.

The bolt G is provided with an eccentric-head, one side of which, *a*, projects out so far as to extend over the shoulder of the block F', when the bolt is turned in the proper direction, the other side being squared off or cut away, as seen at *a'*, fig. 2, so that when that side of the bolt is turned forward, it does not come in contact with said shoulder, and the breech can be opened to any desired extent.

*g* is a handle under the stock, by which the bolt G may be turned, so as thus to intercept or allow the opening of the breech.

The barrels are pivoted to the breech-piece, and thereby to the stock, in a peculiar manner.

The fixed pivot *d'* passes across a vertical gain in the forward end of the piece D.

The block F' is provided with a semicircular notch in its forward side, which fits around the rear side of the pivot, and serves as the bearing upon which the barrels swing.

A brace or block, H, lies directly in front of the piece D, being held up against the barrels by a lug, *h*, and pin. The rear end of the piece H is enlarged, and fits closely against the front end of the piece D, the former being concave, and the latter convex, as seen along the curved joint *i*, fig. 5, so that, in connection with the curved bearing in block F', it forms a socket, in which the pivot *d'* works when the breech is being opened or closed.

By taking the pin out of the lug *h*, removing the piece H, and turning the bolt G to the position shown in fig. 2, the barrels can be detached from the stock. If only the bolt is turned, the pivot is so held between the block F' and rear end of block H, and the barrels are so prevented, by the edge *i'*, from swinging on the

pivot, that they cannot be detached; and if the block H be removed, the bolt not being turned, the bolt and the pivot will hold the block F', and prevent the barrels from being detached. It is therefore necessary that all the conditions should be performed.

The barrels being thus pivoted to the breech-piece, the front side of the rear block, F; when the breech is closed, fits so closely against the rear edge of the bridge *c*, that the barrels are thereby firmly held in place, and prevented from springing or starting in the slightest degree when the gun is fired.

The barrels are locked down by means of a bolt, I, which extends vertically through the stock, or, more properly, through the breech-block, and is provided with a lever, J, for convenience in turning it to unlock the barrels, and a screw, *j*, to tighten it in place.

The upper head of the bolt I, or the forward end of the lever J, which will answer the same purpose, and which is seen at J', fig. 1, forms a lock similar to that made by the head of the bolt G, which fits over a teat or projection, *b*, on the rear end of the barrels, when turned in a certain position, and thereby holds the barrels down; but when turned in another position, its projecting edge retires from above the pin *b*, and leaves the barrels free to swing on their pivot.

The lower part of the bolt I has another projection, K, (fig. 1,) which locks over the shoulder *f* of the block F, when the bolt is properly turned, and thereby assists the head J' to hold the barrels down. The same turn of the bolt locks the barrels at their upper and their lower edges simultaneously.

If one lock gets out of order, from any cause, it does not follow that the other is injured, and therefore no interruption of the working of the apparatus is likely to ensue.

It is only necessary to apply the hand to the lever J, in opening the breech; in closing it, the locks work automatically by the following means:

A pin, *m*, extends back from the bolt I, through an opening in the wall of the block D', forming a lever for turning the bolt. Against this pin a spring, L, presses, tending to spring the bolt back as soon as the breech is opened. This is prevented, however, by a spring-trigger or stop, M, which, when the bolt I is turned, so as to unlock the barrels, springs up against a shoulder near its lower end, holding it in that position. This keeps the locks open, and allows the projection *b* to seat itself again without impediment, when the breech is closed.

Now, when the breech of the barrels is brought smartly down to its place, the lower end of block F throws spring M down, releasing bolt I, and spring L then turns bolt I, setting the flange K over the shoulder *f*, and the flange J' over the projection *b*, and firmly locking the breech.

It will be observed, by fig. 2, that the head J' is so formed that when locked, a shoulder, *n*, comes against the projecting corner, *o*, of the breech-block, arresting the motion of the bolt in that direction, while the wider part of the head entirely covers the joint beneath it, perfectly excluding water from the joint, and thereby preventing the parts from rusting and getting out of order.

In connection with the apparatus hereinabove described, I employ a cartridge-retractor, and devices for attaching it and its supporting-plate to the barrels, and for operating it, which are a great improvement upon anything of the kind heretofore brought into use, and which I will now proceed to describe.

N is a strong plate, cast in a single piece with the blocks F F', and lying close against the under side of the barrels, its rear extremity being flush with the butt of the barrels. This is attached to the barrels by means of the blocks F F', which pass up through mortises in the tin joint or barrel-connection, and are up-

set or provided with countersunk heads, *z z*, at their upper end. This avoids the necessity of brazing to the barrels the plate N, or the catch-blocks that project down into the breech-piece.

Heretofore it has been the custom to attach such parts by brazing; but the brazing requiring so great a heat as to melt the tin that holds the barrels together, they would often become separated, or a portion of their connecting-material be melted away and lost, putting the maker to great trouble and expense in repairing the damage.

Having long experienced this annoying and troublesome difficulty, I have at last completely obviated it by the above-described device, producing as firm and durable a connection between the plate and the barrels as can be produced by brazing them together, and at greatly reduced expense and trouble.

The plate N, thus constructed and attached to the barrels, is provided with two longitudinal grooves, *r r'*, one, *r*, extending the whole length of the plate, and the other extending only a part of its length, both grooves lying adjacent to the blocks F F', on opposite sides thereof.

A sliding cartridge-retractor, R, works back and forth on the under side of the plate N, being guided by these grooves. It is in shape, simply a bifurcated plate, having one long and one short arm, the long arm lying in the groove *r*, and the short one in the groove *r'*, and having at its rear end a bent-up lip, R', one corner of which engages under the rim of one cartridge, and the other under the rim of the other.

When the retractor is in place, the cartridges cannot be inserted without catching and holding it behind their rim, so that when it is pushed backward, it forces them back with it.

In connection with the retractor thus formed, is a spring-catch, *t*, lying partially countersunk in the upper side of the plate D, just above and behind the pivot *d*. This spring-catch is carefully adjusted at such a depth in its bed, and at such a position with relation to the pivot *d* and the retractor R, that when the breech is open, the retractor can be slid into place without coming in contact with the catch; or that, in any position of the barrels, if the retractor is pushed slightly back, it avoids the catch; but that, when the retractor is in place, and the barrels down, the barb or hook of the catch hooks over the end of the retractor. If, then, the breech be opened, the movement of the barrels on their pivot carries the plate N, and the retractor that is connected with it, slightly away from the catch, and causes the latter to slide the retractor backward a short distance, and then, the former being carried too far away from the latter, they become separated, and do not further operate on each other. This movement slightly retracts the cartridge, all the parts assuming the position shown in fig. 5.

On closing the breech again, the rear end of the retractor strikes against the wall of the breech-block, and the retractor is forced forward into place, its front end passing over the spring-catch *t*.

The whole arrangement works with admirable precision and effectiveness.

The retractor can be entirely withdrawn by hand, when the breech is open.

Having thus described my invention,

What I claim as new and useful, and desire to secure by Letters Patent, is—

1. In connection with the bolt I, locking the barrels down, as above described, the combination and arrangement of the two springs, M and L, and pin *m*, with the projection *f*, when said parts are constructed to operate in such a manner as to hold the tongues of the bolt I out of the way of the barrel, when the latter is raised, until, as it is brought down again, it strikes the spring M, thereby releasing the bolt I, and allowing the spring

L to turn the bolt and lock the breech, substantially as described.

2. The combination of the pivot  $d'$ , block F, and bolt G, having the eccentric-head  $a$ , when constructed to operate in the manner described.

3. The combination of a cartridge-retractor, R, with the spring-catch  $t$  and the pivot  $d'$ , when the parts are

constructed to operate together, substantially as described.

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Witnesses:

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