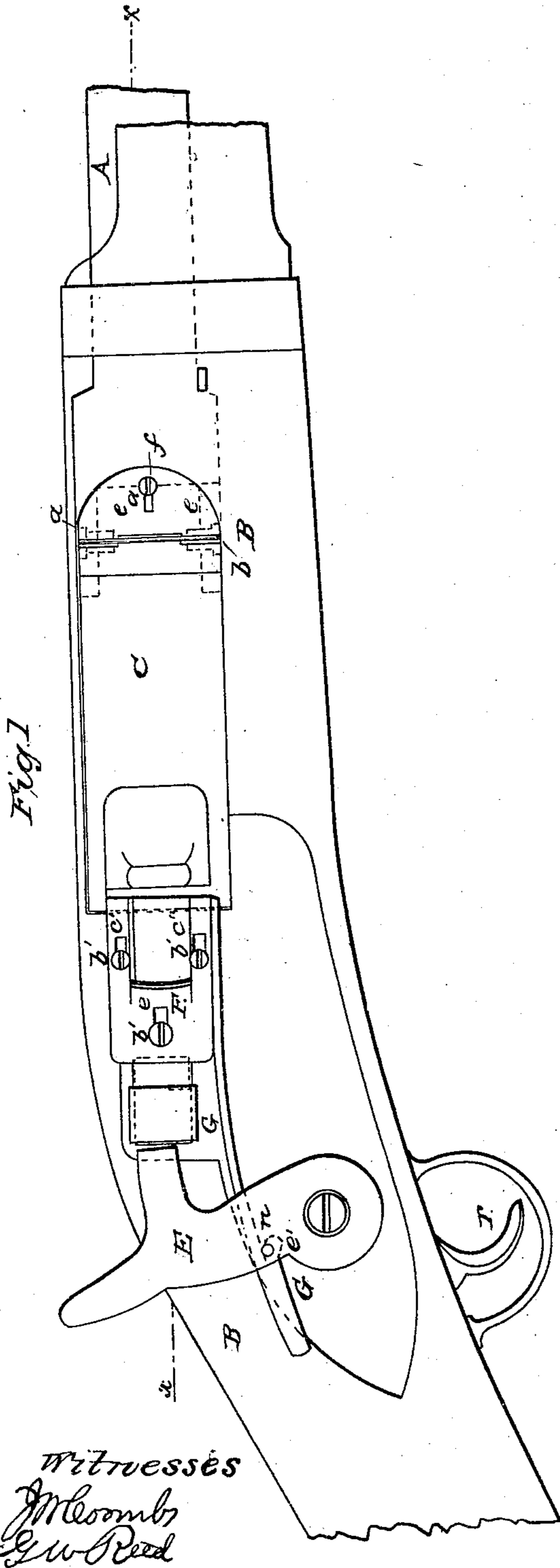


J. MERLETT.

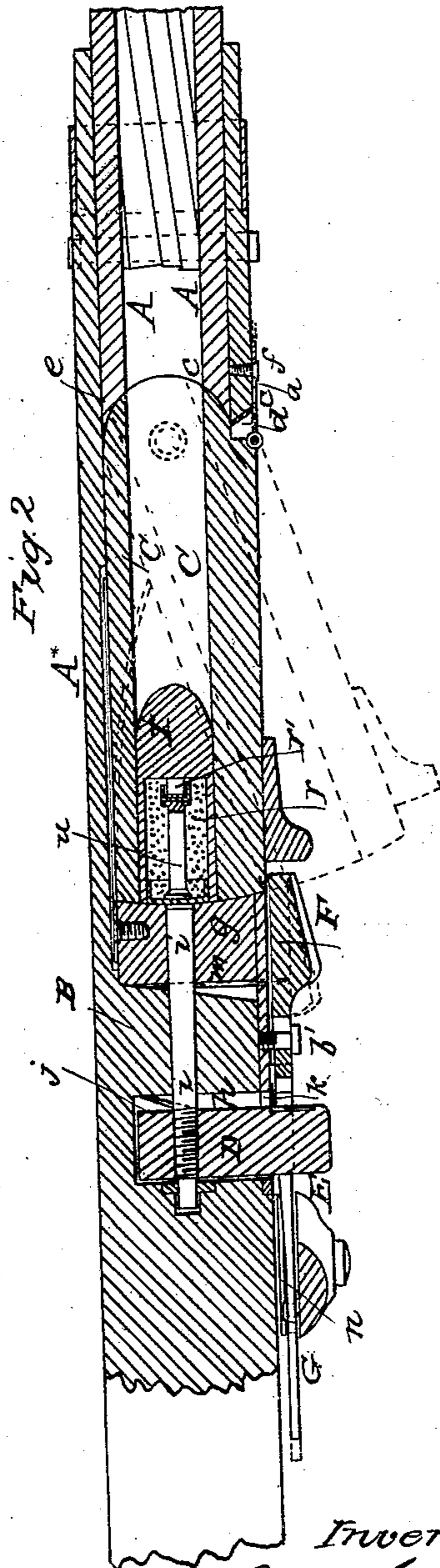
Breech Loading Fire Arm.

No. 81,283.

Patented Aug. 18, 1868.



Witnesses
McCombs
G W Reed



Inventor
J. Merlett

United States Patent Office.

JOHN MERLETT, OF BOUND BROOK, NEW JERSEY, ASSIGNOR TO HIMSELF
AND JOHN SMALLEY, OF SAME PLACE.

Letters Patent No. 81,283, dated August 18, 1868; antedated August 7, 1868.

IMPROVEMENT IN BREECH-LOADING FIRE-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, JOHN MERLETT, of Bound Brook, in the county of Somerset, and State of New Jersey, 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 a part of this specification, in which—

Figure 1 is a side view of a fire-arm, constructed according to my invention.

Figure 2 is a vertical longitudinal section of the same, taken in the line $x x$ of fig. 1.

Similar letters of reference indicate corresponding parts in both figures.

This invention relates to that class of breech-loaders in which a laterally-swinging breech-piece is employed, and it consists of a breech-piece of this description, constructed with a longitudinal chamber, and attached to the barrel of the arm by a semicircular joint, so arranged in relation with a suitable spring that the breech-piece may be readily thrown outward to open the breech, as required, in loading.

The invention further consists in a locking-slide, furnished with a spring-catch, and so applied, with reference to the aforesaid breech-block and the hammer, that the breech-block will be automatically released to open the breech by the act of cocking the hammer.

The invention further consists in a novel arrangement of a sliding block and firing-pin, with reference to each other and to the breech-piece and hammer, whereby a very efficient means of igniting the charge is secured.

The invention further consists in a novel means whereby the escape of gas laterally through the joint by which the breech-piece is attached to the barrel is prevented.

To enable others to understand the construction and operation of my invention, I will proceed to describe it with reference to the drawings.

A represents the barrel, which is secured to the stock B in any suitable manner.

The stock has formed in it, in rear of the barrel, a recess, which receives the swinging breech-piece C; the said recess being open at one side, preferably the right-hand side, in order to permit the lateral outward movement of the breech-piece in unclosing the breech, as will hereinafter be fully set forth.

The said breech-piece is pivoted at its forward end by two short vertical screws, one at the upper and one at the lower side thereof, as shown in dotted outline at $a b$ in fig. 1.

The joint between the forward end of the breech-piece and the rear end of the barrel is of semicircular form, as shown at c in fig. 2, and concentric with the pivot $a b$, the said semicircular form enabling a comparatively tight joint to be formed, without interfering with the free movement of the breech in operating the same.

Placed at the inner side of the recess which receives the breech-piece is a spring, A^* , which operates to force the said piece laterally outward to open the breech, as hereinafter fully explained.

The outer side of the breech-piece, at the forward end thereof, is recessed, as at d , to permit the free lateral movement of the aforesaid piece; and in order to close the said recess against the entrance of dirt, a covering-plate, e , is hinged at the rear end thereof, and, extending forward past the joint c , is held in contact with the side of the arm by a screw, f , passing through an oblong slot, a' , in the forward part of such plate e .

The recoil bearing of the arm is formed by a solid metallic block, g , fitted into the rear end of the recess in the stock which receives the breech-piece, and the forward side of which, together with the rear end of the breech-piece, which fits against it, is shaped upon the arc of a circle concentric with the pivot $a b$ of the said breech-piece.

Provided in the same side of the stock as the breech-receiving recess hereinbefore described, and at a suitable distance in rear of the said recess, is another recess, h , in which is placed a sliding block, D, the end of

which projects out in front of the hammer E, and to the central part of which is secured the firing-pin *i*, which, extending forward through a suitable slot, as shown in fig. 2, strikes the cartridge, to ignite the same in firing.

The block D, and the firing-pin attached thereto, are forced back by a spring, *j*, placed in front of the said block.

A small plate, K, may be attached to the forward side of the outer end of the sliding block D, to close the recess *h*, in which the same is placed.

Situated at the side of the arm, between the outwardly-extending end of the block D and the rear portion of the breech-piece, is a slide, F, which consists of a flat plate, held in place by screws *b'*, which are passed through suitable slots, *e'*, in the said slide F, which is pressed forward by a spring, *m*, placed transversely in a suitable receptacle provided in rear of the recoil-block or bearing *g*, the forward end of the slide lapping past or over the end of the breech-piece in such manner as to securely lock the same in place to close the breech.

A spring-catch, G, extends back from this slide, through or past the recessed inner side of the hammer, and is constructed with a shoulder at *e''*, which is acted upon by an inwardly-projecting stud or spur, *n*, formed upon such inner side of the hammer in such manner that as the hammer is drawn back it will draw back the slide and release the breech-piece, so that the spring A*, situated at the inner end thereof, will force or swing the said piece laterally outward into the position shown in red outline in fig. 2.

When the several parts of the arm are in position for firing, the breech-block occupies the position shown in the drawings, being locked in place by the forward end of the slide F, as hereinbefore described.

In loading the arm, the hammer is brought back, as in cocking the same, and the stud *n*, catching upon the shoulder *e''* of the spring-catch G, draws back the backing slide F, and releases the breech-piece, so that the same may be turned laterally outward by the action of the spring A, thus exposing the open rear end of the said breech-piece, into the chamber of which the cartridge is then inserted. That part of the lower side of the recess in the inner side of the hammer is so shaped as to strike the spring-catch G as soon as the breech-piece is swung outward, as just mentioned, so that the continued backward movement of the hammer raises the spring-catch clear of the stud *n*, to permit the spring *m* to force the slide forward and rest against the rear end of the breech-piece, while the cartridge is being inserted therein, which being done, the said breech-piece is pushed back to its place with the hand, thus closing the breech.

The arm may then be fired by simply dropping the hammer by a pull on the trigger *r*, in the ordinary way, the hammer, as it descends, striking the outwardly-extended end of the block D, and consequently forcing the said block forward to drive the firing-pin *i* against the cartridge, to ignite or explode the same.

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

1. The laterally-swinging chambered breech-piece C, attached to the barrel by the semicircular joint *c*, and arranged in relation with the spring A*, substantially as and for the purpose herein set forth.

2. The sliding plate or apron *e*, arranged in relation with the joint *c*, substantially as and for the purpose specified.

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Witnesses:

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G. W. REED.