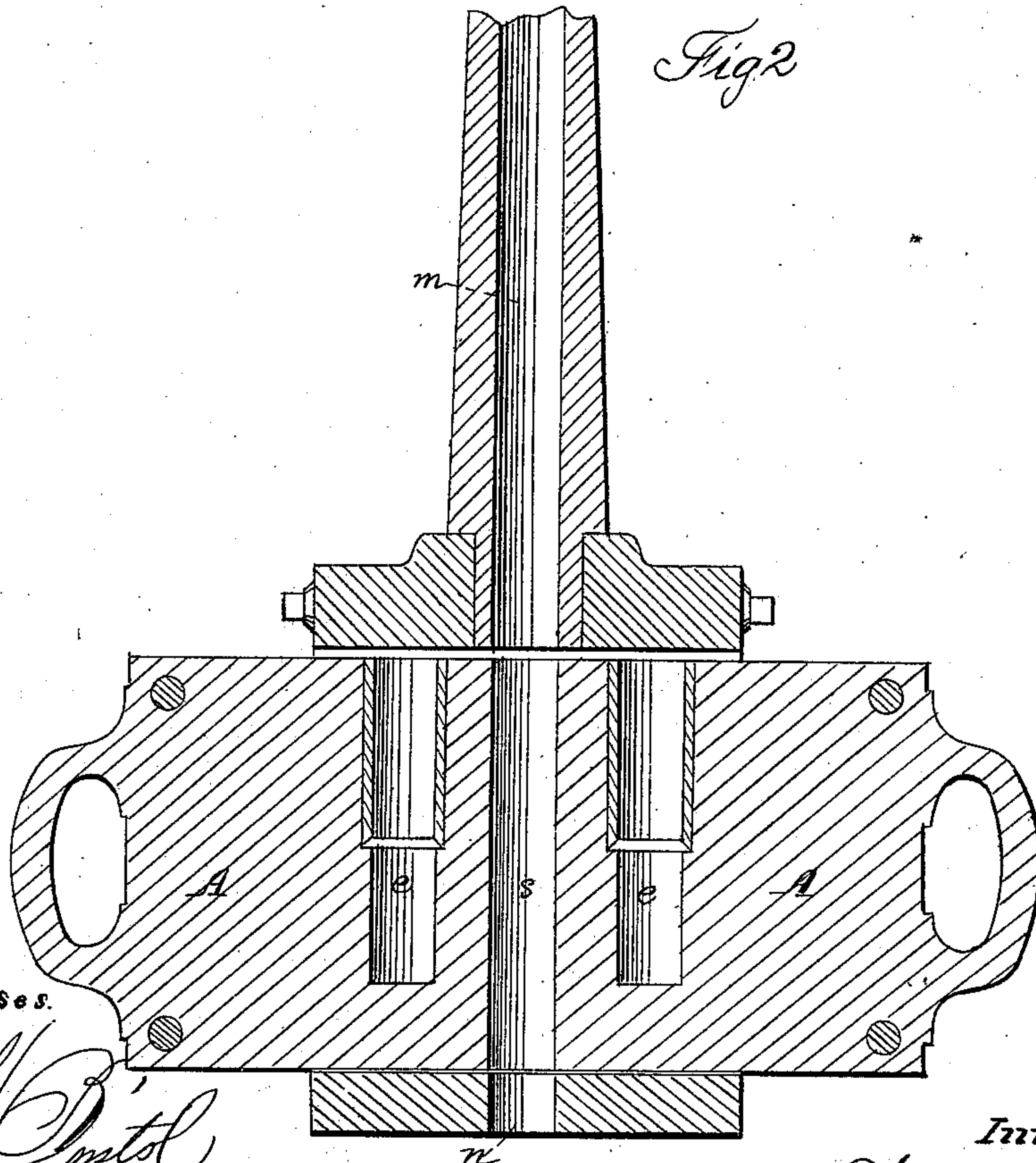
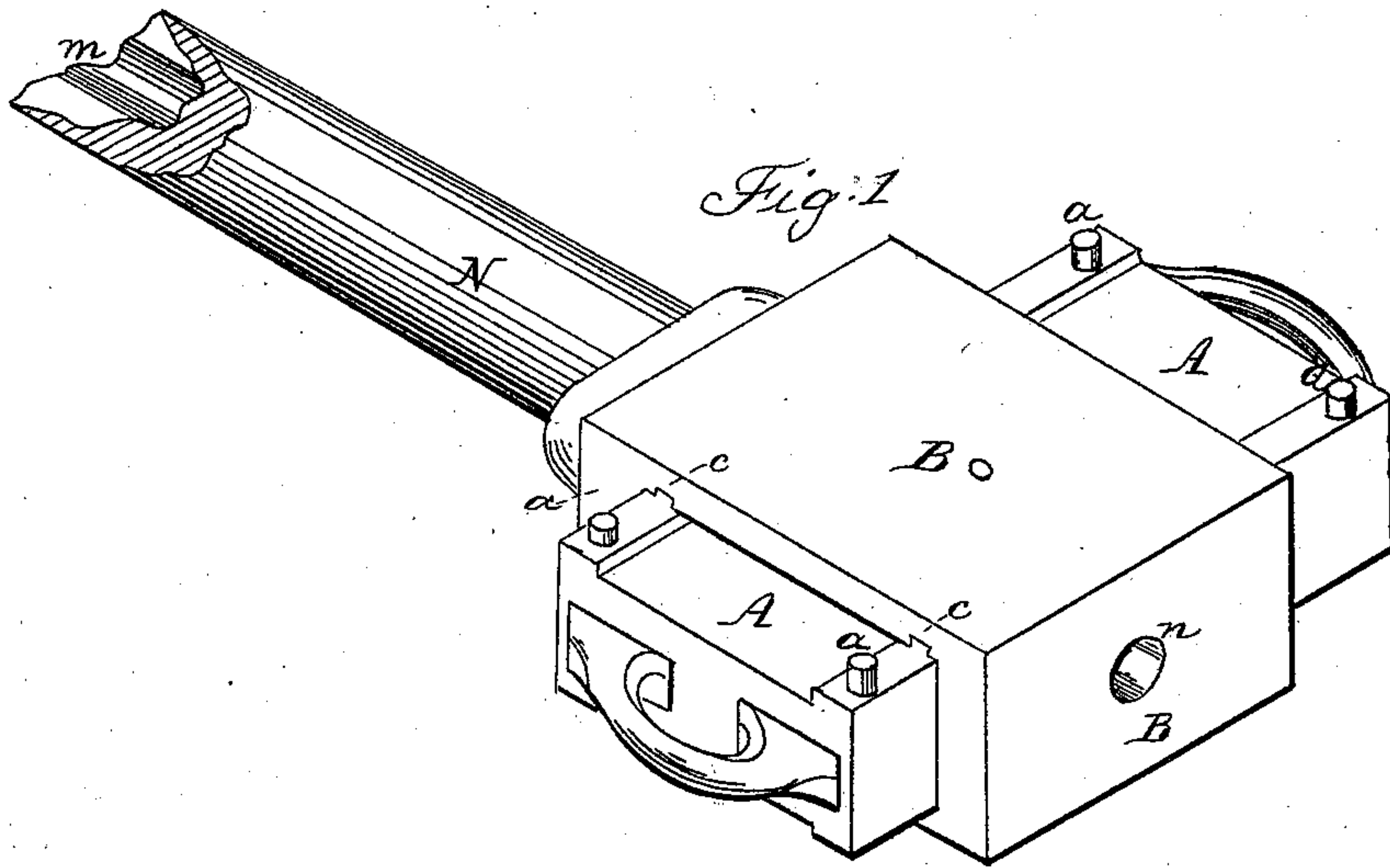


W. WALLACE.

Breech-Loading Ordnance.

No. 44,356.

Patented Sept 20, 1864



Witnesses.

Wm. A. Bristol
J. H. Bartholomew

Inventor

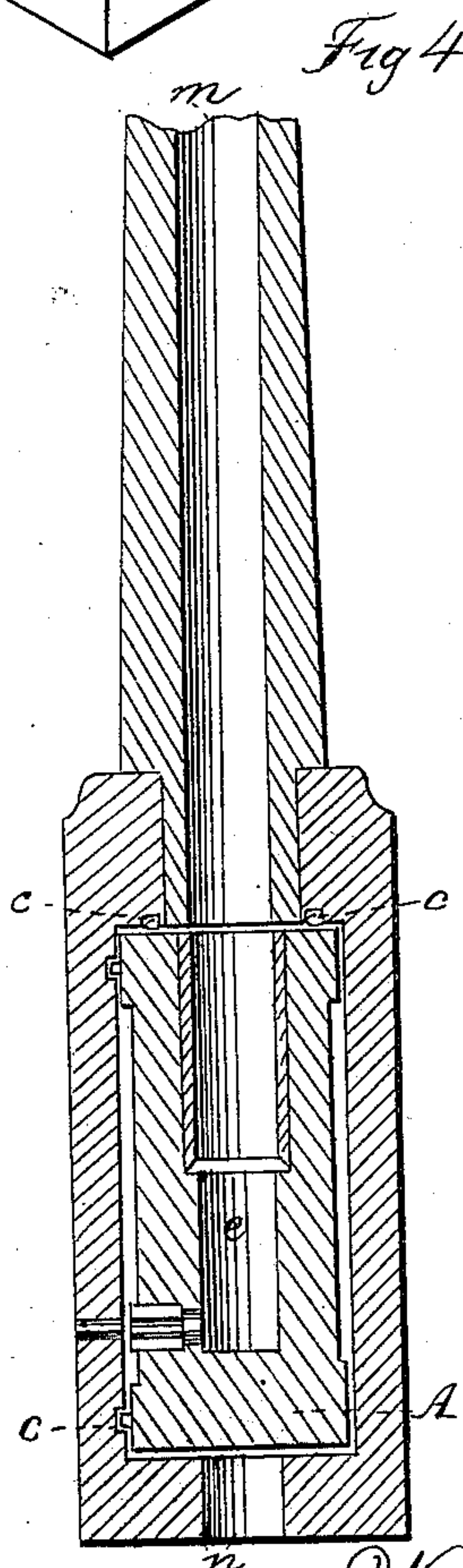
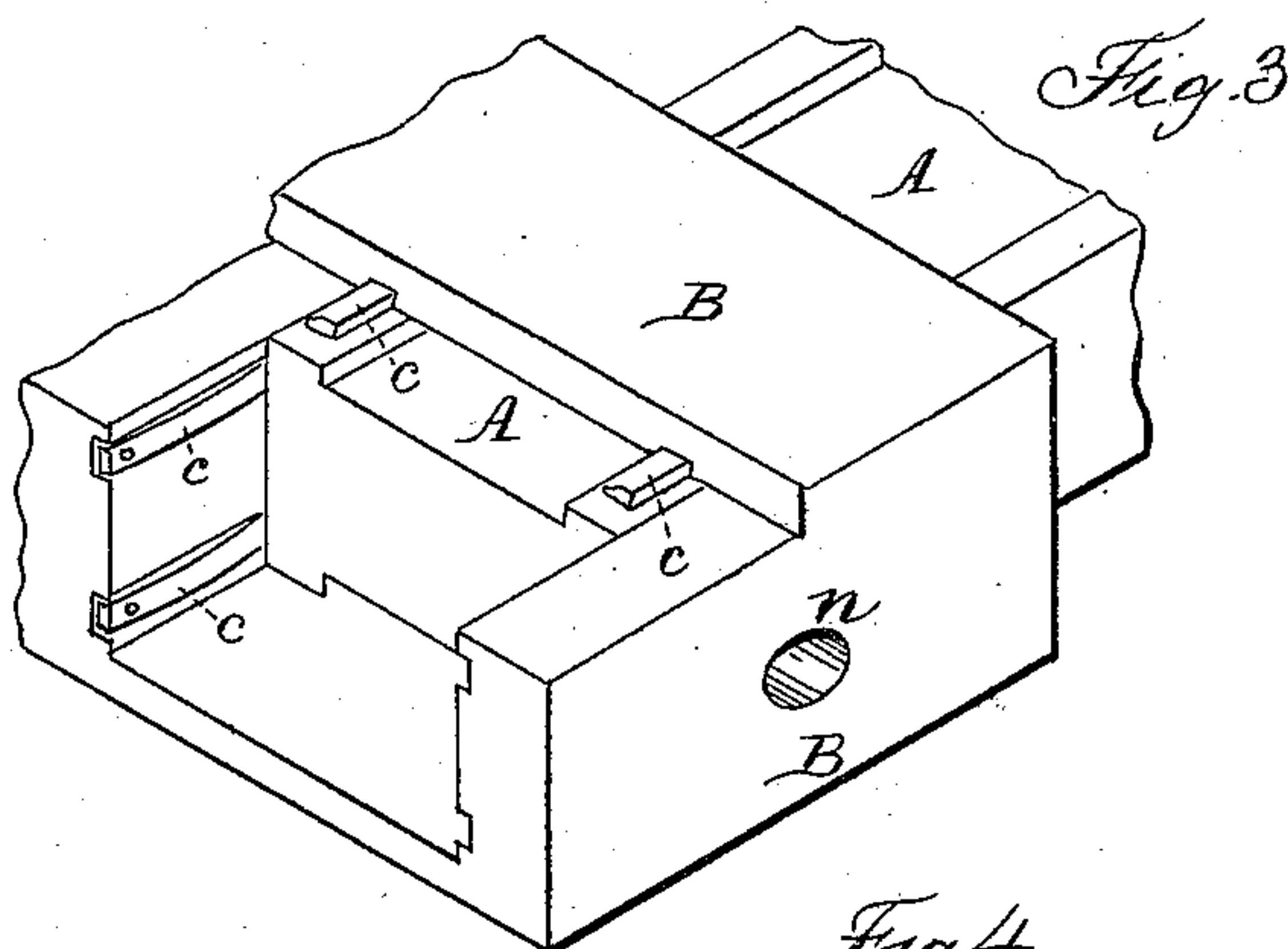
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UNITED STATES PATENT OFFICE.

WILLIAM WALLACE, OF ANSONIA, CONNECTICUT.

IMPROVEMENT IN BREECH-LOADING ORDNANCE.

Specification forming part of Letters Patent No. 44,356, dated September 20, 1864; antedated June 3, 1862.

To all whom it may concern:

Be it known that I, WILLIAM WALLACE, of Ansonia, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Breech-Loading Cannons; 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, making part of this specification, in which—

Figure 1 represents a perspective view of my breech-loading cannon. Fig. 2 shows a horizontal section of the same. Fig. 3 is a perspective view in section, with part of the breech-strap removed, showing the springs *c c c*. Fig. 4 illustrates a vertical section.

My present invention relates to that kind of breech-loading cannon in which is employed a sliding or reciprocating breech-piece containing a series of chambers, and has for its object to render this kind of cannon more desirable by so constructing it that the barrel may be always readily ventilated and cleaned out, and so that the breech-piece may be removed with great facility when necessary, while at the same time the latter is capable of expanding and contracting (as also is the breech-strap) without affecting the working of the gun; and to these ends my said invention consists in the employment, in combination with a barrel bored through and having a breech-strap bored through, of a sliding and removable breech-piece with a series of chambers and one bore through it, and retained in position by spring-pressure, the whole arranged and operating as hereinafter described.

To enable those skilled in the art to make and use my invention, I will proceed to describe the same, referring by letters to the accompanying drawings.

In the several views the same letter of reference represents the same parts of the apparatus.

B B is the breech-strap, in which the sliding breech-piece A A is retained and reciprocated, so as to bring the charge-chambers E E and also the central bore S of said sliding breech in line with the bore *m* of the barrel, for purposes to be presently explained.

N is the barrel, and *n* is a hole through the rear of breech-strap and in line with the bore *m* of the barrel.

c c c c are springs, which are arranged in such a manner in the breech-strap B B as to project beyond the plane of inner surface of said strap sufficiently to come in contact with and be compressed by the top and forward sides of said sliding breech-piece, so as to cause said sliding breech A A to be held in contact with the bottom and rear sides of breech-strap, while it is free to expand in the two other directions when heated.

a a a a are removable stops and retaining-pins, which regulate the extent of reciprocation of the sliding breech, and also retain it in the breech-strap. The object of having these stops removable is this, that by taking out two of them the breech A A may be readily removed from the strap B B when said breech A becomes too hot, and replaced by a new or cool breech, (a duplicate of A A.) It often happens during long firing that the breech becomes so heated that the firing has to be discontinued and the breech allowed to cool to prevent premature explosions. By having the breech A removable, as just explained, this loss of time and inconvenience and danger is avoided.

The operation of my improved breech-loading cannon needs but little explanation. The breech A being pulled out at one side, the chamber E, which is exposed, is loaded in the usual manner. The breech A is then reciprocated in the opposite direction until stopped by the pins *a a*, when the loaded chamber E (being exactly in line with the bore *m* of the barrel) is primed and fired. Meanwhile the other chamber is being loaded, and the breech is then pulled in the other direction and the other chamber E fired, and so on. Whenever the gun needs ventilation or swabbing out, the breech A is placed so that its center bore, S, comes in line with the bore *m* of the barrel. Then both these bores will be in line with the hole *n* in breech-strap B B, and the gun can be swabbed or cleaned right through from the rear, which is a great desideratum, especially where the gun is in an embrasure. When the breech A gets too hot, it may be easily removed, as before explained.

It will be observed that the springs *c c c c* are not designed to form a tight joint, which is a practical impossibility, but to hold the breech A against the strap B, (at its abutments,)

the breech A being smaller than the space in breech-strap to allow expansion of both parts.

I am aware that a sliding breech has been employed with a series of chambers, and also that breech-loading cannon have been bored through. I do not therefore claim these features; but

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

The employment of a removable sliding breech, A, with a series of chambers, E E, and

center bore, S, and the spring compensation, as described, in combination with the breech-strap, with its hole *n*, and the barrel N, the whole constructed and operating as described, for the purposes set forth.

In testimony whereof I have hereunto set my hand.

WILLIAM WALLACE.

Witnesses:

WM. H. BRISTOL,

I. H. BARTHOLOMEW.