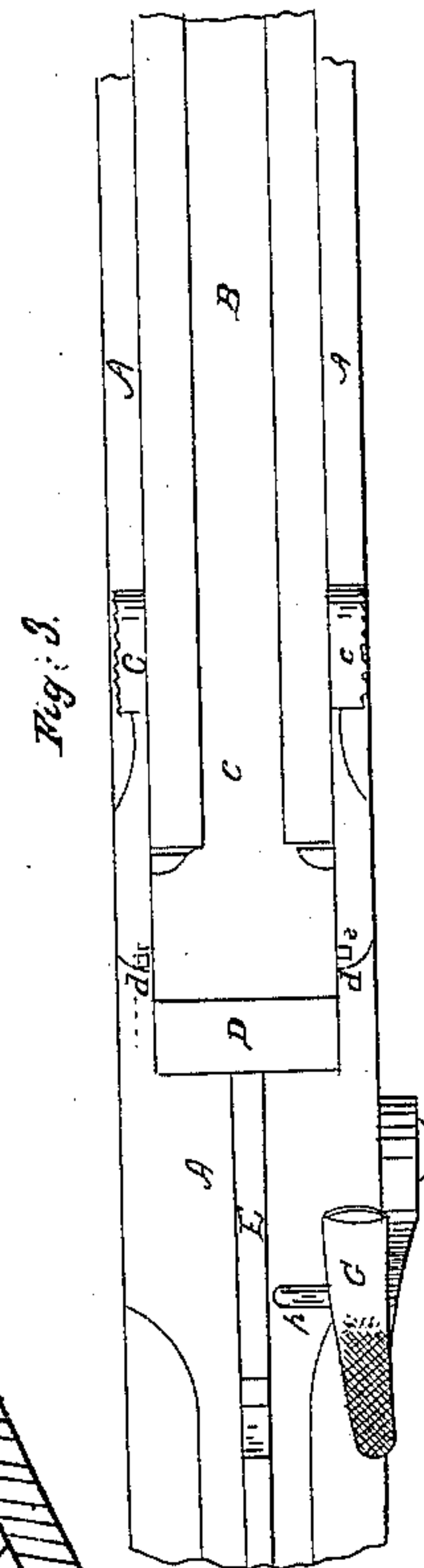
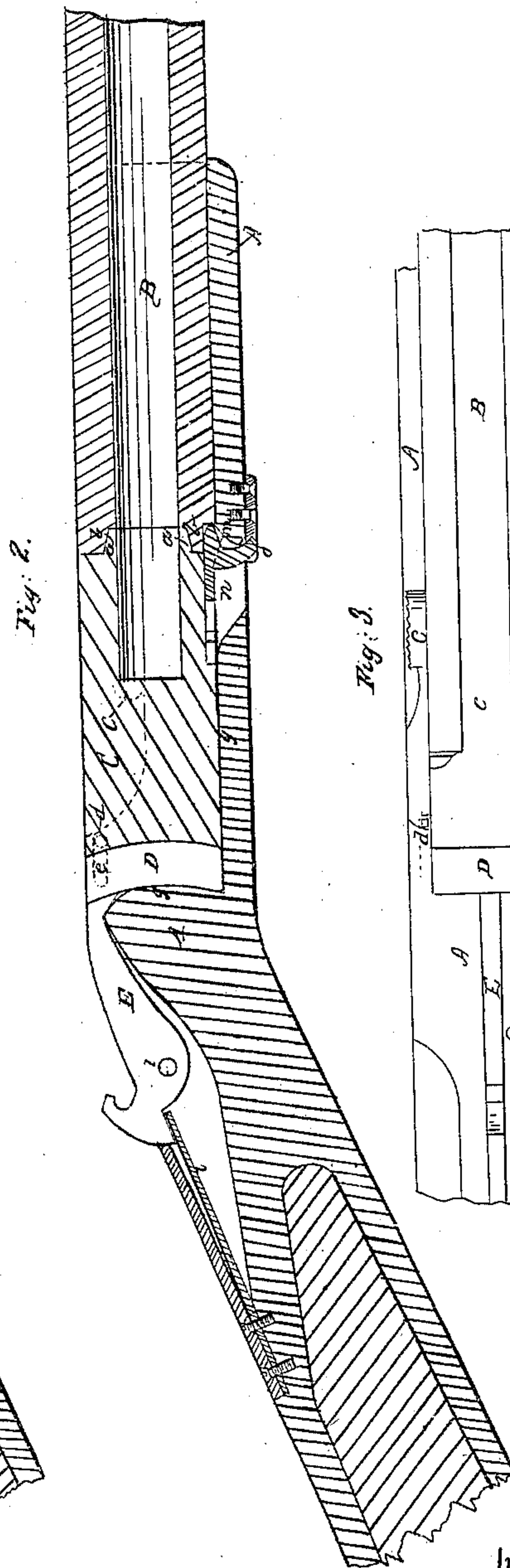
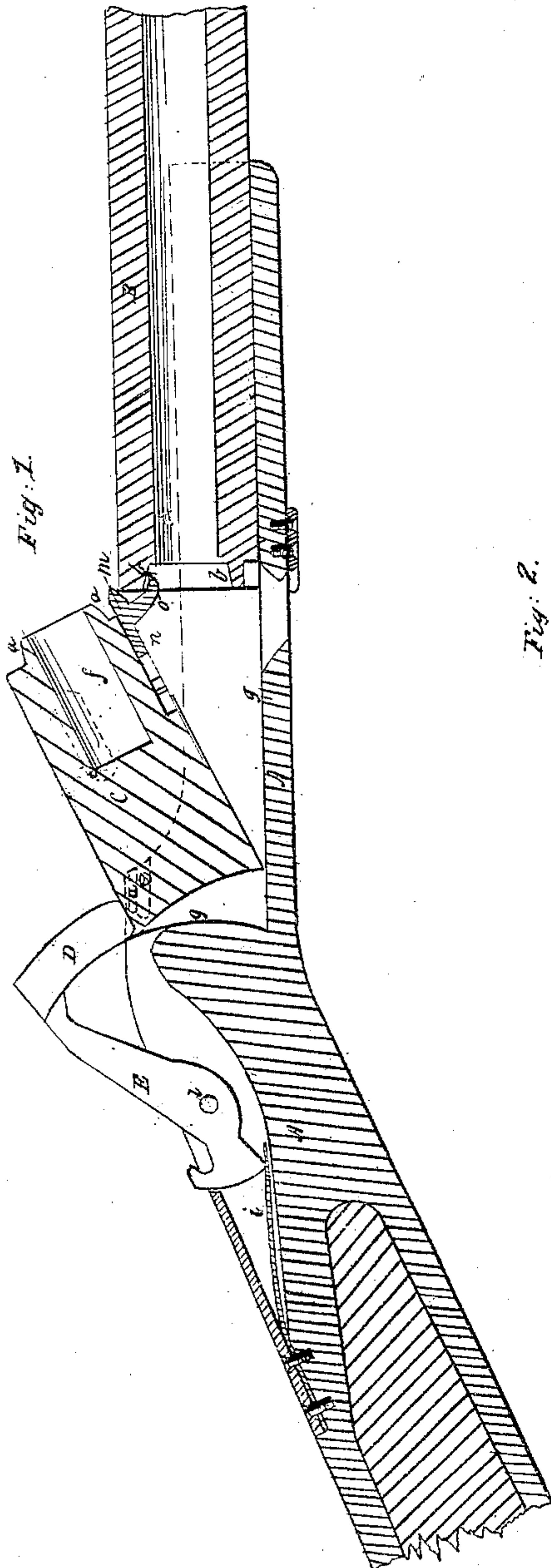


I. M. MILBANK:  
Breech-Loading Fire-Arm.

No. 37,048.

Patented Dec. 2, 1862.



Witnesses:  
James Caird  
Edw. W. Houghton

Inventor  
I. M. Milbank



# UNITED STATES PATENT OFFICE.

ISAAC M. MILBANK, OF GREENFIELD HILL, CONNECTICUT.

## IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 37,048, dated December 2, 1862.

*To all whom it may concern:*

Be it known that I, ISAAC M. MILBANK, of Greenfield Hill, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Breech-Loading Fire-Arms; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figures 1 and 2 are central longitudinal vertical sections of the breech and parts of the stock and band of a rifle constructed according to my invention. Fig. 3 is a top view of the same.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to the use of a chambered breech, which fits to the rear of the barrel with a valve-like joint, and which has a movement toward and from the barrel in a direction parallel therewith, and a tilting movement to bring its muzzle above the barrel for loading.

The said invention consists in a certain improved arrangement of such a breech in the frame of the gun, and means of locking the same in connection with the barrel for firing, and unlocking the same preparatory to loading, whereby I make a breech-loading fire-arm of exceedingly simple construction, and which is very durable and effective.

To enable others skilled in the art to construct fire arms according to my invention, I will proceed to describe it with reference to the drawings.

A is the metal frame which connects the barrel B with the stock, and which is so formed for the reception of the chambered breech C that the latter is capable of sliding some distance back and forth within it toward and from the barrel and parallel therewith. The breech C is finished in front, around the muzzle of the chamber *f*, in the form of a conical valve, as shown at *a* in Figs. 1 and 2, to fit a seat, *b*, of corresponding form in the rear of the barrel B. It is furnished at its sides with two straight lugs, *c c*, which rest upon the sides of the frame A, and with two pivots, *d d*, which enter grooves *e e* in the back part of the interiors of the sides of said frame. The lugs *c c* serve not only to support the breech

in the frame in its sliding motion toward and from the barrel; but afford convenience for laying hold of the chamber to move it back and forth by hand, as may be required, and the pivots *d d* support the breech while its front end is tilted up, as shown in Fig. 1, to expose the muzzle of the chamber above the barrel for loading.

D is a curved wedge entering between the rear of the chambered breech C and the rear end of the cavity *g*, that is provided in the frame A, for the reception of the chambered breech. This wedge is attached to the front end of a lever, E, which works on a fulcrum-pin, *l*, in a mortise in the upper part of the frame A, behind the cavity, and which tends to raise its rear end and cause the depression of its front end, to which the wedge is attached. The pin *l* is so arranged that its axis would be intersected by a prolongation of the axis of the barrel. The rear face of the wedge D is in the form of an arc described from the axis of the fulcrum-pin *l*, and the front face is in the form of an arc slightly eccentric thereto, making it thicker at the top. The rear end of the said lever is so formed as to stand up above the stock, convenient for depression by the thumb of the right hand when the wedge is down behind the breech, as shown in Fig. 1. The rear face of the breech is formed to correspond with the front face of the wedge, and the rear end of the cavity *g* formed to correspond with the back of the rear face of the wedge.

Attached to the front part of the bottom of the breech there is a spring-bolt, *m*, which serves to stop the breech in the open condition shown in Fig. 1. This bolt is fitted to slide in the bottom of the breech, and has applied to it a spring, *n*, which tends to press it forward. In raising the breech to the position shown in Fig. 1, after having drawn it back clear of the barrel, the bolt is pressed back by the act of passing in contact with the upper part of the barrel, but, after having passed, springs forward above the barrel, as shown in Fig. 1, and so holds up the breech until it is desired to close it, when the application of a moderate force to depress the breech causes the bolt to be forced back. To permit the above-mentioned action the bolt *m* has its point beveled both upward and down-



ward; and to prevent the breech from being raised too high, the said bolt has a hook, *o*, on its under side, to catch in the upper part of the barrel, as shown in Fig. 1.

To load the gun the stock is grasped in the right hand, as is usual for firing, and the thumb pressed upon the rear portion of the lever *E*, to raise up the wedge *D* from behind the breech *C*, which is then moved back by taking hold of the projections *c c* with the left hand, or caused to slide back by its own weight by raising the muzzle of the gun; and when the breech has thus been drawn or allowed to run back far enough for the pivots *d d* to reach the back ends of the grooves *e e*, which is far enough to bring the conical muzzle *a* clear of the barrel, the lever *E* is released and the wedge allowed to rest upon the rear portion of the breech. The breech is then raised up by the thumb and finger of the left hand to the position shown in Fig. 1, and the charge inserted into the chamber, after which the chamber is depressed into the cavity *g*, and slid forward to bring its conical muzzle *a a* close up into its seat *b b* in the barrel, when the wedge drops down behind it, and presses the said conical muzzle swiftly and firmly into its place, and holds it tight up to the barrel, in which position it is also secured against any upward, downward, or lateral movement by the muzzle *a a* fitting snugly into the seat *b b*. The wedge *D* is made to fall with a quick blow, and thus to drive the breech-piece *C* firmly forward by means of the spring *i*, which

acts against the lower arm of the lever *E*, as shown in Figs. 1 and 2. It will be observed that the breech *C* and wedge *D* are self-fastening. The wedge, in falling, not only drives forward the breech into its proper place, but fastens or locks itself and the breech in the proper position for firing, no bolts, slides, or other additional devices being necessary.

The hammer *G* is furnished with a stop-pin, *p*, firmly secured in its inner side in such position that it will be prevented from falling while the breech is open by the said pin coming in contact with the wedge *D*.

I am aware that in the English patent of William Green (1860) there is shown a tilting breech pivoted to the frame of the gun, and also jointed by a lever to the arm of a hinged wedge-piece, upon which is mounted a sliding bolt, and that after the wedge-piece has been pressed down by hand the bolt is then moved forward by hand, to fasten down the wedge-piece. I do not claim any of the above devices; but

What I claim as my invention, and desire to secure by Letters Patent, is—

The employment of a detached or loose breech-piece, *C*, and a self-locking independent breech-wedge, *D*, arranged to operate together in the manner herein shown and described.

ISAAC M. MILBANK.

Witnesses:

JAMES LAIRD,

EDW. W. HODGSON.