

T. McDONOUGH.
CALIPERS AND DIVIDERS.

No. 173,802.

Patented Feb. 22, 1876.

Fig. 1.

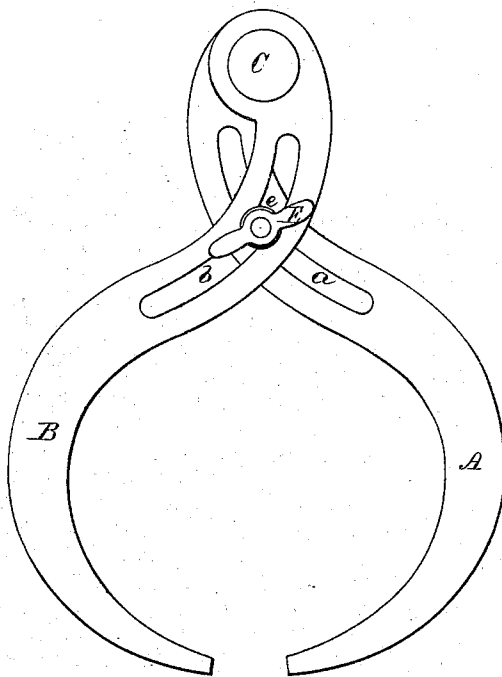


Fig. 2.

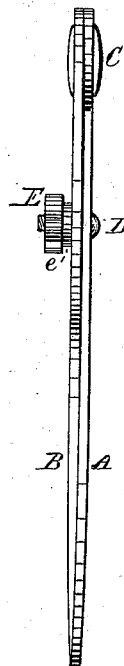
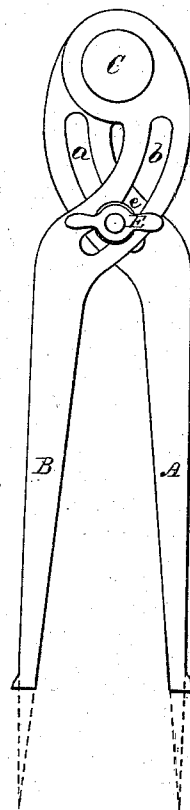


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

THOMAS McDONOUGH, OF MONT CLAIR, NEW JERSEY, ASSIGNOR TO, THE
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IMPROVEMENT IN CALIPERS AND DIVIDERS.

Specification forming part of Letters Patent No. **173,802**, dated February 22, 1876; application filed
January 29, 1876.

To all whom it may concern:

Be it known that I, THOMAS McDONOUGH, of Mont Clair, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Compasses; and I do hereby declare that the following is a full, clear, and exact description thereof, whereby a person skilled in the art can make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Like letters in the figures indicate the same parts.

My invention relates to those instruments known as compasses, caliper-compasses, or calipers, which open upon a joint for the purpose of measuring distances or describing circles with the legs. It has for its object a method of fixing the legs in position and holding them from being moved, when set at any desired opening, in a better manner than has heretofore been used.

My invention consists in constructing the legs so that they shall cross or lap over each other near the joint, and be provided with slots in both legs, which intersect each other, so that a thumb-screw can pass through both to clamp the legs in any desired position.

In the accompanying drawing, Figure 1 is a front view of a pair of calipers for measuring exterior dimensions, having my improvements. Fig. 2 is a side view of the same. Fig. 3 is a front view of a pair of calipers for measuring interior dimensions, furnished with my improved clamping mechanism.

It also shows in dotted lines how the points can be varied so as to form divider-compasses.

A and B are the two legs of the compasses jointed at C in the usual manner. *a* and *b* are slots cut through the legs, crossing each other nearly at right angles in all positions of the legs. This angle may be more acute, but the more nearly square the intersection may be the freer will be the movement of the legs when unclamped. For this purpose the slots are given the curved form shown in the drawing. D is a pivot, provided with a head on one end and a screw-thread on the other. It fits and slides in the slots *a* and *b*. E is a nut of proper form, to be turned with the fingers, fitting the thread on D, so that it draws the legs together, and clamps them when screwed up. Under it is usually placed a washer, *e*.

The operation of my invention is as follows: When the nut E is loosened the legs A and B can be moved freely to any position. The pivot D slides equally in the two slots *a* and *b*, and moves in a line to or from the central joint C. When the nut E is screwed up or tightened it clamps the legs together, and holds them firmly in the desired position.

What I claim as my invention is—

The slots *a* and *b* and sliding clamping-pivot D E, applied to the legs of compasses or calipers, substantially in the manner described.

THOMAS McDONOUGH.

Witnesses:

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