

A. V. D. Westervelt,

Calipers.

No. 61,902.

Patented Feb. 5. 1867.

Fig. 1.

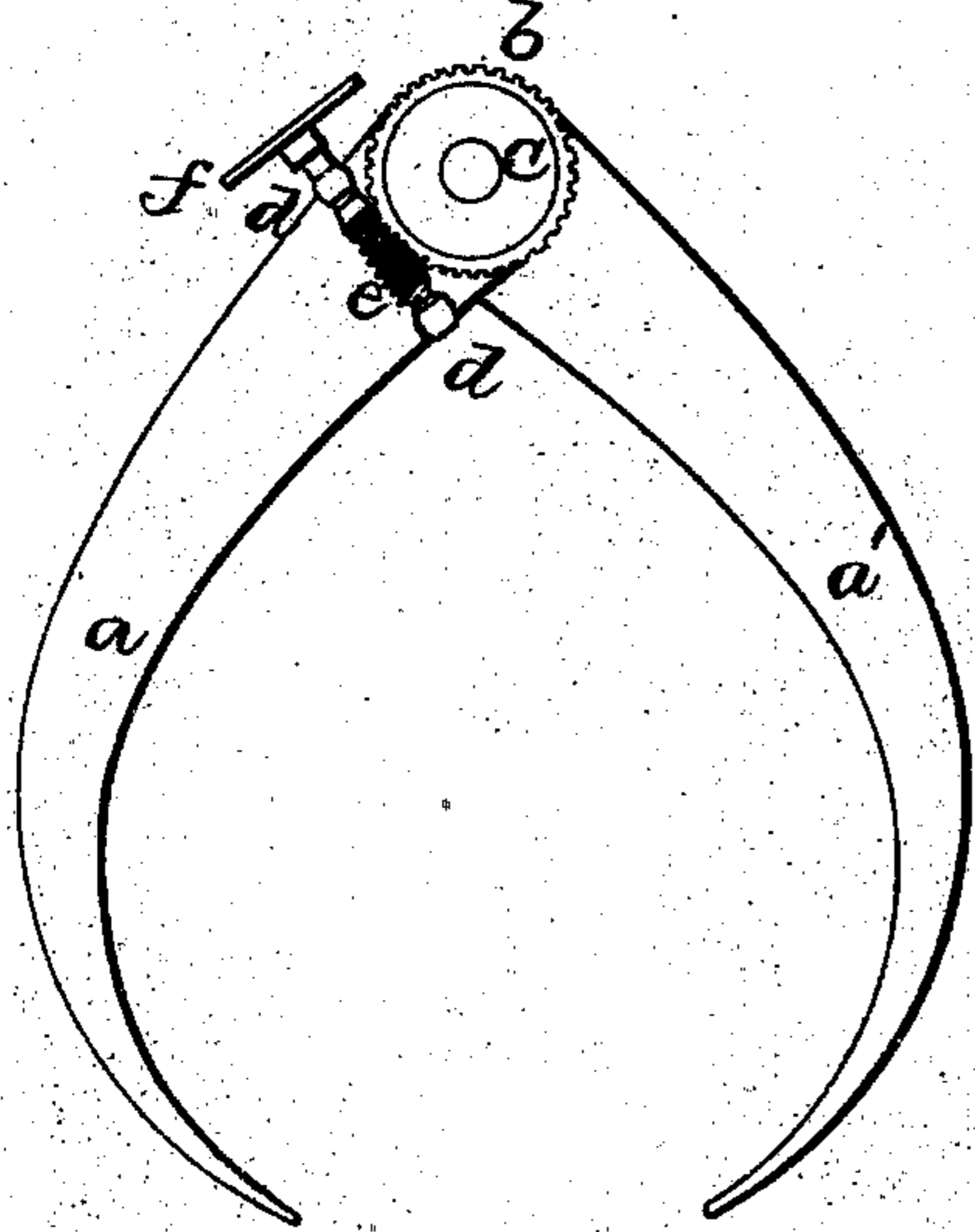


Fig. 2.



Fig. 3.

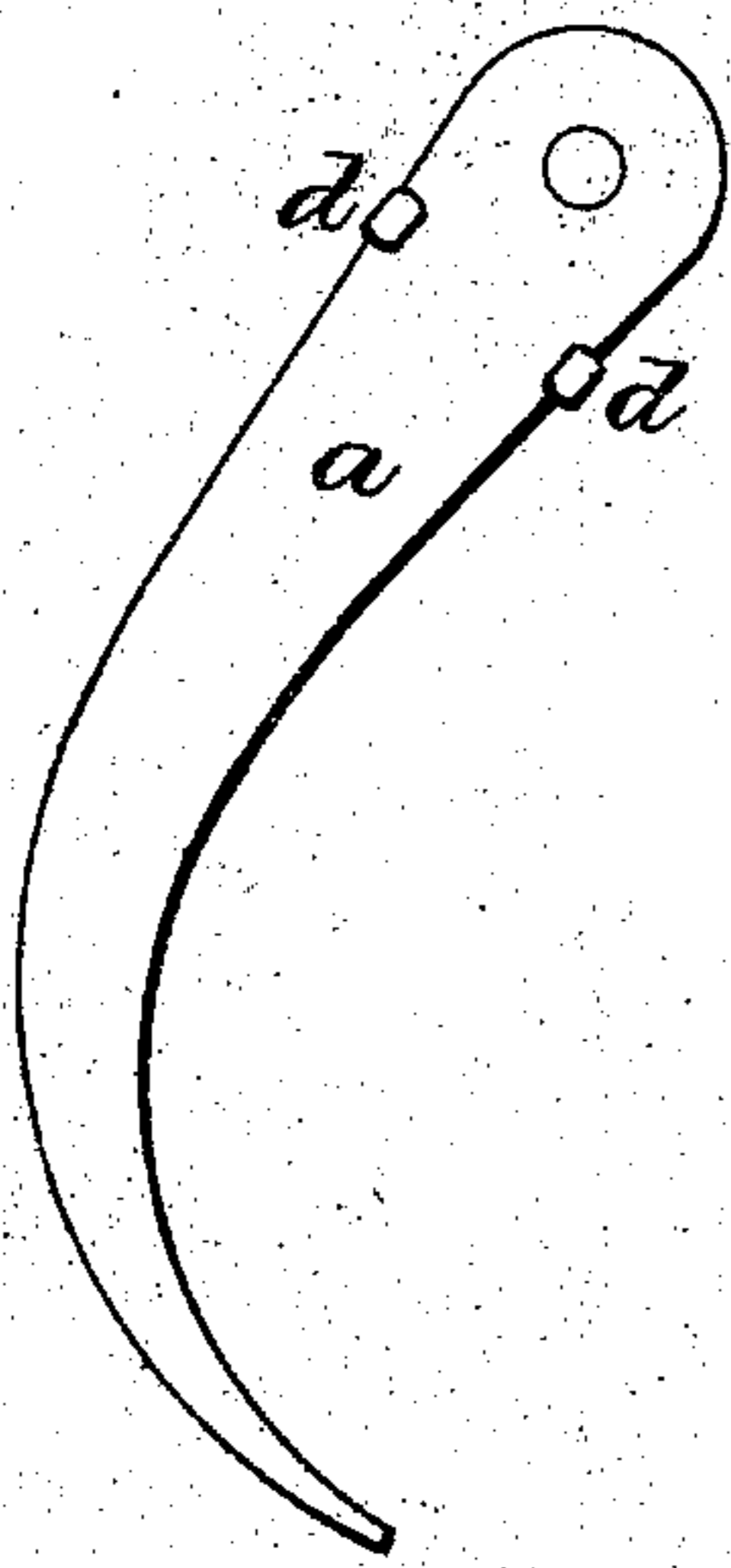


Fig. 4.

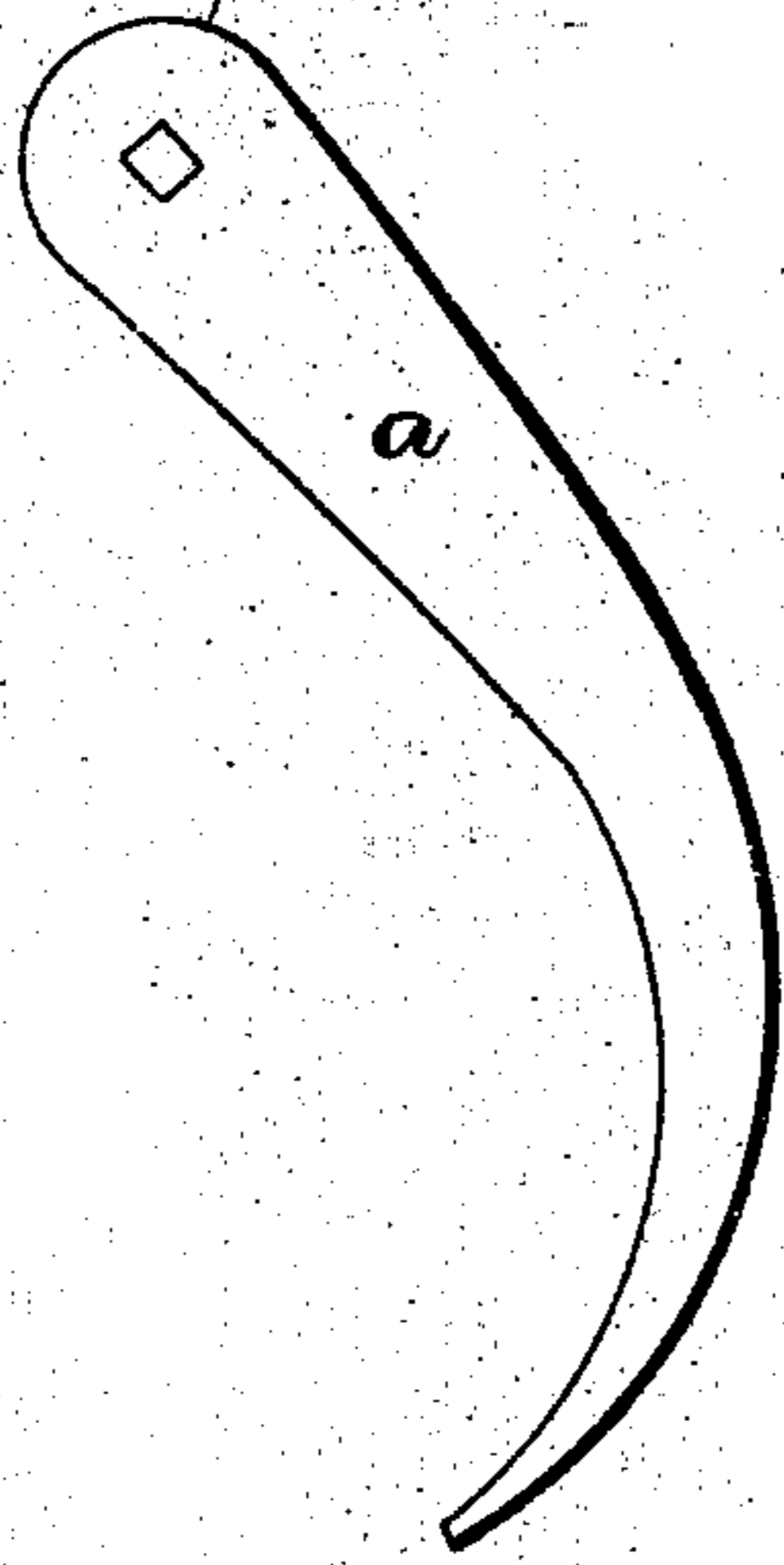
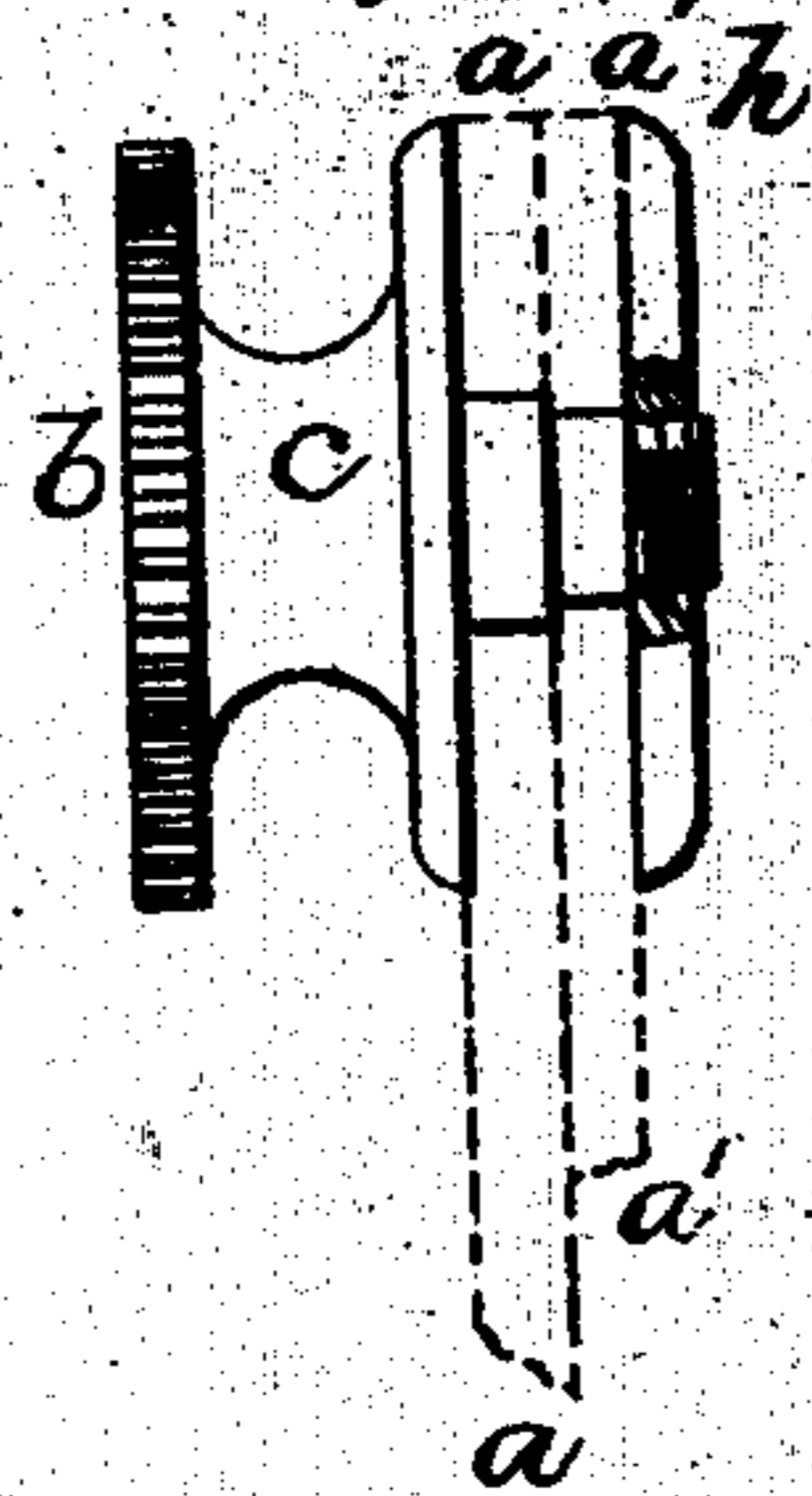


Fig. 5.



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ANDREW V. D. WESTERVELT, OF NEW BRUNSWICK, NEW JERSEY, ASSIGNOR
TO HIMSELF, J. W. WESTERVELT, AND H. SMITH, JR.

Letters Patent No. 61,902, dated February 5, 1867.

IMPROVEMENT IN CALIPERS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, ANDREW V. D. WESTERVELT, of New Brunswick, in the county of Middlesex, and State of New Jersey, have invented a new and useful Improvement in Calipers and Dividers; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a pair of calipers having my improvement attached.

Figure 2 is another view of the same.

Figures 3 and 4 are views of the legs of the calipers separated.

Figure 5 is a view of a portion of the calipers partially in section, and enlarged in the scale.

Similar letters of reference indicate like parts.

The nature of this invention consists in attaching a worm and worm-wheel to a pair of calipers, dividers, or compasses, for the purpose of opening and closing the legs and graduating them exactly in making measurements of either internal or external work. The legs are fixed at any point by the worm-wheel, and the measurement is carried with certainty. The worm and worm-wheel are placed near the joint of the legs, where they are entirely out of the way in handling and taking measurements.

The drawings (figs. 1 and 2) represent a pair of calipers, of which $a a'$ are the legs, joined by the pivot c . On one end of the pivot c is affixed a small spur-wheel, b , which engages in a worm, e , that is mounted upon two little standards $d d$, fastened on the outside of one of the legs, a . The shaft of the worm e projects through one of the standards d , and on the extreme end of it is placed a milled disk or burr, f , for turning with the thumb and finger. The leg a , on which the worm e is mounted, turns freely on the pivot c , but the leg a' is fitted on a square hub on the pivot to prevent it from turning thereon, and it is secured by a flat binding screw-nut, h , on the end of the pivot, as shown at fig. 5.

The operation of this device is obvious: By turning the worm e around by the burr f , the worm-wheel b will receive rotary motion, which will open or close the legs of the calipers, or compasses to which they may be applied, by a slow and graduated movement, and then the legs will remain stationary at any point when the motion of the worm ceases.

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

1. The pivot c , fitted on one end to the leg a' , forming the bearing for the two legs of the calipers, provided at the other end with the spur-wheel b , operating with the worm e , mounted on leg a , substantially as and for the purpose specified.

2. The leg a , provided with standards d , bearing the worm e and the leg a' to which the pivot c is secured, in combination with the pivot c , to which the wheel b is secured, constructed and operating in the manner and for the purpose specified.

The above specification of my invention signed by me this 29th day of August, 1866.

ANDREW V. D. WESTERVELT.

Witnesses:

WM. F. McNAMARA,

ALEX. F. ROBERTS.