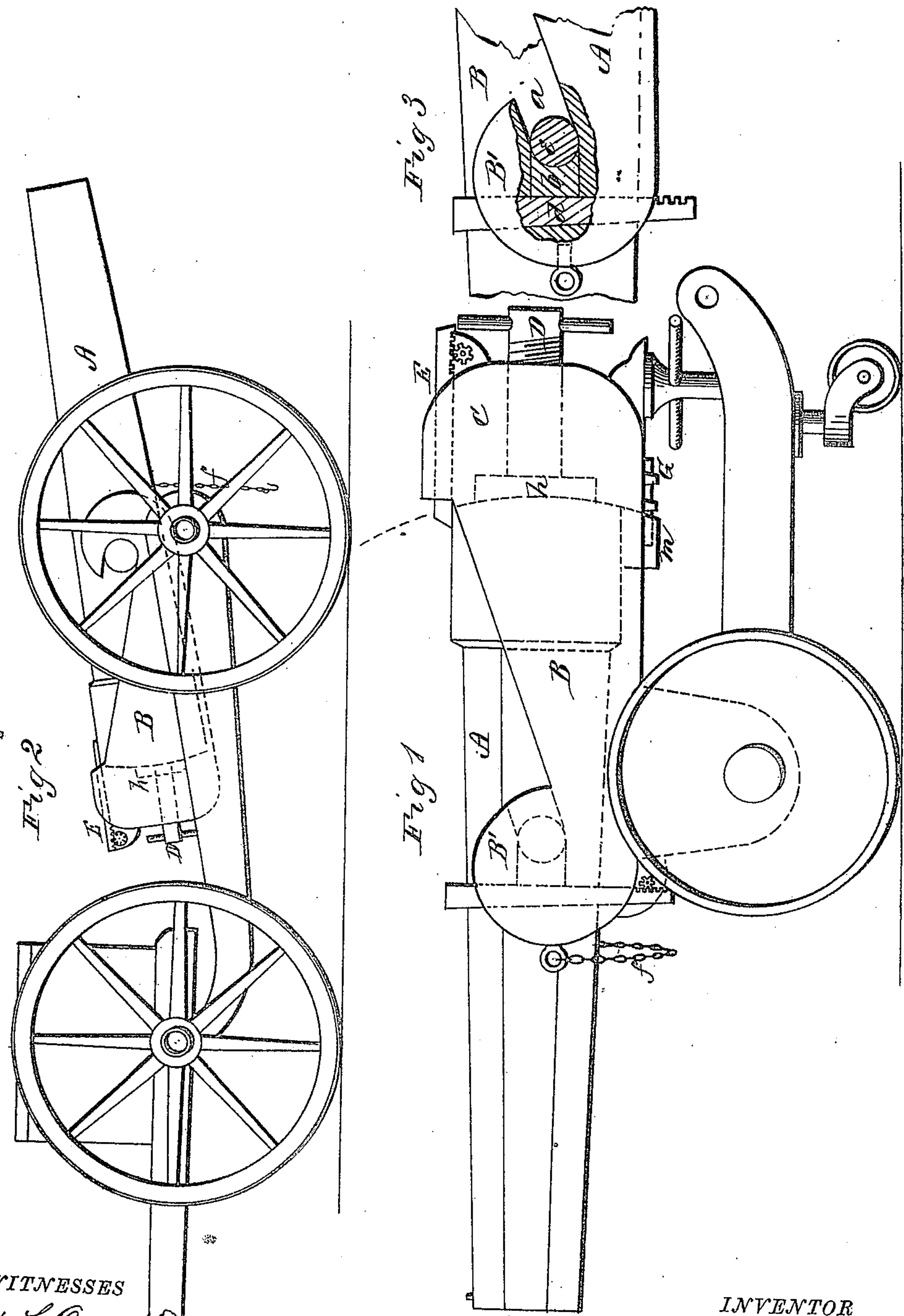


B. C. WATSON.
Breech-Loading Ordnance.

No. 161,308.

Patented March 23, 1875.



WITNESSES
Frank L. O'Connell
C. L. Evers

By

INVENTOR
Barrow C. Watson.
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Attorney

UNITED STATES PATENT OFFICE.

BARRON C. WATSON, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF HIS
RIGHT TO LEON FURNISS, OF SAME PLACE.

IMPROVEMENT IN BREECH-LOADING ORDNANCE.

Specification forming part of Letters Patent No. 161,308, dated March 23, 1875; application filed
February 12, 1875.

To all whom it may concern:

Be it known that I, BARRON C. WATSON, of New York, in the county and State of New York, have invented certain new and useful Improvements in Cannon; 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.

My invention relates to breech-loading ordnance; and it consists in the construction of the devices for hanging and adjusting the cannon in its bearings, and for holding it in position while being fired, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side elevation of a heavy or naval gun embodying my invention. Fig. 2 is a side elevation of a field-gun, showing my invention applied thereto; and Fig. 3 is a section of one of the trunnion-bearings.

A represents a cannon of any desired dimensions, and constructed in any of the known and usual ways, with the bore extending clear through the same, from end to end. B is a case of suitable length, forming at its rear end the breech C, and mounted upon a suitable carriage, or forming part of the carriage. At the front end of the case B are rounded enlargements or lips B', on the inner side of each of which is a slot or groove, *a*. The front part of this groove is horizontal, and the rear part inclined, as shown in Fig. 3. In the front part of the groove *a* is placed a bearing-block, *b*, rounded on its rear end, and having a wedge, *d*, placed in front of it vertically through the lip B'. The cannon A is provided with trunnions *e*, on a line with the center thereof, and at such a distance from the breech that when the cannon is unloaded the front end of the same will overbalance the rear end and tilt the cannon. The trunnions *e e* are inserted in the slots or grooves *a*, against the bearing-blocks *b*. Under the front end of the case B is suspended a chain, *f*, to act as a stop for the tilting of the can-

non. In the breech C is a plate, *h*, actuated by means of a screw, D. This is for the purpose of making the breech perfectly tight if the same should become slightly open by wear of the parts. The wedges *d* may also be forced downward to move the bearing-blocks *b* and the gun backward for the same purpose. If the breech should become too tight by reason of the expansion of the metal from too rapid firing, these parts may be easily loosened to remedy such defect.

The wedges *d d* may be operated by means of rack and pinion, as shown in Fig. 1. In field-guns the wedges and bearing-blocks are dispensed with, and the breech-screw D only is used.

When the cannon A is in position for firing it is held by means of a slide, E, on top, operated by rack and pinion, and, if desired, an additional slide, G, may be used at the bottom, to enter a slotted projection, *m*, on the under side of the cannon. This latter is, however, not necessary, as very little fastening is required on account of the cannon being hung on a line with its center, and hence there is no tendency of throwing the breech of the cannon upward.

By unhooking or removing the chain *f* the cannon A can be tilted far enough to allow its removal from the case B, for transportation or other purposes.

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

1. The cannon A, provided with trunnions *e e*, in combination with the case B, formed with the breech C, lips B', and grooves, as described, substantially as and for the purposes herein set forth.

2. The combination, with the cannon A and case B, constructed as described, of the bearing-blocks *b* and wedges *d*, as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 27th day of February, 1875.

BARRON C. WATSON.

Witnesses:

H. A. HALL,
C. L. EVERT.