A. SCHROEDER.

BREECH-LOADING ORDNANCE.

No. 193,042. Patented July 10, 1877

Fig. 1.

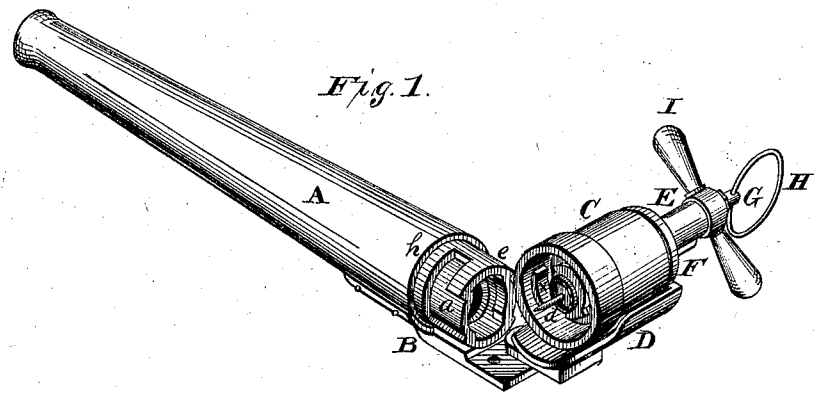


Fig. 2.

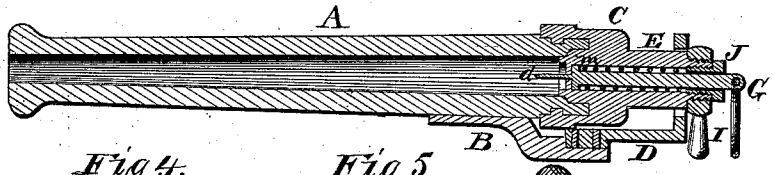


Fig 4.

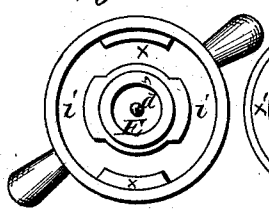


Fig. 5.

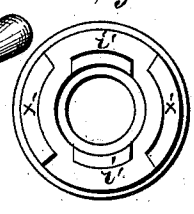


Fig. 3.

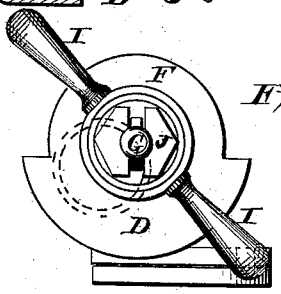
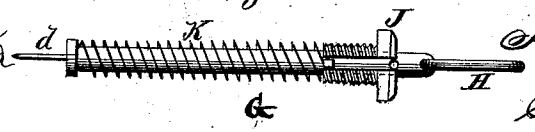


Fig. 6.



WITNESSES

Francis L. Ouvana

H. N. Miller

INVENTOR

Alfred Schroeder

Munn & Mason

ATTORNEYS.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ALFRED SCHROEDER, OF OMAHA, NEBRASKA.

IMPROVEMENT IN BREECH-LOADING ORDNANCE.

Specification forming part of Letters Patent No. **193,042**, dated July 10, 1877; application filed February 1, 1877.

To all whom it may concern:

Be it known that I, ALFRED SCHROEDER, of Omaha, in the county of Douglas, and in the State of Nebraska, have invented certain new and useful Improvements in Breech-Loading Ordnance; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of the several parts of a breech-loading cannon, which will be hereinafter more particularly described.

In order to enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation.

In the accompanying drawings, making part of this specification, Figure 1 represents a perspective view of my cannon, with the breech thrown open. Fig. 2 is a longitudinal section, and Figs. 3, 4, 5, 6 are views of detached portions.

In the figures, A represents the barrel of the piece, which is made with a decreasing bore from the breech to the muzzle. The rear end of the barrel is turned down, or is cast so that a shoulder, *h*, is formed. That portion of the end of the barrel which has been turned down is marked *e*, and is provided with two L-shaped slots, *a*, upon its outside, and upon its inside with slots and projections.

B represents a piece of metal which is secured to the under side of the barrel at its rear end. C represents the breech-block, which is secured in a metallic swinging cup or trough, D. This trough is pivoted or hinged to the piece B in such a manner that the breech can swing to the right and out of the way when the gun is to be loaded or cleaned.

The inner end of the breech-block is hollowed out, and provided with lugs on its inner surface, so that when it closes over the turned-down end of the barrel, the said lugs will take into the L-shaped recesses in said end. Within the mouth of the breech-block is a cylinder, which is provided with lugs or projections. This cylinder enters the opening at the rear end of the barrel, and its projections pass through the recesses or grooves in said end, and then catch behind the lugs within the end of barrel. The lugs or projections *x x* upon the inside of the breech-block at the same time pass into the L-shaped grooves *a a*, and thus a double lock is formed for the breech-block, an inside and an outside lock. The rear end of the breech-block is diminished, as seen at E, and passes through and works in a collar, F, upon the trough D. This collar acts to hold the block in place and guide it in its working. G represents the firing-pin. This pin passes through the breech-block and through the end E, and is provided at its inner end with a needle, *d*. A coiled spring, K, surrounds the firing-pin. This pin passes through a slotted nut, J, and is provided with a lug, which, when the pin is drawn back, passes through the slot of the nut. When the pin is drawn back so as to compress the spring, the lug *o* protrudes beyond the nut, and by a half turn of the pin said lug is made to catch upon the outer end of the nut, and thus keep the spring K in a compressed condition until such time as the operator desires to fire the piece. The piece is fired by simply turning the pin G by means of the ring H until the lug *o* passes freely through the slot in the nut, and slips through the same to expend the force of the spring upon the fulminate of the cartridge.

The gun is operated as follows: The breech-block and barrel being in the position seen in Fig. 1, the cartridge is inserted. The block is then swung to the left, and shoved inward until the lugs are in position to catch. The handle I is then turned partially to the right, which brings the lugs and grooves in proper position to catch.

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

1. The barrel A of a breech-loading cannon, having a tapering bore, in combination with the breech-block, having an internal and external lock, constructed in the manner and for the purpose specified.

2. The barrel A, having turned-down rear end forming shoulder *h*, and part *e*, with L-shaped slots *a*, and interior stops and projections, and provided with metal piece B, in combination with the breech-block C, hollowed out and provided with lugs, and having a cylinder provided with internal lugs, and connected to a trough, D, which is pivoted to the piece B, and capable of being swung laterally to one side of the barrel, all substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand.

ALFRED SCHROEDER.

Witnesses:
H. A. STURGES,
P. LIEBER.