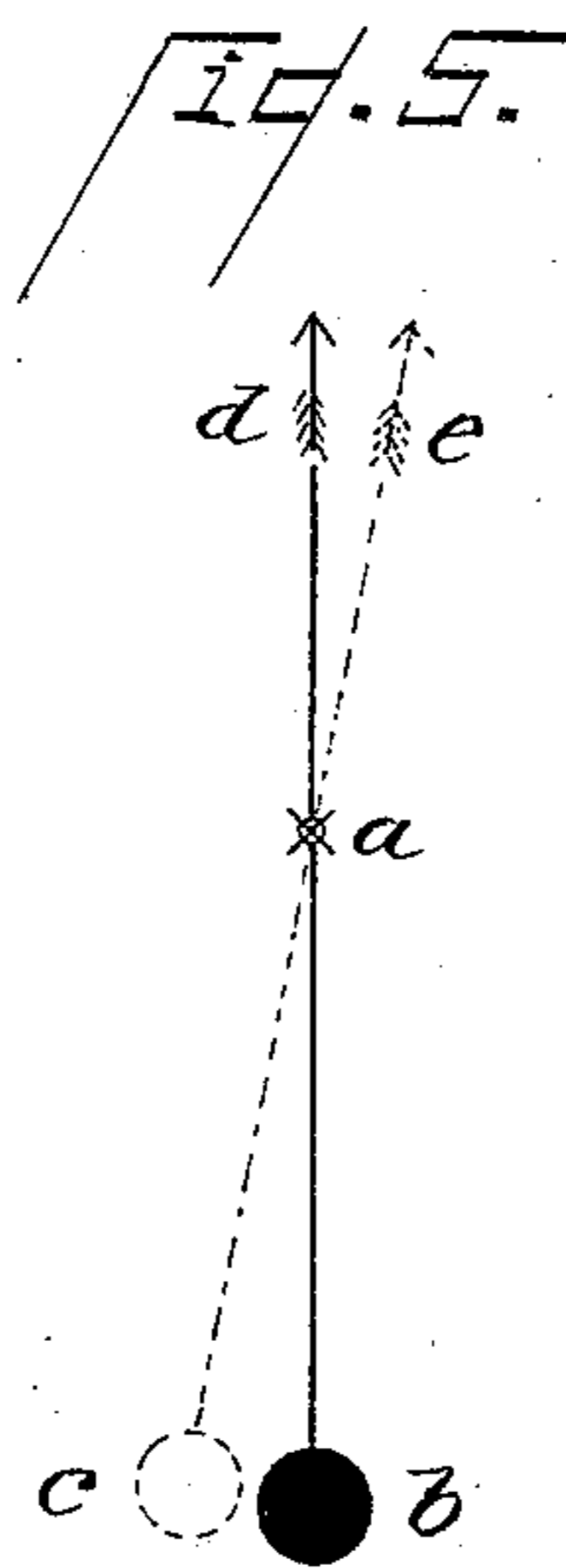
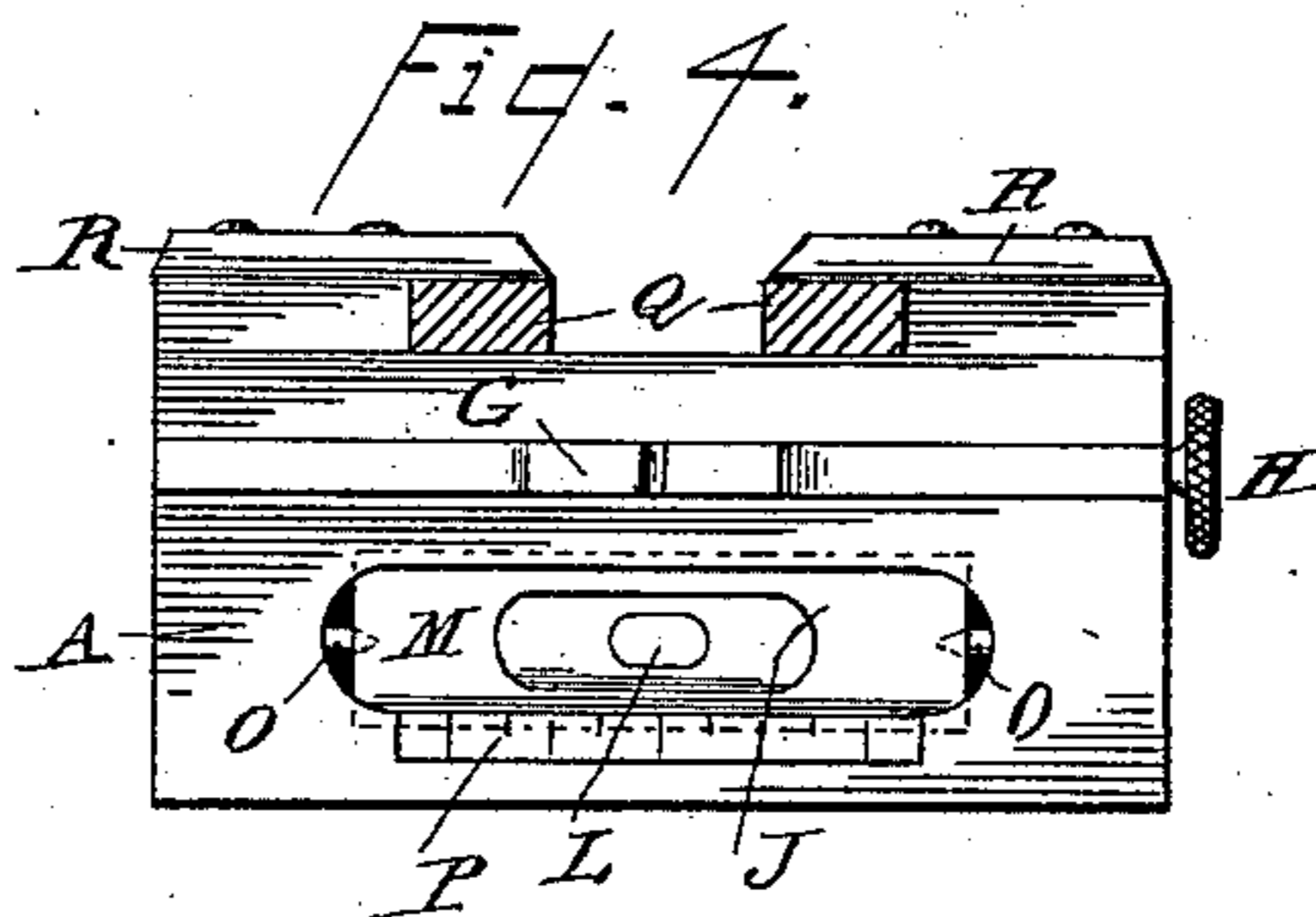
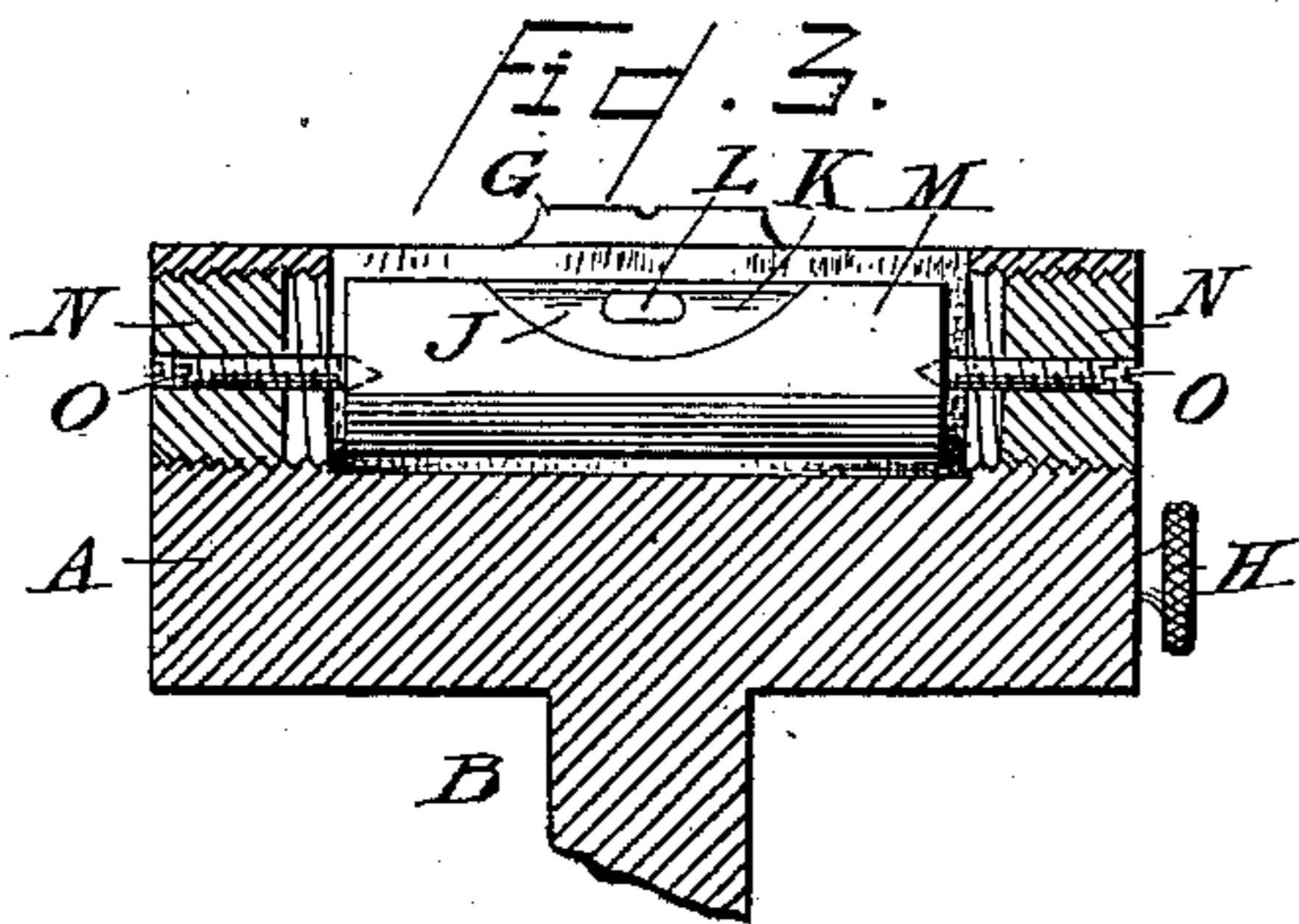
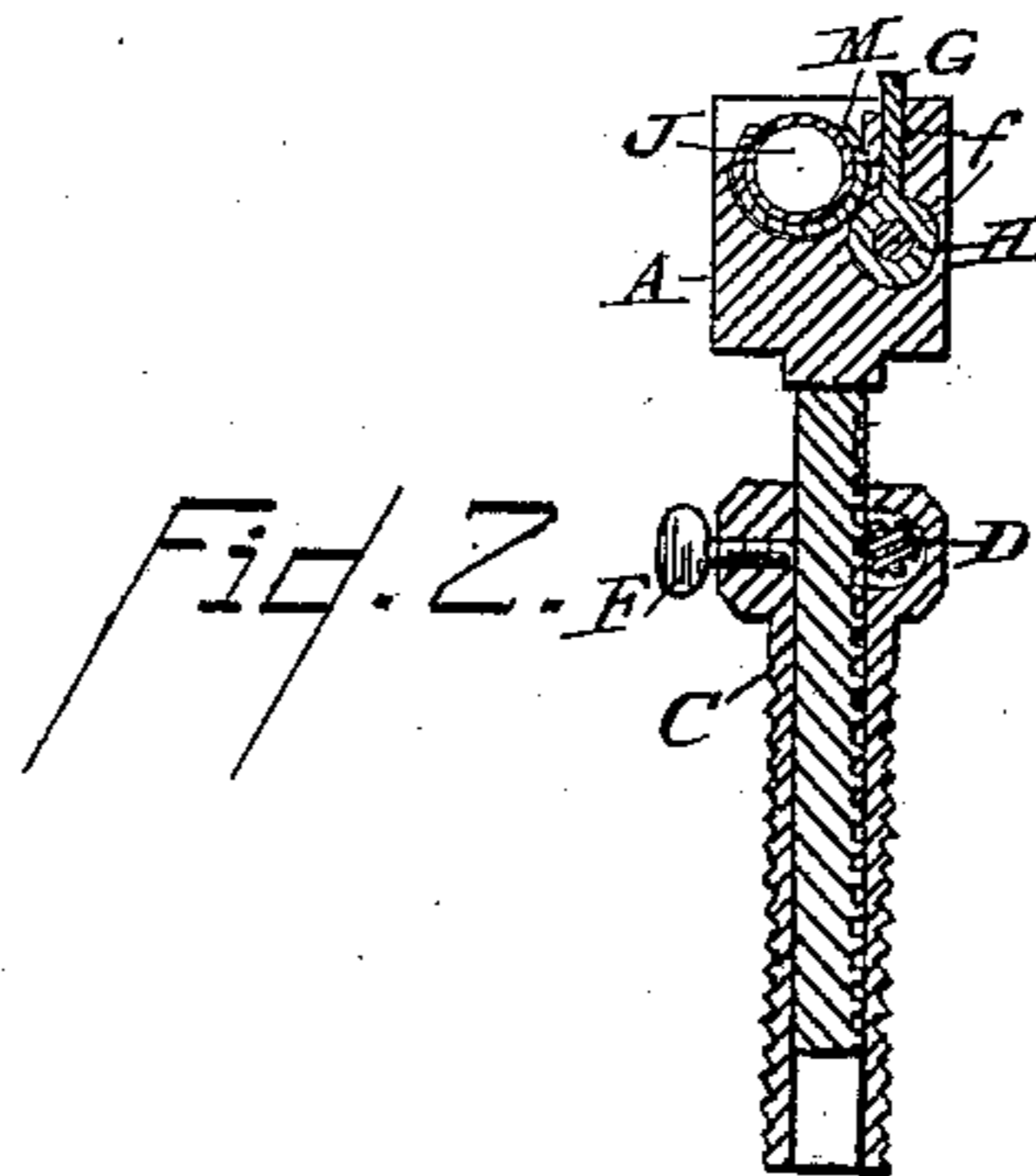
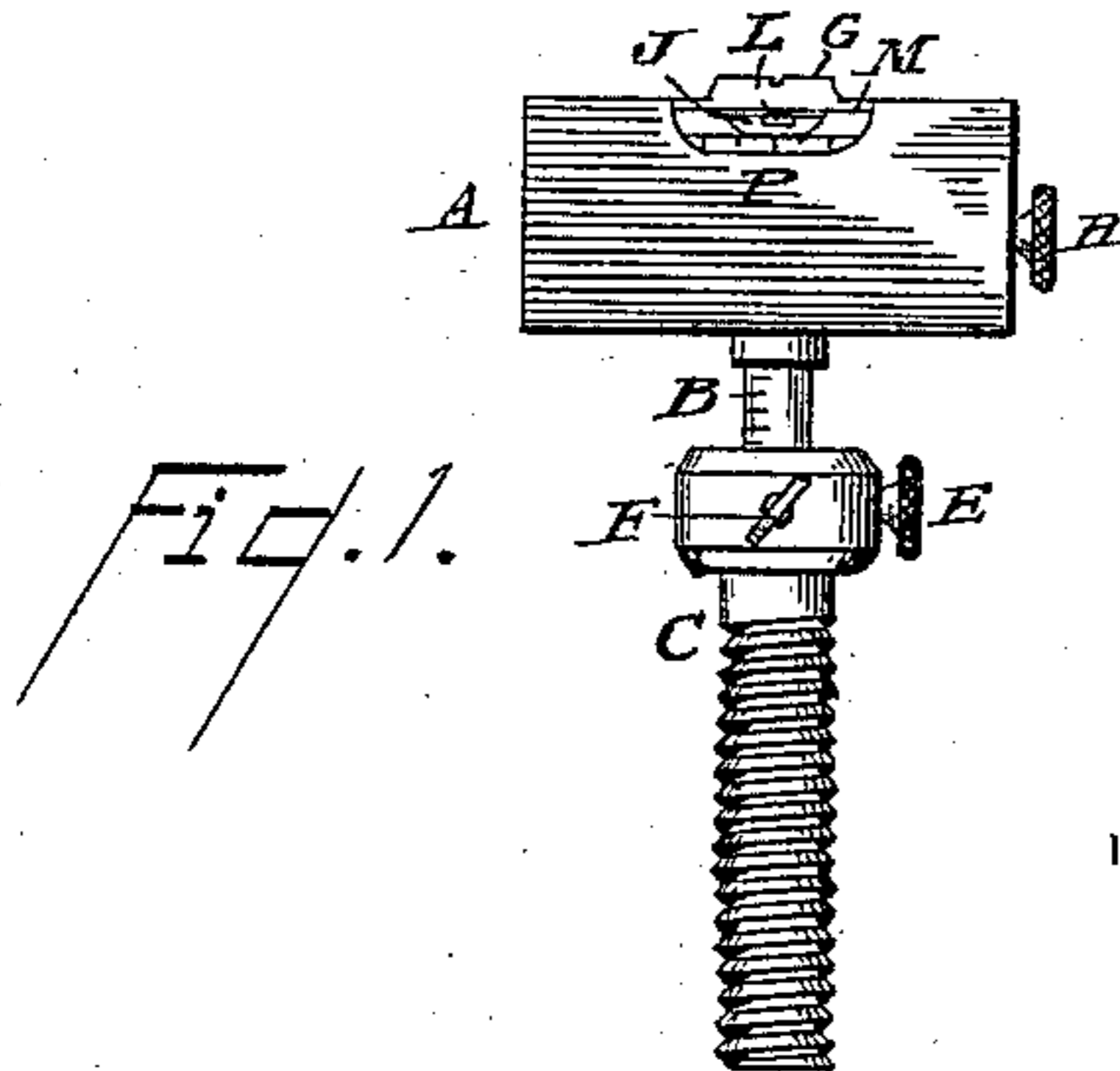


(No Model.)

R. GASKIN, Sr.
SIGHT FOR FIRE ARMS.

No. 360,678.

Patented Apr. 5, 1887.



Witnesses
Lewis A. Clark
P. E. Stevens.

Inventor
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UNITED STATES PATENT OFFICE.

ROBERT GASKIN, SR., OF PORTLAND, NEW BRUNSWICK, CANADA.

SIGHT FOR FIRE-ARMS.

SPECIFICATION forming part of Letters Patent No. 360,678, dated April 5, 1887.

Application filed July 17, 1886. Serial No. 298,272. (No model.)

To all whom it may concern:

Be it known that I, ROBERT GASKIN, Sr., a citizen of Canada, residing at the city of Portland, in the county of St. John and Province of New Brunswick, Canada, have invented certain new and useful Improvements in Sights for Fire-Arms; 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.

This invention relates to that class of sights for long-range fire-arms which are placed at the rear end of the arm and provided with means whereby they may be adapted for elevation and windage. It is a commonly-known fact that in firing long distances the bore of the arm is required to be very much elevated to point above the target, while the line of the sights points directly at the target. In common rifled small-arm practice very good results are produced when the target is so far away as to require the gun to point one hundred and twenty-five feet above center, and in long-range cannon practice it is common to elevate to as high an angle as forty-five degrees. Then, if the target were three miles away, the gun would aim three miles above the mark. Now, if in the instance of the small-arms the gunner were to fix his sights with the elevation stated, and then turn his gun on one side and aim the sights at the mark, the bore would be aimed one hundred and twenty-five feet to one side of the mark, and just in proportion as he tips his gun either way from a vertical position will he vary from the mark. Again, it is estimated that if the wind blows across the path of the bullet and moves six feet while the bullet is in the air the bullet will be deflected six feet from a direct line.

Therefore, the object of my invention is, first, to enable the gunner to maintain the bore of his gun exactly in the vertical plane of its sights when firing, and, secondly, to adjust the sight accurately to compensate for windage or drift of the bullet.

To this end my invention consists in the construction and combination of parts forming a sight for fire-arms, hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a rear elevation of my sight. Fig. 2 is a central vertical section of the same. Fig. 3 is an enlarged rear view of the level, showing a portion of the sight-body in transverse vertical section. Fig. 4 is a top view of a modification of my sight adapted to be attached to the raisable bar of the Enfield-rifle sight, and Fig. 5 is a diagram illustrating the principle of operation.

A represents the body of the sight, having a standard, B, which is fitted to slide vertically in a socket, C, that is provided with an external screw-thread, whereby it may be screwed vertically into the breech of a rifle or cannon.

D is a pinion journaled in the body A, to engage a rack of teeth in the front face of the standard B, and provided with a head, E, whereby it may be revolved by the thumb and finger to raise or lower the sight.

F is a set-screw passing through the shell of the socket, to bind the standard at any desired point of elevation, so that firing may not jar the sight down out of place.

G represents the sight proper, which is fitted to slide transversely to the gun in a slot in the body A, and is provided with a traversing screw, H, journaled in the body and threaded through the base of the sight, whereby the sight may be adjusted for drift or windage with the finest shade of accuracy. It is graduated with a scale of markings, as shown, whereby the gunner may know the exact position of the center of the sight relative to the vertical plane of the bore. The aperture of the sight may be a notch, a circular hole, or of any other form desired.

J represents a spirit-level, which is the main characteristic of my invention. This level consists of the usual glass tube, K, so nearly filled with alcohol as to leave only a small bubble, L, of air, and incased in a metallic tube, M, which is open at one side to show the glass tube and bubble. The body A is bored through, forming a recess to receive the tube M parallel with the slot for the sight, and is cut away at the upper side, along the middle, to expose the level.

N N are plugs screwed into the bore to close the ends thereof. Through these plugs pointed screws O are threaded, upon which the tube M is pivoted for two purposes. The first is in

order that the level may be adjusted with its bubble exactly at the center of the scale P when the bore of the gun is in the vertical plane of the said center, and the second is in order that when not in use the tube M may be inverted on the said pivots to protect the glass both from dust and the liability of being broken. The level and the scale P combined serve another purpose. The gunner—as on picket duty, for instance—may be suddenly required to shoot in an unexpected direction relative to the wind, not having time to set the sight for drift. In that case he may rock his gun to the side toward the wind until the bubble of the level reaches a certain mark of the scale P, with which practice has familiarized him, thus giving the bore of the gun the lateral deflection required, on the principle illustrated at Fig. 5, in which *a b* represent the normal vertical plane of the sights *a* and bore *b*, and the arrow *d* represents the line to the target. If the wind be from the right, the bore at the rear end of the barrel carried to *c* will start the bullet in the direction *e*, to be brought back to the plane *a d* by the wind. This angle of divergence *d a e* is very much exaggerated, for an extreme illustration. In the modification shown at Fig. 4 the principle of construction is in all respects the same as that already described, excepting that the socket C and standard B are dispensed with, and the body A is vertically slotted on its front face to receive the vertical bars Q of the Enfield-rifle sight, and plates R are secured upon the body A by screws, to project over the bars Q, forming frictional binders, whereby the sight will be held at any height upon the said bars where slid up or down by hand. To adapt this sight for use upon any particular style of cannon or upon any particular style of small-arms may be readily done by the machinist or gunsmith.

It is evident that the socket C might be fitted upon the breech of the gun, to be fastened by two or more screws.

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

1. The combination, in a sight for fire-arms, of a socket adapted to be secured to the rear portion of a gun, a standard for the sight, fitted to slide vertically in the said socket, and provided with a toothed rack in one of its vertical sides, a pinion journaled in the socket to engage the said rack, and a set-screw in the socket to bind the said standard, substantially as shown and described.

2. The combination of a transversely slotted and recessed body-piece, a sight fitted to traverse in the said slot, and a spirit-level located in the said recess parallel with the slot, substantially as shown and described.

3. The combination, with a sight having a recessed body, of a spirit-level incased in a tube open at one side and journaled in the said recess upon pivots, substantially as shown and described, whereby the level may be inverted, as set forth.

4. The combination, with a sight having a recessed body, of a spirit-level incased in a tube open at one side and provided with central pivot-holes at its ends, and two pointed screws in the ends of the recess fitted as pivots for the said tube, substantially as shown and described, whereby the tube may be transversely adjusted, as set forth.

5. The combination of the transversely bored and slotted body A, the sight G, fitted to the slot, the level J, loosely fitting the said bore, the plugs N, screwed into the ends of the bore, and the pointed screws O, fitted through the said plugs as pivots for the level, substantially as shown and described.

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

ROBERT GASKIN, SR.

Witnesses:

C. GILLESPIE,
GEO. F. CALKIN.