

L. SHELTERS.

Calipers.

No. 67,360.

Patented July 30, 1867.

Fig. 1.

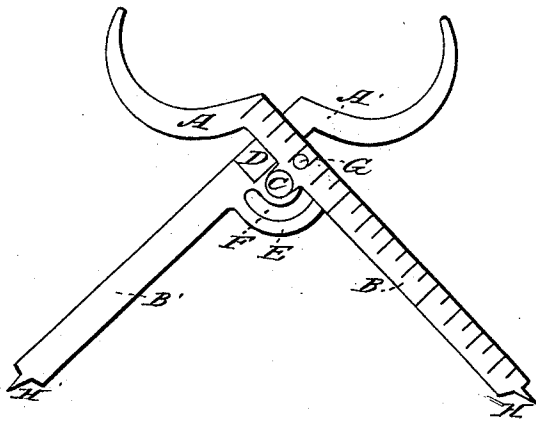


FIG. 2

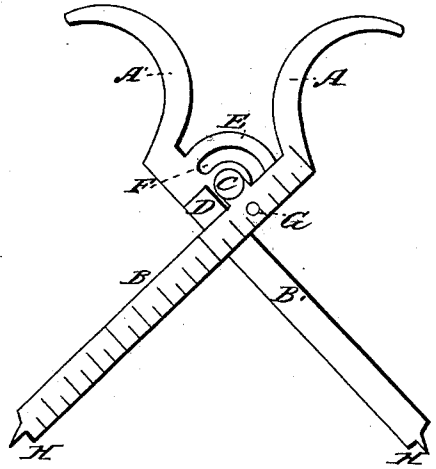


Fig. 3.

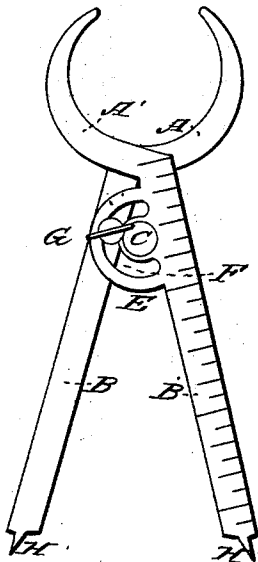
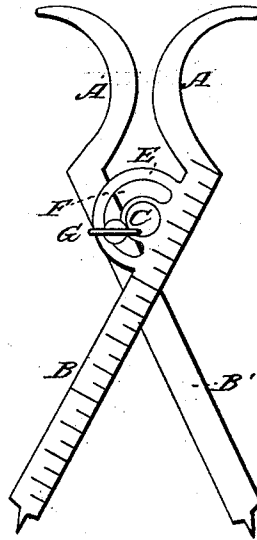


Fig. 4.



WITNESSES:

*E. P. Smith*  
*J. N. Bell*

INVENTOR:

*Leonard Shelters*

# UNITED STATES PATENT OFFICE.

LEONARD SHELTERS, OF MANCHESTER, NEW HAMPSHIRE, ASSIGNOR TO  
HIMSELF AND JOHN PATTEE, OF SAME PLACE.

## IMPROVEMENT IN CALIPERS AND DIVIDERS.

Specification forming part of Letters Patent No. 67,360, dated July 30, 1867.

*To all whom it may concern:*

Be it known that I, LEONARD SHELTERS, of Manchester, in the county of Hillsborough and State of New Hampshire, have invented a new and useful Improvement in Combined Calipers, Dividers, Square, and Rule; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters marked thereon, making part of this specification.

The same letters refer to like parts in all the figures of the drawings.

Figure 1 represents the instrument as opened for use as calipers for outside measurement. Fig. 2 represents the same as opened for use as a square. Fig. 3 represents the same as in use for dividers. Fig. 4 represents the same as opened for use as calipers for inside measurement.

A A' are the jaws of the calipers. B B' are the arms which form the square and also serve as legs of the dividers in connection with the points H H', on which arms are marked the divisions of the scale, and which are pivoted by the pivot C, on which they freely turn.

C is the pivot by which the arms B B' are connected together, and which is placed on or near the sides of the arms B B', or on a projection on the same, so as to admit of the slot F, or its equivalent, being cut in one of the arms or in such projection, and so as to admit of the stop D being placed on one of such arms.

D is a stop on one of the arms to prevent them, when opened in either direction, from turning more than a right angle, and so adjusted that the crossing of the arms, when extended so as to bear against it, forms a right angle or square at the point of crossing.

E is the projection on the arm B', in which is the pivot C, and in which the slot F is cut.

F is a slot cut in one of the arms B B' or

in the projection E, for the purpose of allowing of the operation of the thumb-screw G, or its equivalent, to clamp the parts in any desired position.

G is a thumb-screw, the shoulders of which bear on the sides of the slot F, and when the screw is turned up clamp the parts in any desired position.

H H' are points on the ends of the arms B B' to admit of the instrument being used for dividers.

The construction and operation of the instrument is such that the two halves or parts being united by the pivot C, when opened as shown in Figs. 1 and 3, it may be used as calipers for outside measurement. When opened as shown in Figs. 2 and 4 it may be used as calipers for inside measurement. When the arms B and B' are turned so as to bear against the stop D and form a right angle, as shown in Fig. 4, it may be used as a square. When the arms B and B' are at less than a right angle and clamped by the thumb-screw it may, by means of the points H and H', be used as dividers; and when in any position the arms may be held by the thumb-screw for any purpose desired, and in either position the arms B and B' may be used as a scale or rule, as the same may be graduated.

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

The combination of the calipers and arms B B', together with the points H H', forming the legs of the dividers and turning on the pivot C, and on which arms are marked the divisions of a rule or scale, and the stop D, the thumb-screw G in the slot F, or their equivalents, substantially as set forth.

L. SHELTERS.

Witnesses:

E. S. SMITH,  
S. N. BELL.