

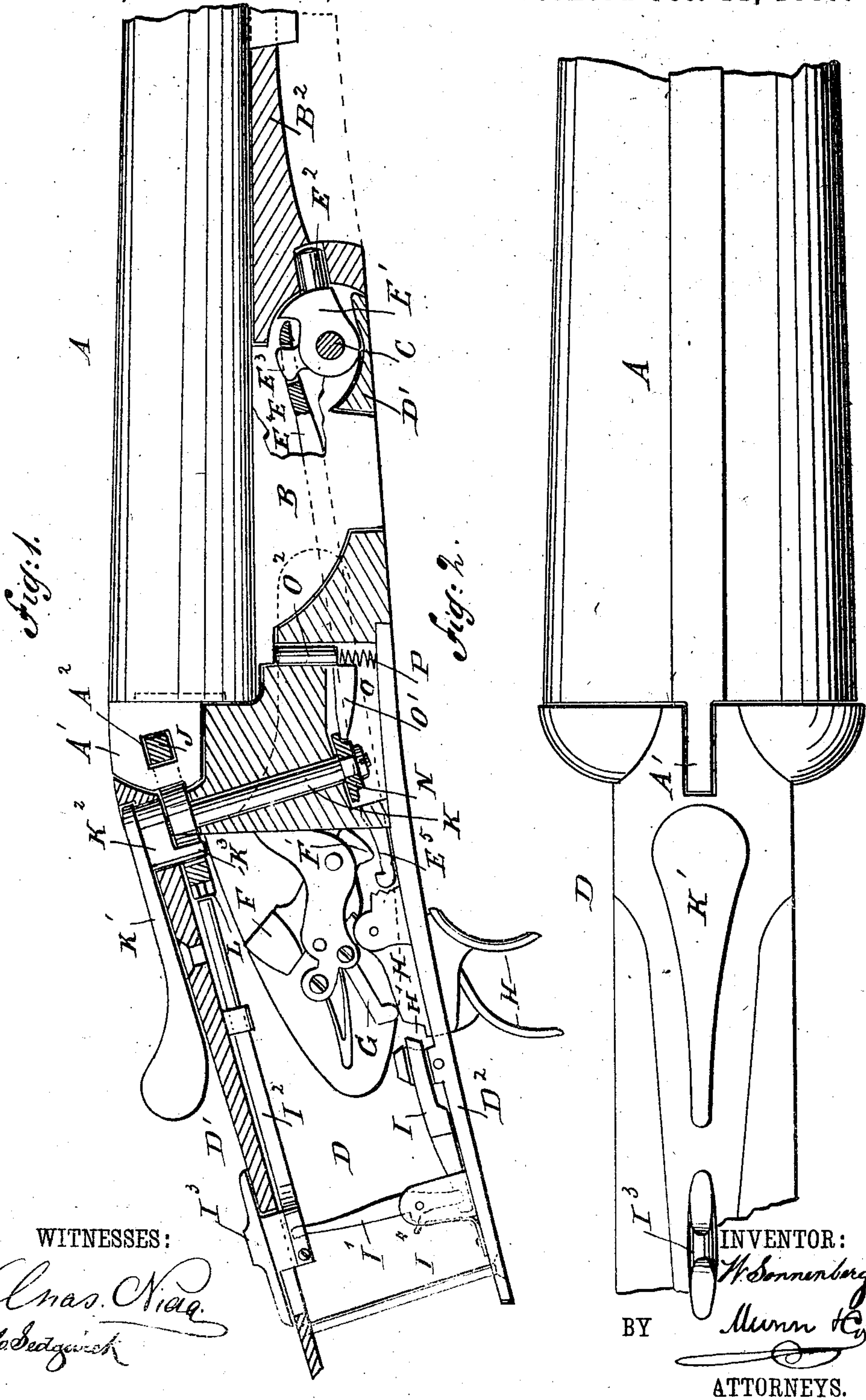
(No Model.)

2 Sheets—Sheet 1.

W. SONNENBERG.  
BREECH LOADING FIRE ARM.

No. 371,390.

Patented Oct. 11, 1887.



WITNESSES:

*Chas. N. Nier*  
*to Sedgwick*

INVENTOR:

*W. Sonnenberg*  
*Munn & Co.*

BY

ATTORNEYS.

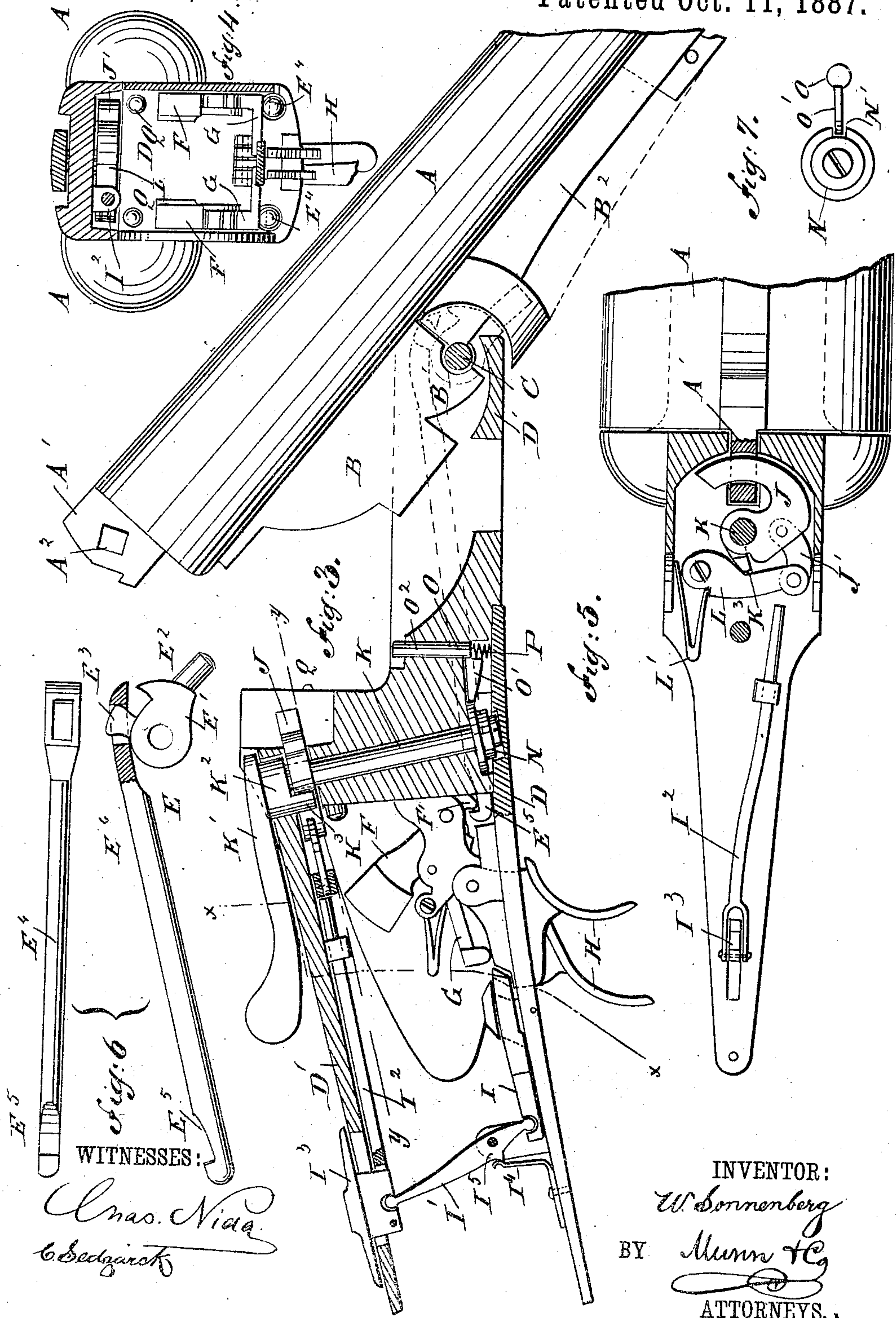
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# UNITED STATES PATENT OFFICE.

WILHELM SONNENBERG, OF WINONA, MINNESOTA.

## BREECH-LOADING FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 371,390, dated October 11, 1887.

Application filed March 1, 1887. Serial No. 229,349. (No model.)

### *To all whom it may concern:*

Be it known that I, WILHELM SONNENBERG, of Winona, in the county of Winona and State of Minnesota, have invented a new and Improved Breech-Loading Fire-Arm, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved breech-loading fire arm, in which the hammers and triggers are set automatically and locked in position when the barrel is opened for loading.

The invention consists of a device for locking the barrel on and unlocking it from the stock, means for setting the hammers and triggers when opening the barrel, and a device for locking the triggers automatically by the device for locking the barrel on or unlocking it from the stock.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a longitudinal central section of my improvement in a closed position. Fig. 2 is a plan view of the same. Fig. 3 is a longitudinal section of the same, showing the barrel open. Fig. 4 is a vertical cross section of the same on the line *xx* of Fig. 3. Fig. 5 is an inverted sectional plan view of part of the same on the line *yy* of Fig. 3. Fig. 6 is a plan and a side view of the bar or rod operating the hammers, and Fig. 7 is an inverted plan view of a locking device for the breech-block.

The single or double barrel *A* is provided on its under side with the tongue *B*, having a half-round notch, *B'*, engaging the pivot-pin *C*, held in the front end of the stock *D*, and on which swings the said barrel *A*. On the under side of the barrel *A* is also held a removable plate, *B''*, which swings with the barrel *A* on the pivot *C* and operates the mechanism *E* (see Fig. 6) for setting the hammers *F*.

The mechanism *E* consists of a bearing, *E'*, fulcrumed on the pivot *C*, and having a pin, *E''*, projecting loosely into a horizontal aperture formed in the plate *B''*, and the said arm *E'* is also provided with a lug, *E'''*, operating on a rod or bar, *E''''*, adapted to slide in suitable bearings formed in the stock *D*. The inner end of the rod *E''''* is provided with a notch, *E''''''*, engaging a shoulder or lug, *F'*, on a hammer, *F*, which is of the usual construction.

The hammer-lever *G* engages at one end, in the usual manner, with the said hammer *F*, and its other end projects over the respective trigger or triggers *H*, which set off the hammer or hammers *F*. The trigger or triggers *H* can be locked in position by a bar, *I*, adapted to slide in bearings on the bottom plate, *D''*, of the stock *D*, and engaging with its front end a notch, *H'*, formed on the tops of the said triggers *H*.

The rear end of the sliding bar *I* connects by the lever *I'* with the rod *I''*, held in suitable bearings on the under side of the top plate, *D'*, of the stock *D*, and the said rod is provided with a knob, *I'''*, extending through a slot in the top plate, *D'*. The spring *I''''*, secured by one end to the bottom plate, *D''*, of the stock *D*, engages with its other free end a projection, *I''''''*, on the lever *I'*, so as to hold the latter in whatever position it is in.

The inner end of the barrel *A* is provided in its middle with a projection, *A'*, having a square aperture, *A''*, into which passes the segmental arm *J*, fulcrumed on the shaft *K*, adapted to turn in the stock *D*, and provided on its upper outer end with a hand-lever, *K'*, swinging on the top plate, *D'*, of the stock *D*, and provided with a collar, *K''*, having a downwardly-extending lag, *K'''*, operating on the lever *L*, pivoted to the under side of the top plate, *D'*, and operating against the spring *L'*. The outer end of the lever *L* is connected by a link, *J'*, with the segmental arm *J*.

On the lower end of the shaft *K* is secured a disk, *N*, on the under side of which rests one end of the arm *O'* of the L-shaped arm *O*, which has its other arm, *O''*, extending upward, and is pressed against the inner end of the tongue *B* by a spiral spring, *P*. The disk *N* has a notch, *N'*, into which drops the end of the arm *O'* when the shaft *K* is turned so that the spring *P* forces the said arm *O* upward.

The operation is as follows: When the fire-arm is in a closed position, as shown in Fig. 1, then the barrel *A* is held in a locked position on the stock *D* by the segmental arm *J*, engaging the aperture *A''* in the projection *A'* of the barrel *A*. The operator, by pressing the triggers *H*, causes the hammers *F* to strike the firing-pin *Q* in the usual manner. The lug *F'* of the hammer *F* is now engaged with the notch *E''''''* of the rod *E''''*, and when the operator now desires to open the barrel *A* for reloading



he swings the hand-lever K' to the right, whereby the lug K<sup>3</sup> causes the lever L to swing toward the rear, and the latter, by means of the link J', causes the segmental arm J to swing in the same direction, so that the latter disengages from the projection A' of the barrel A. At the same time the turning of the shaft K brings the notch N' in the disk N opposite the arm O' of the L-shaped arm O and the latter is pressed upward by the spring P, thus engaging the notch N', and thereby holding the shaft K and its connection in a locked position. When the lever L swings toward the rear, it comes in contact with the bar I<sup>2</sup> and causes the same to slide in the same direction, so that the bar I is moved forward and over the notches H' in the top of the triggers H, so that the latter are held in a locked position. The operator, by pressing on the outer part of the barrel A, causes the latter to swing on its pivot C into the position shown in Fig. 3, thus enabling him to reload the barrel A. This swinging motion of the barrel A imparts a rearward motion to the rod E<sup>4</sup> by the arm E' being turned on the pivot C by the swinging plate B<sup>2</sup>. This sliding motion of the rod or bar E<sup>4</sup> imparts a swinging motion to the hammer F, which is thus reset, ready for action. When the operator now closes the barrel A, then the upwardly-projecting arm O<sup>2</sup> of the L-shaped lever O is pressed downward by the inner edge of the tongue B, so that the arm O' is disengaged from the notch N' of the disk N, and the spring L', pressing on the lever L, now causes the shaft K and its hand-lever K' to turn to their former positions, and the segmental arm J' is again swung into the aperture A<sup>2</sup> of the lever A', thus locking the barrel A in place on the stock D. If the operator now desires to fire, he has to move the knob I<sup>3</sup> forward, so that the sliding bar I is disengaged from the triggers H. The gun is now ready for firing.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. In a breech-loading fire arm, the combination, with the stock and a barrel pivoted thereto and provided with an apertured projection on its inner end, of a shaft provided with a downwardly-extending lug, a segmental arm pivoted on the said shaft and adapted to engage the apertured lug of the barrel, a spring-pressed lever pivoted in rear of the shaft, and a link connecting the said lever and arm, substantially as herein shown and described.

2. In a breech-loading fire arm, the combination, with the stock and the barrel pivoted thereto and having an apertured projection on its inner end, of a shaft provided with a collar having a downwardly-projecting lug, a segmental arm pivoted on the said shaft and adapted to engage the apertured projection of the barrel, a spring-pressed lever pivoted in the stock in the rear of said shaft, a link connecting said lever and arm, and means for locking the said shaft in position, substantially as herein shown and described.

3. In a breech-loading fire-arm, the combination, with the pivoted barrel having an apertured projection at its inner end and a tongue at its under side, of a segmental arm adapted to engage the said apertured projection, a shaft on which the said segmental arm is fulcrumed, a hand-lever secured to the said shaft, a collar having a downwardly-extending projection secured to the said shaft, a spring-lever actuated by the said downwardly-extending projection, a link connecting the said spring-lever with the said segmental arm, a notched disk secured to the lower end of the said shaft, an L-shaped arm connected with the said disk and operated on by the tongue of the said barrel, and a spring pressing against the said L-shaped arm, substantially as shown and described.

4. In a breech loading fire arm, the combination, with the barrel pivoted on the stock, of an arm turning loosely on the pivot of the barrel and having a pin connected with the said barrel, a lug secured on the said arm, a sliding rod or bar operated by the said lug and having a notch, and a hammer provided with a shoulder engaging the said notch in the said rod or bar, substantially as shown and described.

5. In a breech-loading fire arm, the combination, with the stock, a barrel pivoted thereto and provided with a plate on its under side, and a hammer provided with a lug or shoulder, of a bearing-piece mounted on the pivot of the barrel to move with the latter, and provided with an upwardly-projecting lug, and a rod or bar provided with a slot at one end to receive the lug of the bearing-piece and with a notch at its other end engaging the lug or shoulder of the hammer, substantially as herein shown and described.

6. In a breech-loading fire arm, the combination, with the stock and the trigger having a notch on its top, of a bar sliding in bearings on the bottom plate of the stock and adapted to engage the notch of the trigger, a bar sliding in bearings on the under side of the top plate of the stock, a lever connecting the said sliding bars, and means for operating said sliding bars, substantially as herein shown and described.

7. In a breech loading fire-arm, the combination, with the stock, the trigger, the pivoted barrel, and means for locking the barrel in position, of a sliding bar in the lower part of the stock and adapted to engage the trigger, a sliding bar in the upper part of the stock and adapted to be operated by the barrel-locking mechanism, and a pivoted and spring-pressed lever having its ends connected to the said sliding bars, substantially as herein shown and described.

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Witnesses:

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