

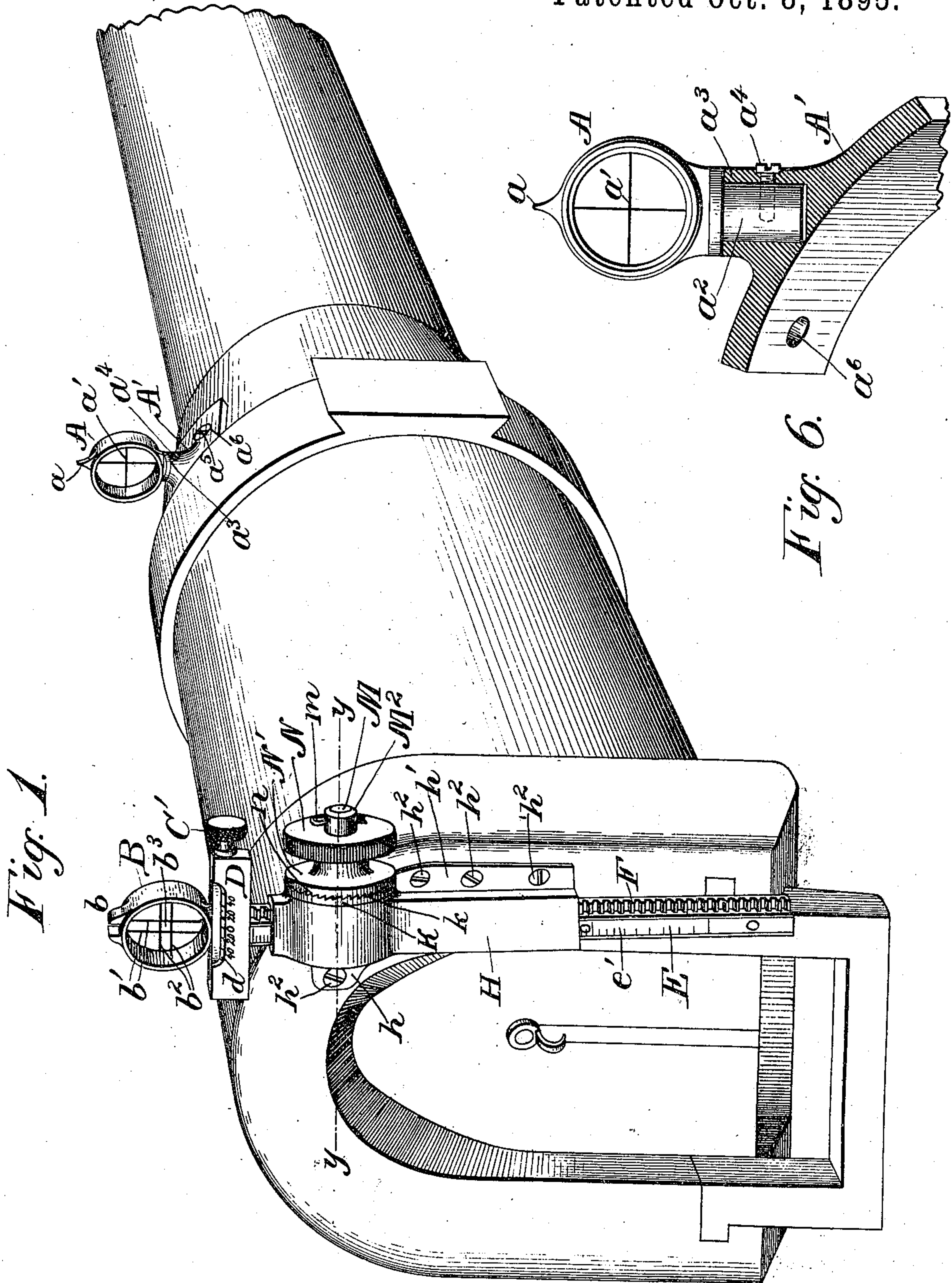
(No Model.)

2 Sheets—Sheet 1.

W. H. DRIGGS.  
SIGHT FOR ORDNANCE.

No. 547,423.

Patented Oct. 8, 1895.



Witnesses  
Rey C. Bowen  
John E. Wilson

Inventor  
William H. Driggs,  
By Whitman & Wilkinson,  
Attorneys.



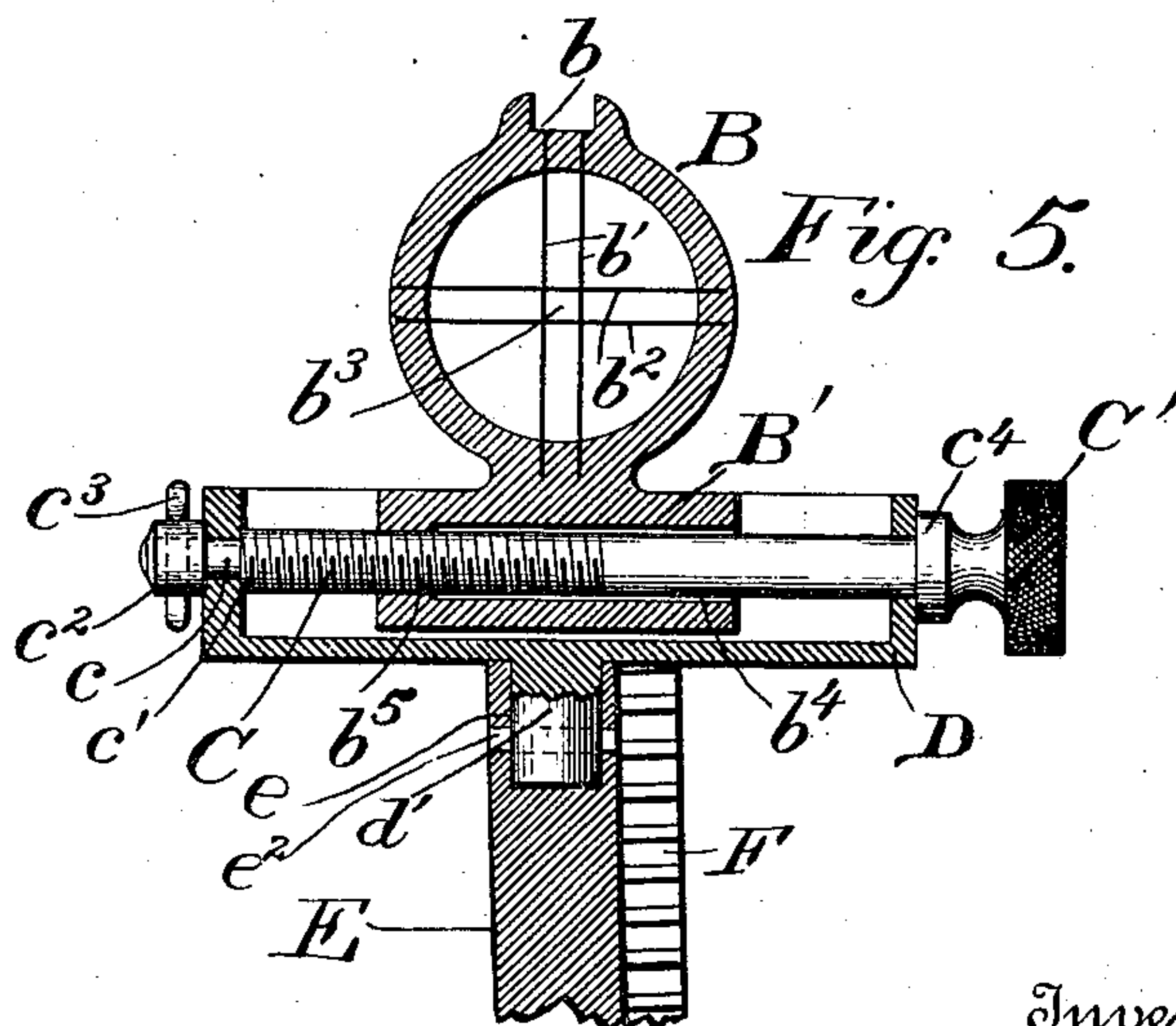
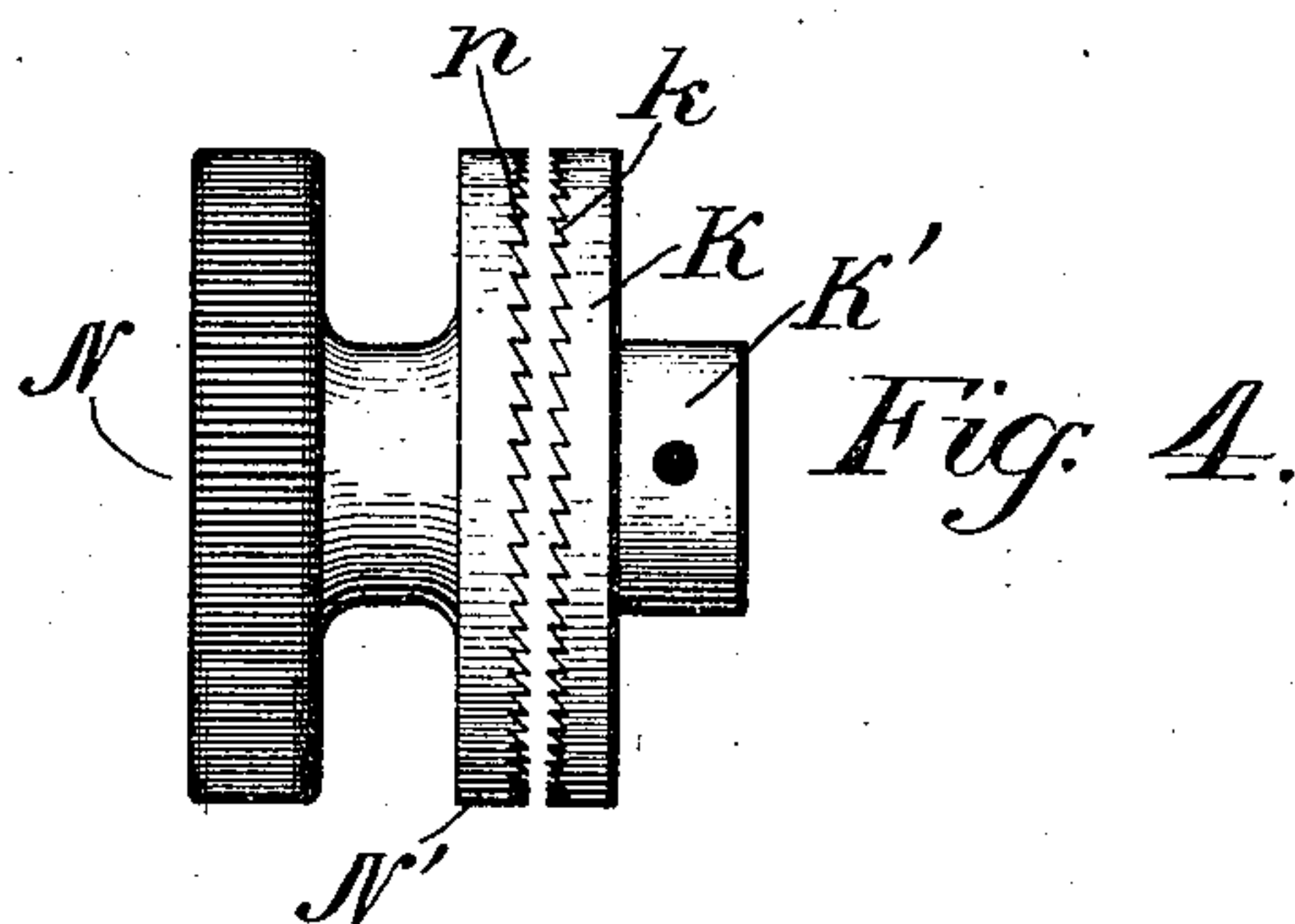
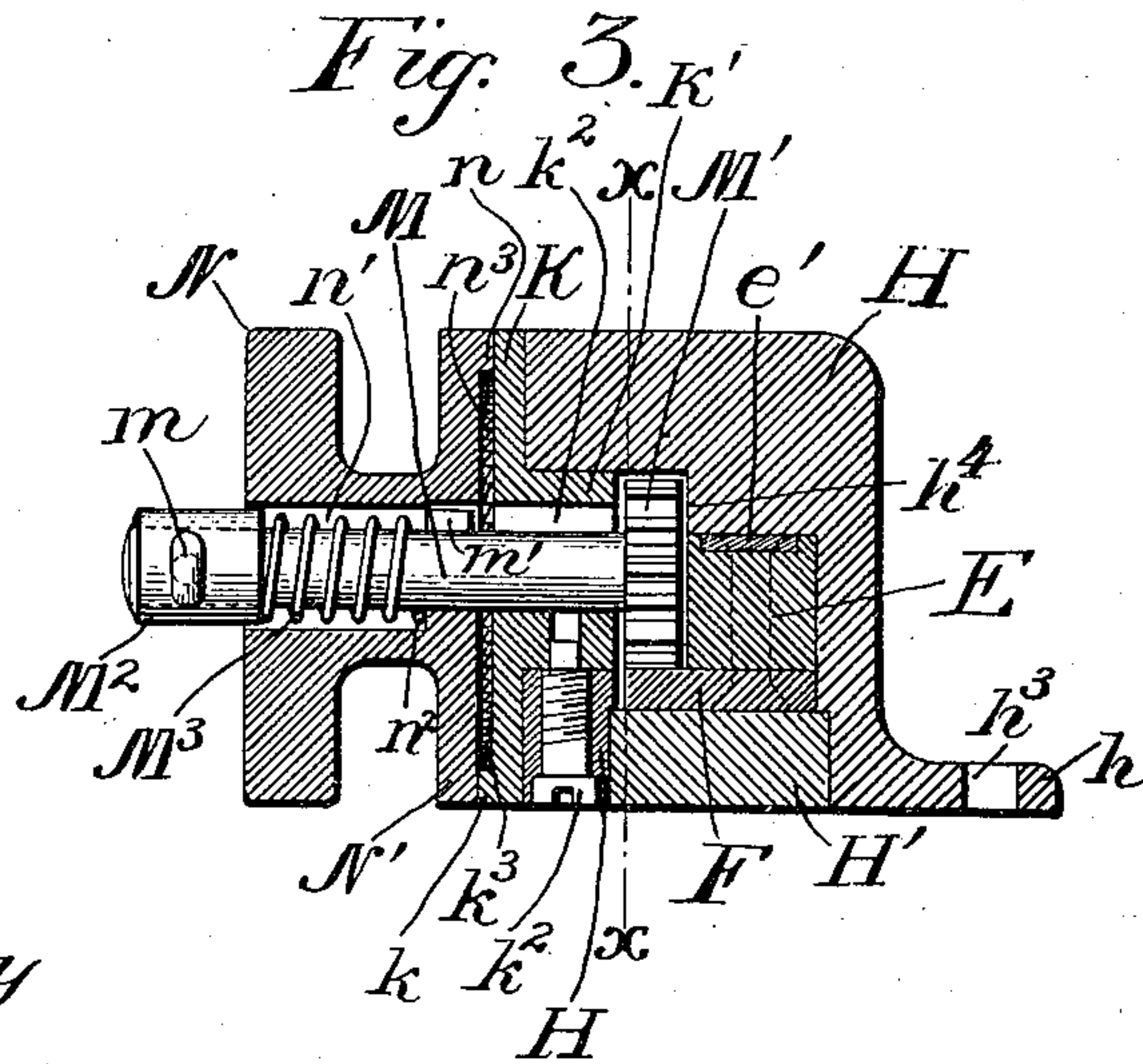
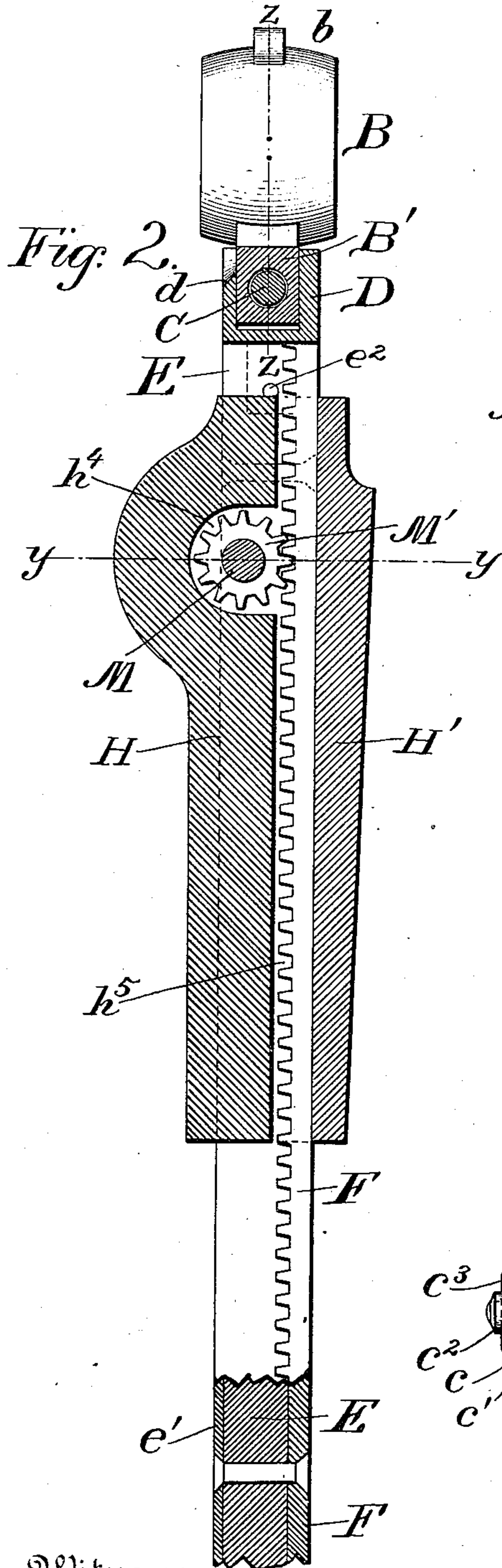
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*John L. Wilson*

Inventor  
*William H. Driggs,*  
By *Whitman & Wilkinson,*  
Attorneys



# UNITED STATES PATENT OFFICE.

WILLIAM H. DRIGGS, OF THE UNITED STATES NAVY.

## SIGHT FOR ORDNANCE.

SPECIFICATION forming part of Letters Patent No. 547,423, dated October 8, 1895.

Application filed February 8, 1893. Serial No. 461,493. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM HALE DRIGGS, lieutenant United States Navy, a citizen of the United States, stationed at Washington, in the District of Columbia, have invented certain new and useful Improvements in Sights for Guns; 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 appertains to make and use the same.

My invention relates to improvements in sights for guns; and it consists of certain novel features hereinafter described and claimed. Reference is had to the accompanying drawings, in which the same parts are indicated by the same letters throughout the several views.

Figure 1 represents a perspective view of a gun detached from its mount and provided with my improved sights. Fig. 2 represents a section along the line  $xx$  of Fig. 3. Fig. 3 represents a section along the line  $yy$  of Fig. 1. Fig. 4 represents a side elevation of the two parts of the elevating-wheel as detached from the device. Fig. 5 represents a section along the line  $zz$  of Fig. 2; and Fig. 6 represents a sectional view of the socket-plate for the front sight, and illustrates the method of attaching the front sight to the gun.

A represents the front sight, provided with a point  $a$  for coarse sighting, cross-wires  $a'$  for fine sighting, and a tenon  $a^2$ , fitting in the socket  $a^3$  of the socket-plate  $A'$ , attached to the gun forward of the reinforce-band. The front sight  $A$  is held in its socket by means of a set-screw  $a^4$ , and the socket-plate is secured to the gun by screws  $a^5$ , passing through screw-holes  $a^6$ . The rear sight  $B$  is provided with a groove  $b$  in the upper part thereof to use in connection with the point  $a$  for rough sighting, while for fine sighting the vertical wires  $b'$  and horizontal wires  $b^2$  form in their center a parallelogram  $b^3$ , the center of which should be made to coincide with the intersection of the cross-wires  $a'$  on the front sight. In this manner an exceedingly-accurate adjustment of the line of sight is obtainable.

To allow for drift, velocity of the wind, velocity of the target or of the gun platform, or of both, the eyepiece  $B$  is arranged to be moved laterally. This is accomplished as follows: A fixed frame  $D$  is attached to the

upper end of the sight-bar  $E$  at right angles to the axis of the gun. Across this frame  $D$  the screw  $C$  is revolvably mounted and is turned by a milled head  $C'$ . This screw is held against longitudinal movement in the frame by the shoulder  $c'$ , at one side of the turned-down portion  $c$ , and by the collar  $c^2$ , held in place by the split pin  $c^3$ , as shown in Fig. 5. The shoulder  $c^4$  also prevents any motion of the screw to the left, as represented in the said figure. The rear sight  $B$  is provided with a bottom lug  $B'$ , adapted to slide in said frame  $D$ , and having a cylindrical aperture  $b^4$  therein, and a female screw  $b^5$ , adapted to engage said screw  $C$ , whereby said rear sight  $B$  is moved to the right or left for the purposes already described.

To allow for the range of the target, the rear sight  $B$  is raised or lowered by means of the rack  $F$ , attached to the sight-bar  $E$ , and the pinion  $M'$ , operated by the elevating-wheel  $N$ . The said sight-bar, rack, pinion, and elevating-wheel are mounted in a frame  $H$ , attached by means of the lips  $h$  and  $h'$  and the screws  $h^2$  to the breech of the gun. The sight-bar  $E$  carries a graduated scale  $e'$ , indicative of the range in degrees or yards, and the frame  $D$ , rigidly attached to the upper part of said bar, carries a scale  $d$  for indicating the lateral deviation.

For convenience of manufacture the frame  $H$  is closed at one side by a plate  $H'$ , and it is scored out at  $h^4$  and  $h^5$  to receive the pinion  $M'$  and rack  $F$ , as shown in Fig. 2. The serrated disk  $K$  is let into the side of the frame  $H$ , as shown in Fig. 3, and is held rigidly therein by means of a set-screw  $k^2$ , projecting into the hollow cylinder  $K'$  on the back of the serrated disk. The face of the said disk is provided with a number of longitudinal teeth  $k$ , projecting at right angles to the face of said disk and leaving a recess  $k^3$  between the top of the teeth and the face of the disk. Journaled in the said disk  $K$  is the shaft  $M$ , carrying on its inner end a pinion  $M'$  and on its outer end a sleeve  $m^2$ , held in place by a split pin  $m$ . Mounted over this sleeve and keyed to the said shaft by means of the key  $m'$  is the wheel  $N$ , provided with a hollow central chamber  $n'$  and an inner shoulder  $n^2$ . Between this inner shoulder and the inner face of the sleeve  $M^2$  the spring  $M^3$  is



compressed. The inner flange  $N'$  of this wheel  $N$  is provided with a plurality of teeth  $n$ , projecting axially and adapted to engage the teeth  $k$ . These teeth project beyond the inner face of the said flange  $N'$ , so as to leave a space  $n^3$ , as shown in Fig. 3.

In order to raise or lower the sight-bar, the wheel  $N$  is drawn out against the spring until the teeth  $n$  are disengaged from the teeth  $k$ , and the sight-bar is raised or lowered to the proper elevation by means of the wheel  $N$  and pinion  $M'$ . When the desired elevation is seen on the scale  $e'$  above the top of frame  $H$ , the wheel  $N$  is let go and the teeth  $n$  are brought by the spring  $M^3$  into engagement with the teeth  $k$  and the sight-bar is locked in the proper position. In this way the rear sight is readily adjusted both as to elevation and to lateral deviation, and is firmly held in position in spite of the shocks and jars incident to training or firing the gun.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. The combination with a fixed front sight  $A$  provided with point  $a$  and cross hairs  $a'$  of a movable and adjustable rear sight provided with notch and cross hairs, substantially as and for the purposes described.

2. The combination, with a fixed front sight consisting of a ring with cross hairs intersecting in the center thereof, of a movable and adjustable rear sight consisting of a similar ring provided with two pairs of cross hairs parallel to those of the first sight, and so intersecting as to form a parallelogram in the center of said ring; substantially as and for the purposes described.

3. The combination, with a fixed front sight consisting of a ring with cross hairs intersecting in the center thereof for fine sighting and a point above said ring for coarse sighting,

of a movable and adjustable rear sight consisting of a similar ring provided with two pairs of cross hairs parallel to those of the first sight, and so intersecting as to form a parallelogram in the center of said ring for use in fine sighting, and a notch above said ring for use in coarse sighting, substantially as described.

4. In mechanism for adjusting the movable sights of guns, the combination with a frame attached to or moving with the gun and a serrated disk rigidly attached to said frame, of a shaft journaled in said frame, a pinion mounted on said shaft, a thumb wheel movable axially on said shaft but held against turning thereon, a dentated flange on said thumb wheel adapted to engage said serrated disk, a spring normally pressing said dentated flange against said serrated disk, a sight bar moving vertically in said frame, and a rack attached to or integral with said sight bar and engaging said pinion, substantially as and for the purposes described.

5. In a rear sight for guns, the annular piece  $B$ , provided with pairs of cross wires  $b'$  and  $b^2$  intersecting in approximately the center of the said annular piece, substantially as and for the purposes described.

6. In a rear sight for guns, the combination of the annular piece  $B$  provided with groove  $b$  at the upper edge thereof, and cross wires  $b'$  and  $b^2$  intersecting in approximately the center of the said annular piece, with means for moving said annular piece vertically and laterally, substantially as and for the purposes described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM H. DRIGGS.

Witnesses:

JOHN C. WILSON,

PERCY C. BOWEN.