

(No Model.)

2 Sheets—Sheet 1.

A. WELIN.
SCREW THREADED BREECH BLOCK.

No. 552,561.

Patented Jan. 7, 1896.

Fig. 1.

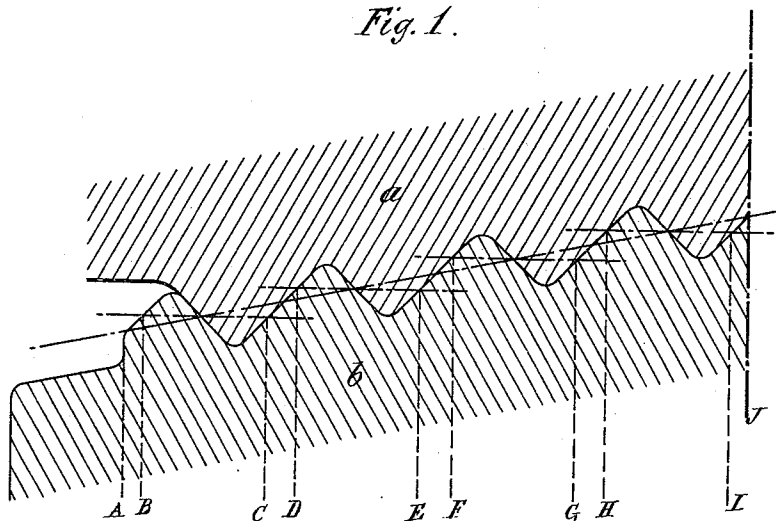
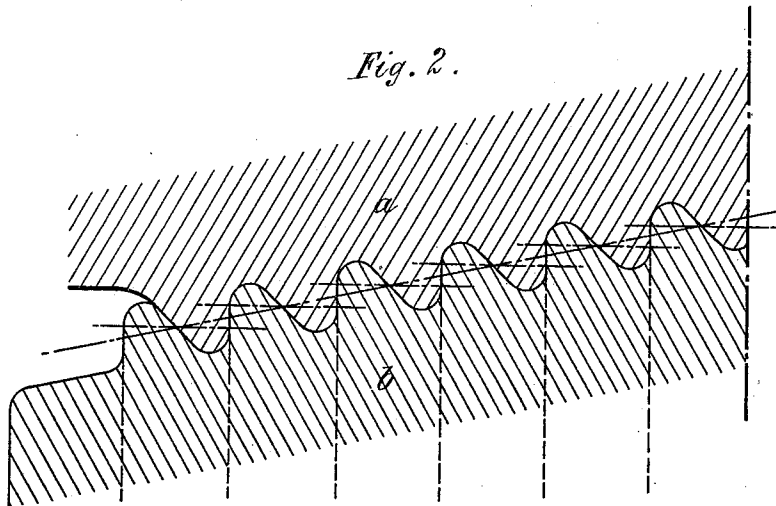


Fig. 2.



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By his Attorneys,
Paldwin, Davidson & Thght

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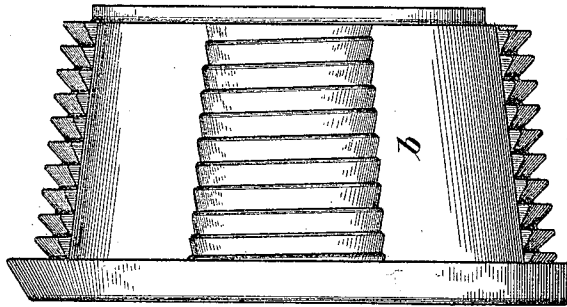


Fig. 4.

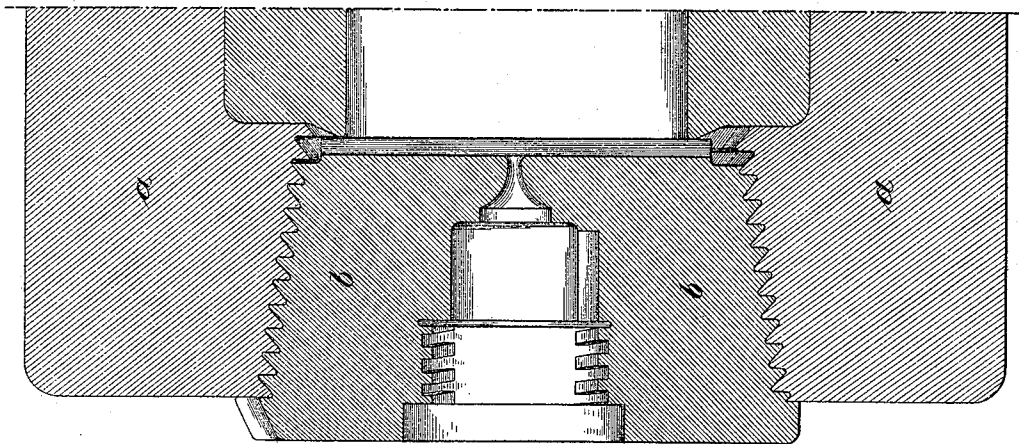


Fig. 3.

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Inventor,
Axel Welin,
By his Attorneys
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UNITED STATES PATENT OFFICE.

AXEL WELIN, OF LONDON, ENGLAND.

SCREW-THREADED BREECH-BLOCK.

SPECIFICATION forming part of Letters Patent No. 552,561, dated January 7, 1896.

Application filed September 16, 1895. Serial No. 562,714. (No model.)

To all whom it may concern:

Be it known that I, AXEL WELIN, engineer, a subject of the King of Sweden and Norway, residing at 9 London Street, in the city of London, England, have invented certain new and useful Improvements in the Breech Mechanism of Guns, of which the following is a specification.

In guns, especially those of the quick-firing type, it is often desirable that the breech-block should be withdrawn by simply swinging it about a pivot. In order to enable this to be done the breech-block has in some cases been made tapered or conical. This method, however, as hitherto carried out has involved the weakening of the divided screws by which the block is secured in the breech, because, owing to the conical form of the breech and block, the slope at the rear of each thread in the gun and the front of each thread on the block is longer than the other slope and the difference between these lengths represents metal which presents no resistance to a shearing strain. In other words, if the breech-block were blown out the total width of the metal shorn away from the top of the threads of the screws in the gun and on the block would be less than the length of the threaded part of the breech-block. According to this invention I obviate this objection by modifying the screws, causing the rear face of each thread in the gun and the front face of each thread on the block in place of being sloped, as heretofore, to be generated by a line at right angles to the axis of the gun and block, the other faces being sloped, as before.

In the accompanying drawings, Figure 1 is a diagram showing the ordinary arrangement of screw-threads in tapered breech-blocks. Fig. 2 is a diagram showing the arrangement

of screw-threads in a tapered breech-block according to my invention. Fig. 3 shows a longitudinal central section through the breech end of a gun and a breech-block with my improvements applied. Fig. 4 shows a side elevation of my improved breech-block.

a indicates the gun, and *b* the breech-block. A breech-block having the screw-threads arranged, as indicated in the diagram Fig. 1, could be blown out by shearing away a length of metal equal to $BC+DE+FG+HI$, which is less than that of the threaded part of the breech-block by $AB+CD+EF+GH+IJ$, whereas in the arrangement shown in Fig. 2 the breech-block could only be blown out by shearing away a length of metal equal to the length of the threaded part of the breech-block.

It will be obvious that by simply making the one slope steeper than the other part of the advantage gained by this invention would be attained.

What I claim is—

1. The combination of a tapering breech block, a corresponding breech opening, a divided screw on the block such that the front face of each of the threads makes a greater angle with the axis of the block than the rear face, and a corresponding screw in the breech.

2. The combination of a tapering breech block, a corresponding breech opening, a divided screw on the block having the front face of each of its threads at right angles to the axis of the block and the rear face inclined thereto and a corresponding screw in the breech.

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Witnesses:

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FREDERICK CARPMAEL.