

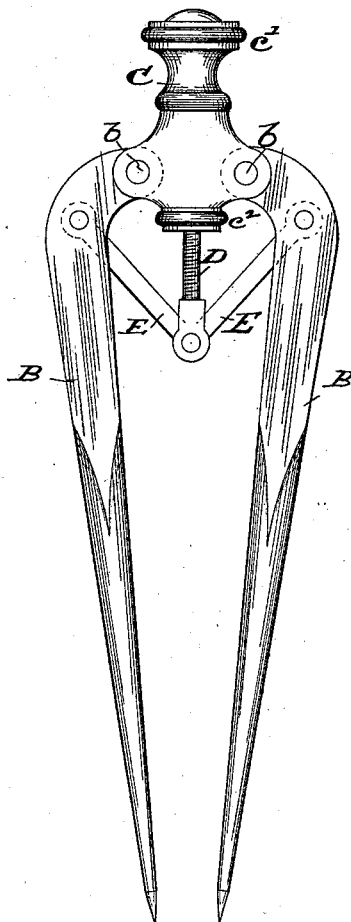
(No Model.)

C. H. ALAPAW.
COMPASSES.

No. 307,371.

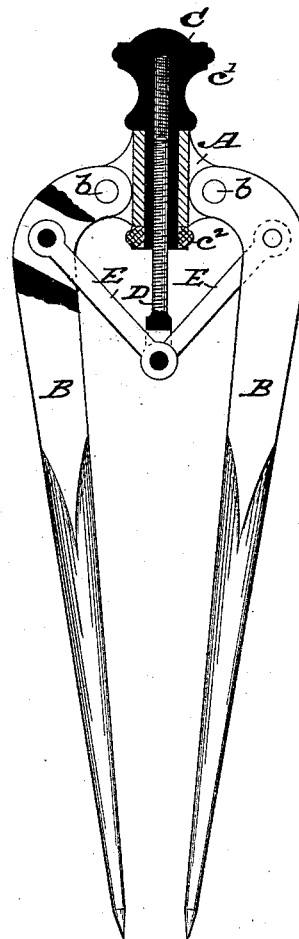
Patented Oct. 28, 1884.

Fig. 1.



Attest;
Charles Pickles
Lora E. Hunt

Fig. 2.



Inventor;
Charles H. Alapaw
by C. D. Moody
att'y.

UNITED STATES PATENT OFFICE.

CHARLES H. ALAPAW, OF ST. LOUIS, MISSOURI, ASSIGNOR OF TWO-THIRDS
TO JOHN G. BRINKMEYER AND FREDERICK A. BRINKMEYER, BOTH OF
SAME PLACE.

COMPASSES.

SPECIFICATION forming part of Letters Patent No. 307,371, dated October 28, 1884.

Application filed April 21, 1884. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. ALAPAW, of St. Louis, Missouri, have made a new and useful Improvement in Compasses, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a side elevation of the improved compasses, and Fig. 2 a sectional elevation thereof.

The same letters of reference denote the same parts.

The present invention is an improvement in that class of compasses in which a screw-shaft is journaled in a bearing in the compass-head and linked to the compass-legs, so that by rotating a fixed part through which the screw-shaft passes the compass-legs are opened and closed.

A represents the head of the compasses, and B B represent the compass-legs. The legs are jointed to the head at *b b*. The compass-head is perforated vertically to receive a nut, C, which is held longitudinally in the compass-head, but journaled so that it can be rotated therein. The nut is perforated longitudinally to receive a screw-rod, D, which is threaded and adapted to be screwed into and out of the nut—that is, by rotating the nut in the compass-head the screw-rod is worked into and out of the nut, according to the direction in which it is rotated. At its outer end the screw-rod is jointed to the links E E, which at their other ends are jointed to the compass-

legs B B, respectively. When it is desired to open the compass-legs, the nut is turned so as to draw the screw-rod into it. This movement of the screw-rod causes the links to be drawn toward the compass-head, and the effect is to open the compass-legs. When it is desired to move the compass-legs in the opposite direction, the nut is turned in the opposite direction, and the screw-rod and links move accordingly. The nut is extended through the compass-head, and at both ends—that is, both above and below the compass-head—is suitably shaped to enable the operator to operate the nut from below as well as above the compass-head. To this end the nut is provided with the head *c'*, which is above the compass-head, and the head *c''*, which is below the compass-head. These heads *c'* *c''* also serve as shoulders for holding the nut longitudinally in place in the compass-head.

The present improvement is equally adaptable to calipers.

I claim—

In a pair of compasses, the combination, with the tubular head A, having the legs B B and links E E pivoted to it, of a thumb-nut having an elongated neck provided with a head, *c'*, and the screw D, tapped into said nut and connected by a pivot to the two inner ends of the said link, substantially as described.

Witness my hand.

CHAS. H. ALAPAW.

Witnesses:

CHARLES D. MOODY,
CORA E. HUNT.