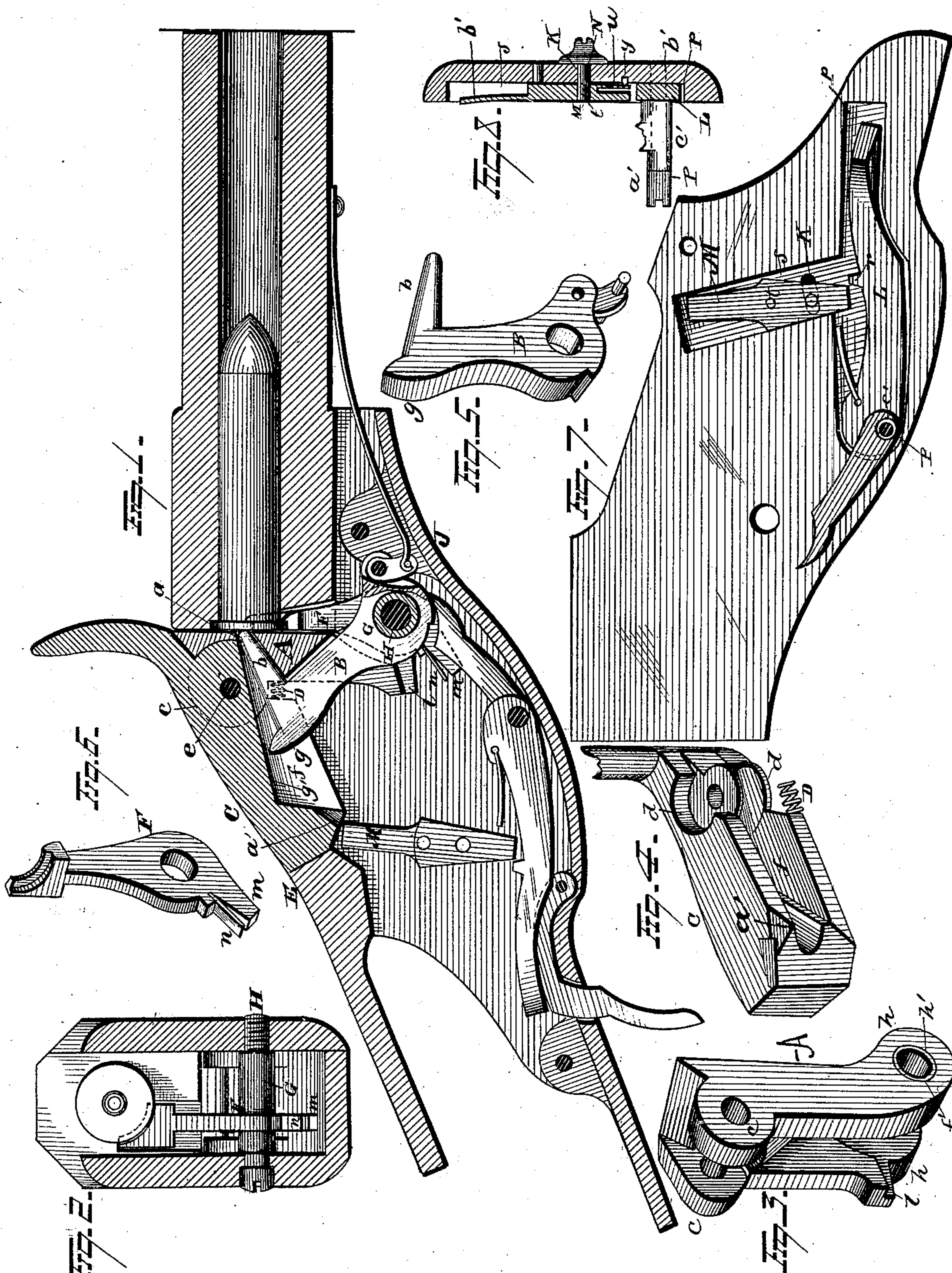


(No Model.)

D. HUG.  
Breech Loading Fire Arm.  
No. 232,035. Patented Sept. 7, 1880.



WITNESSES

*E. J. Nottingham,*  
*A. M. Bright.*

INVENTOR

*Dane Hug.*  
*By H. A. Seymour,*  
ATTORNEY.



# UNITED STATES PATENT OFFICE.

DANIEL HUG, OF ULA, COLORADO.

## BREECH-LOADING FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 232,035, dated September 7, 1880.

Application filed May 24, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, DANIEL HUG, of Ula, in the county of Custer and State of Colorado, have invented certain new and useful Improvements in Breech-Loading Fire-Arms; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to certain improvements in breech-loading fire-arms; and it consists of the parts and combinations of parts hereinafter described and claimed.

In the drawings, Figure 1 is a view, in longitudinal vertical section, of parts sufficient to illustrate the improvement. Fig. 2 is a view, in vertical transverse section, looking toward the breech of the barrel. Fig. 3 is a detail view of the breech-block. Fig. 4 is a detail view of the key-block. Fig. 5 is a detail view of the hammer. Fig. 6 is a detail view of the extractor. Fig. 7 is a detail view, in inner side elevation, of the right stock-cheek, representing the sear seated in position. Fig. 8 is a detail sectional view of said stock-cheek, taken longitudinally through the stop-bar.

The breech-block A is formed with a conical hole, *a*, in which works the conical firing-pin *b*, made in single piece with the hammer B. The upper rear portion of the breech-block is provided with two ears, *c*, which fit, respectively, in recesses *d*, formed on opposite sides of the forward portion of the key-block C. The abutting portions of the ears and recess-walls are made circular, so that the key-block may have pivotal movement upon a cylindrical pin, *e*, which connects it to said ears.

A spring, D, is interposed between the breech-block and key-block at a point below the horizontal line of the ears. The lower side of the key-block is formed with a longitudinal groove, *f*, in which fits the upper portion of the hammer. The latter is provided with a catch, *g*, on its top, which engages with an incline, *g'*, formed lengthwise in the top of groove *f*, as the key-block is drawn backward. The hammer is thereby drawn back with the key-block into cocked position. This construction prevents the hammer from striking for-

ward before the breech-block is locked by the key-block, as the latter must be swung forward so as to have its rear end abut against the end piece, E, of the stock before the incline *g'* will be in position to permit the hammer-catch to pass forward.

The extractor F is journaled on a sleeve, G, fitted in a transverse hole formed in ears *h* of the breech-block. The hammer is also journaled on the same sleeve, the extractor being located between the hammer and the left ear. One of the two ears is made thicker than the other, and with an annular recess, *f'*, in its outer side. Within this recess fits the collar *h'*, formed on the corresponding end of the sleeve.

The sleeve is loosely fitted on a screw-bolt, H, which passes through the cheek of the frame, and the breech-block turns with the sleeve, while the hammer and extractor have independent movement upon the sleeve.

The ear located next to the extractor is formed at its rear portion with a shoulder, *l*, which engages with the short arm *m* of the extractor as the breech-block completes its movement in swinging backward. A spring, *n*, is secured to the bearing-surface of this arm, and imparts a throw to the extractor after the latter has been drawn out from its position in the barrel. This spring *n* may be formed independent of the extractor-arm, or in single piece therewith. The said extractor-arm comes in contact with the guard-strap J when the extractor has swung back sufficiently for the purpose.

The right stock-cheek is provided with a longitudinal groove, *p*, which receives the sear L, thereby permitting the breech-block to fit in between the sear and the left stock-cheek when swung rearward. The rear arm of the sear is provided on its upper side with a lug, *r*, adapted to engage with the lower end of stop-bar M, as the latter may be moved in vertical line with said lug. This stop-bar is fitted in a transverse groove, *s*, formed in the inner side of the right stock-cheek, and is pivoted therein at *t*. Below its pivoted point it is provided with a stud, N, which passes through a slot, K, in the stock-cheek, and has its outer extremity adapted to be handled as a knob. Instead of this special form of handle a lever



may be substituted as the means for moving the stop-bar. The lower rear portion of one side of the key-block is provided with an incline,  $a'$ , with which the spring  $b'$ , formed on the upper portion of the stop-bar, is adapted to have lateral engagement. The stop-bar therefore has three functions—it stops the hammer, it jointly stops the hammer and key-block, and it stops the key-block.

10 The lower extremity of the stop-bar is formed with a spring,  $u$ , which has lateral bearing against a pointed stud,  $y$ , which latter is secured in the right stop-cheek. The stop-bar is thereby prevented from displacement, and  
15 may be maintained in its desired position.

The sear is pivoted on a screw-bolt,  $P$ , having a head,  $a'$ , which passes through hole  $b'$  in the stock-cheek and provides end bearing for collar  $c'$  of the sear.

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

1. The combination, with ear  $h$ , provided with shoulder  $l$ , of extractor  $F$ , whose short  
25 arm  $m$  is provided with spring  $n$ , substantially as set forth.

2. The combination, with breech-block  $A$ , having its lower extremity provided with ears  $h$ , sleeve  $G$ , fitted in transverse holes in the  
30 ears, and bolt  $H$ , of hammer  $B$  and extractor  $F$ , respectively journaled loosely on the sleeve between the two ears, the ear adjacent to the extractor being provided at its rear portion with shoulder  $l$ , adapted to engage with arm  $m$

of the extractor as the breech-block completes its rear swinging movement, substantially as set forth. 35

3. The combination, with sear  $L$ , having its upper side provided with raised projection  $r$ , and vertical stop-bar  $M$ , having pivotal movement in a vertical plane passing lengthwise through the sear, of the frame-cheek provided with slot  $K$ , stud  $N$ , and pointed stud  $y$ , which has end bearing against the lower side portion of the stop-bar when the latter is in vertical  
45 line with stop  $r$ , substantially as set forth.

4. The combination, with sear  $L$ , having its upper side provided with raised projection  $r$ , vertical stop-bar  $M$ , having pivotal movement in a vertical plane lengthwise with the sear, of  
5 frame-cheek provided with slot  $K$ , and stud  $N$ , projecting through the latter from the stop-bar, the lower portion of said stop-bar being provided with spring  $u$ , which has lateral bearing against stud  $y$ , substantially as set forth. 55

5. The combination, with key-block  $C$ , having the lower rear portion of one side provided with incline  $a'$ , of vertical stop-bar  $M$ , having its upper portion provided with spring  $b'$ , adapted to have lateral bearing against said  
60 incline, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 3d day of May, 1880.

DANIEL HUG.

Witnesses:

JAMES J. ROWEN,  
JOHN JORDI.