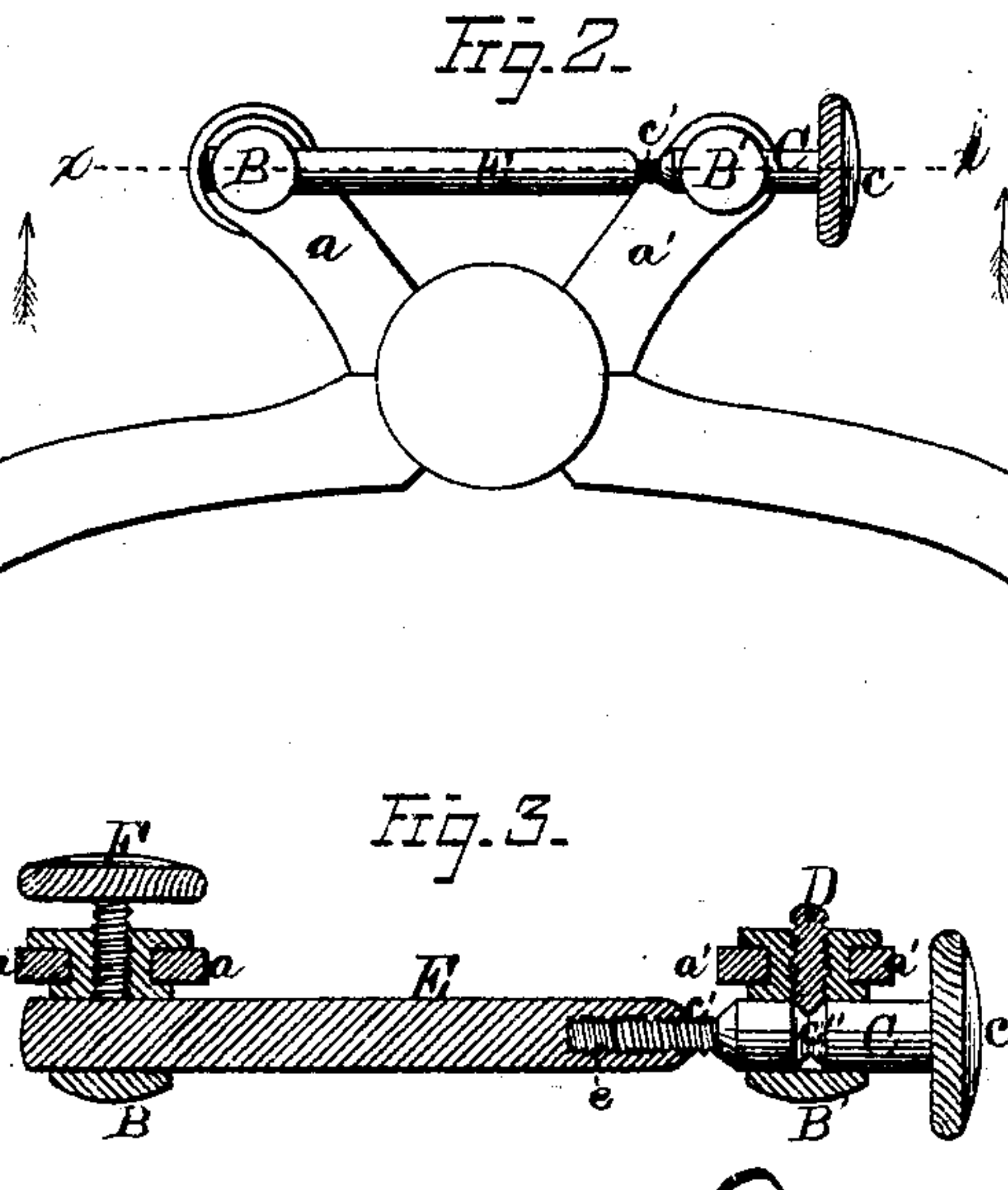
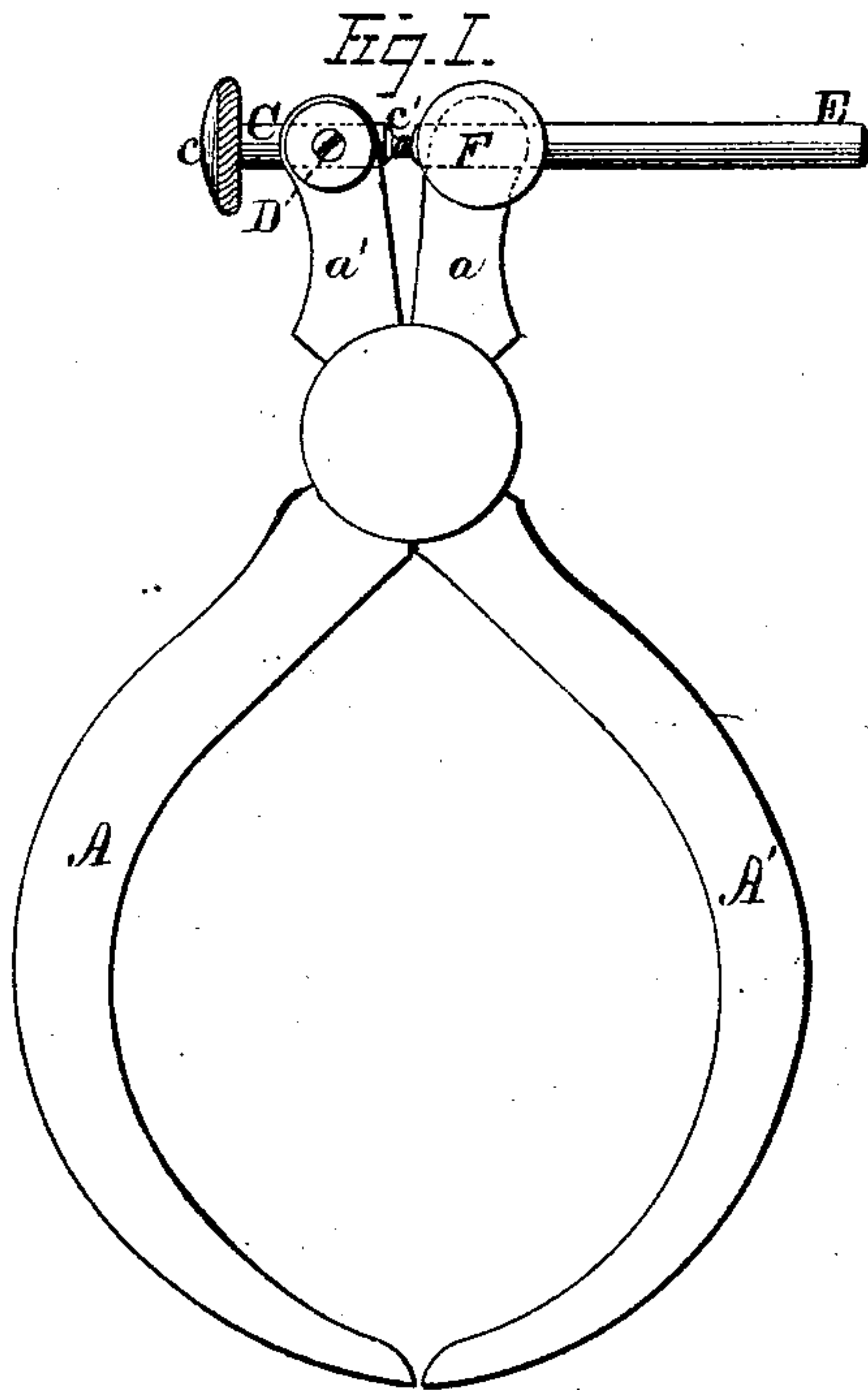


J. W. BARSANTEE.

Calipers.

No. 151,824.

Patented June 9, 1874.



WITNESSES.

Gas. E. Hutchinson.
John R. Young.

INVENTOR.

James W. Barsantee, by
Orville W. Dean, his atty.

UNITED STATES PATENT OFFICE.

JAMES W. BARSANTEE, OF EAST SOMERVILLE, MASSACHUSETTS.

IMPROVEMENT IN CALIPERS.

Specification forming part of Letters Patent No. 151,824, dated June 9, 1874; application filed March 6, 1874.

To all whom it may concern:

Be it known that I, JAMES W. BARSANTEE, of East Somerville, in the county of Middlesex and in the State of Massachusetts, have invented certain new and useful Improvements in Calipers; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is an elevation of one side of my device, showing the arms closed. Fig. 2 is a like view of the opposite side of the same, the arms being opened; and Fig. 3 is an enlarged section upon line *x x* of Fig. 2.

Letters of like name and kind refer to like parts in each of the figures.

The design of my invention is to enable the arms of calipers to be adjusted with accuracy, and, when so adjusted, to be secured in position; and it consists in the peculiar construction of the adjusting and locking devices and their combination with the arms of the calipers, substantially as and for the purpose hereinafter specified.

As the principle involved in my improvement is the same when applied to any of the usual styles of calipers, it will be necessary to show its application to but one style, which, for convenience, is that employed for measuring outside dimensions.

In the annexed drawings, A and A' represent the sections of a pair of calipers pivoted together near their ends, so as to form two long inward-curving legs and two shorter straight arms, *a* and *a'*, which operate in the usual manner.

Journaled loosely with the upper ends of the arms *a* and *a'* are two studs, B and B', which extend laterally outward in parallel lines, and are provided with transverse round openings, that may be caused to coincide by turning said studs within their bearings.

Within one of the studs B is fitted a correspondingly-shaped bar, C, one end of which is reduced in size, and is provided with a fine-pitch screw-thread, *c'*, while upon the opposite outer end of said bar is secured or formed a button-head, *c*. A screw, D, passing inward through the axis of the stud B, has its inner pointed end contained within a corresponding or V-shaped groove, *c''*, which is formed within the surface of the bar C, and insures the longitudinal position of said bar without inter-

fering with the free rotation of the same within said stud.

Within the second stud B is placed a bar, E, which has such shape and dimensions as to cause it to fill the opening *b* as closely as is practicable without interfering with its free longitudinal movement therein, and is provided within its inner end with a threaded opening, *e*, that corresponds to and receives the reduced threaded portion *c'* of the bar C.

A set-screw, F, passing inward through the axis of the stud B, with its inner end bearing against and locking in place the bar E, completes my improvement, the operation of which is as follows:

To set the calipers, the set-screw F is loosened and the legs adjusted to substantially the desired relative positions, after which said set-screw is tightened once more and the adjustment of said legs completed by turning the screw-bar C, so as to draw together or move apart the arms *a* and *a'*.

All longitudinal motion of the screw-bar C within its bearing is prevented by the pointed set-screw fitting within the V-shaped groove, while, by closely fitting the screw *c* within the threaded opening *e*, said bar C and the bar E are rendered longitudinally rigid, so that when the set-screw F is turned firmly to place, the sections of the calipers are firmly secured in relative position, and not liable to change by any ordinary use.

While possessing the advantages named, calipers provided with my attachment can be furnished at a cost but slightly greater than those of ordinary construction.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

In combination with the arms *a* and *a'*, the journaled studs B and B', provided, respectively, with the openings *b* and *b'*, the screw-bar C, *c*, *c'*, and *c''*, the bar E, and the set-screws D and F, said parts being constructed and operating in the manner and for the purpose substantially as specified.

In testimony that I claim the foregoing I have hereunto set my hand this 25th day of February, 1874.

JAMES W. BARSANTEE.

Witnesses:

L. MARRETT,
WM. A. NASON.