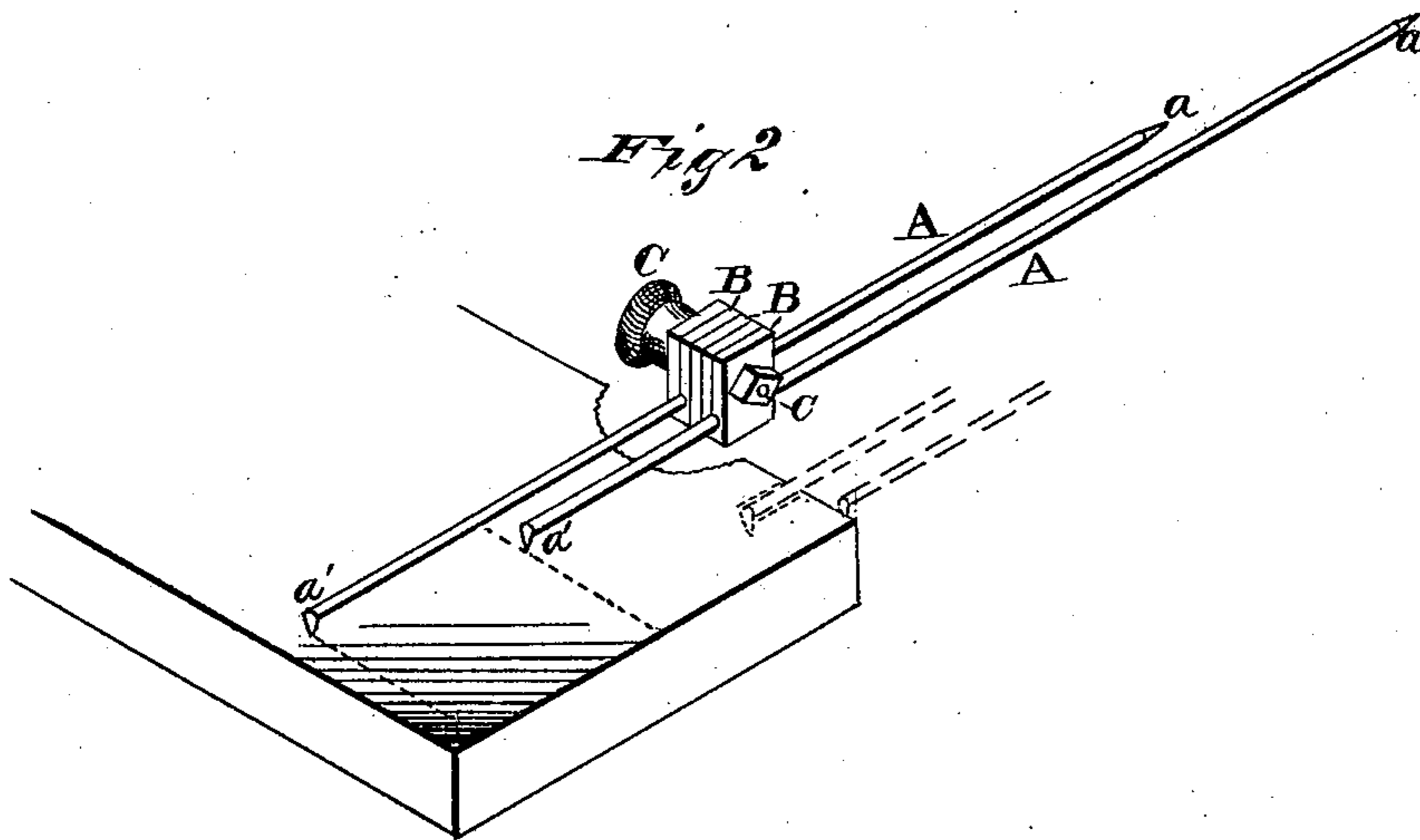
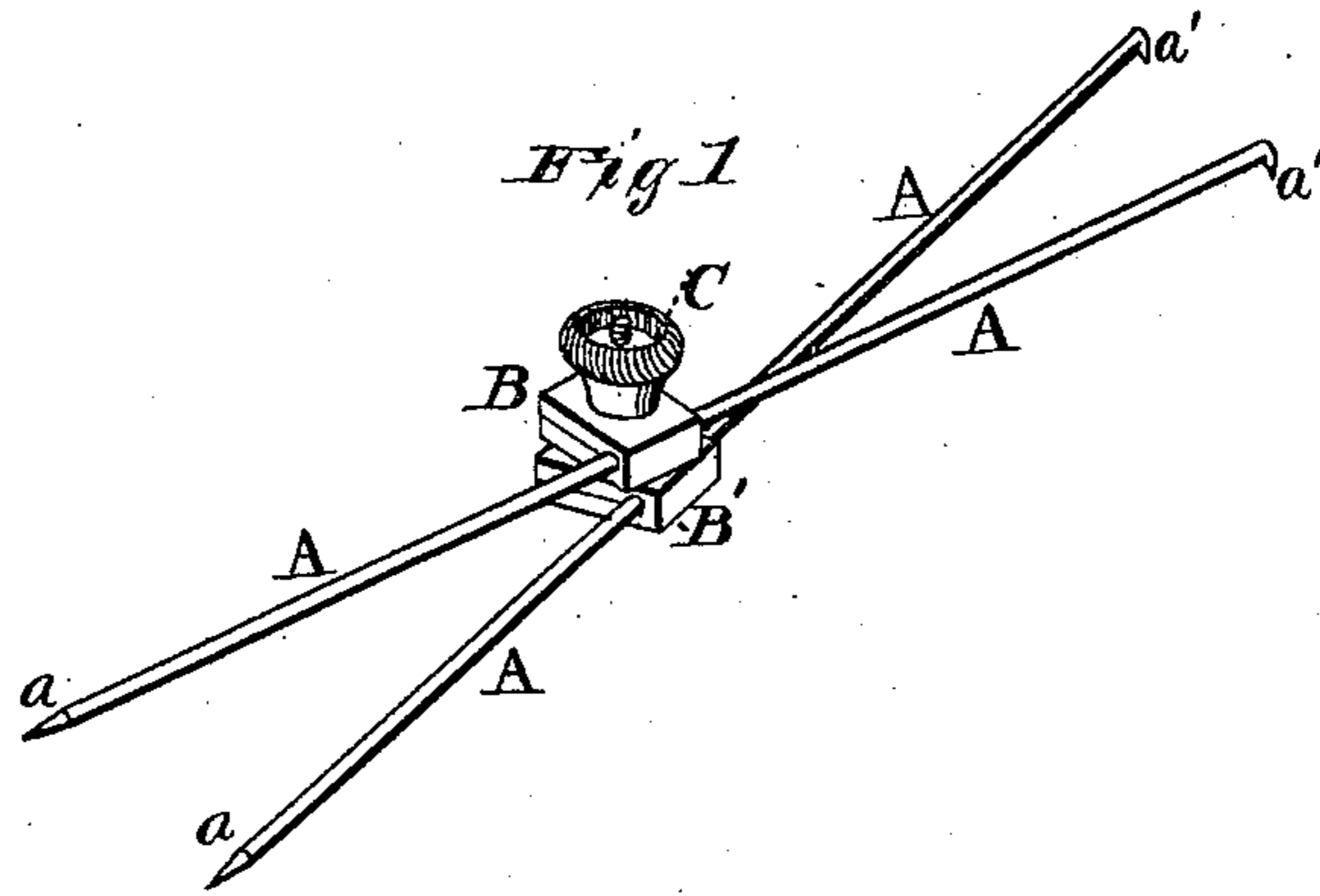


W. S. HOW.  
DIVIDERS.

No. 179,793,

Patented July 11, 1876.



WITNESSES  
Frank L. Curand  
Philip M<sup>c</sup> Nickle

INVENTOR  
Woodbury S. How.  
By L. Deane.  
Attorney

# UNITED STATES PATENT OFFICE.

WOODBURY S. HOW, OF CINCINNATI, OHIO, ASSIGNOR OF ONE-FOURTH OF HIS RIGHT TO WILLIAM J. BREED, OF SAME PLACE.

## IMPROVEMENT IN DIVIDERS.

Specification forming part of Letters Patent No. **179,793**, dated July 11, 1876; application filed June 26, 1876.

*To all whom it may concern:*

Be it known that I, WOODBURY STORER HOW, of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Dividers, Calipers, and Gages, of which the following is a specification:

Figure 1 is a perspective view of the device in position for use as a pair of dividers. Fig. 2 is a perspective view showing the device in use as a carpenter's scribing-gage, the edge of the plank broken away to exhibit the whole tool.

The design of the present invention is to produce a device, tool, or instrument which shall embody such an arrangement and combination of parts or elements that it shall be capable of use, and equally well in either instance, as dividers, calipers, or carpenter's gage or scribe; and to this end it consists more particularly in adapting each leg of said instrument in a divided nut or seat, so that it may be moved at will or clamped in position and in uniting the said nuts, so that the clamping-screw or means used for binding the parts together shall also be the joint on which the several parts may be turned, all as will now be more in detail set out and explained.

In the drawings, A A denote the legs, usually made of round wire, which are held each in a convenient seat or seats in the split clamps B and B', by the thumb-screw C, which passes centrally through them, and is suitably attached in B', or held in place by a nut on its lower end. By this construction and adaptation of the several parts the said clamps can readily be compressed upon each other, and each also upon the leg resting in the seat in it. The legs may be pointed at one end, *a*, to allow the device to serve as dividers, and lipped or bent a little at the other, as at *a'*, to allow it to serve as calipers, and in this latter instance, as the points or edges *a'* are turned out or in, will answer for outside or inside use in straight or taper work with the articles to be measured. Or by suitably arranging the bent or lipped ends, they will answer for a scribing-gage, as now par-

ticularly indicated in Fig. 2, and in this way one or more lines may be scribed as the tool is adjusted for use.

The legs may be marked off in a suitable manner with graduating lines and figures, to adapt them to measure, and thus they may be used conveniently to measure the depth of holes and other like purposes. In dotted lines in this figure the tool is shown as adapted to measure moldings or offsets, by placing the foot or end of one leg upon one part of the same, and moving the other or arm till it fits upon the other projections or depression, when the parts can be clamped and the measure read. The sharp edges at *a'* of the legs can be so adapted to measurements, when the relative length of the two ends of each is properly fixed by the clamp and thumb-screw, that the device can be readily used in very many instances as proportional dividers. Nor would it be beyond the scope of my said invention if, instead of bending said ends *a'* or lipping them, as now indicated in the drawings, they should be sharpened as at *a*, in which case they would more perfectly form proportional dividers.

Though I have shown in the drawings, and, for general use, prefer round legs, I can employ triangular, square, octagonal, or scarfed legs, and I may also adapt, by means of supplemental tips, or in like way, different shaped ends to the legs, but for the same purposes and uses above indicated.

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

The tool or instrument herein described, consisting of split and screw-pivoted clamps, combined with sliding legs, substantially as and for the purposes set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

WOODBURY STORER HOW.

Witnesses:

J. L. WARTMANN,  
F. STEWART.