

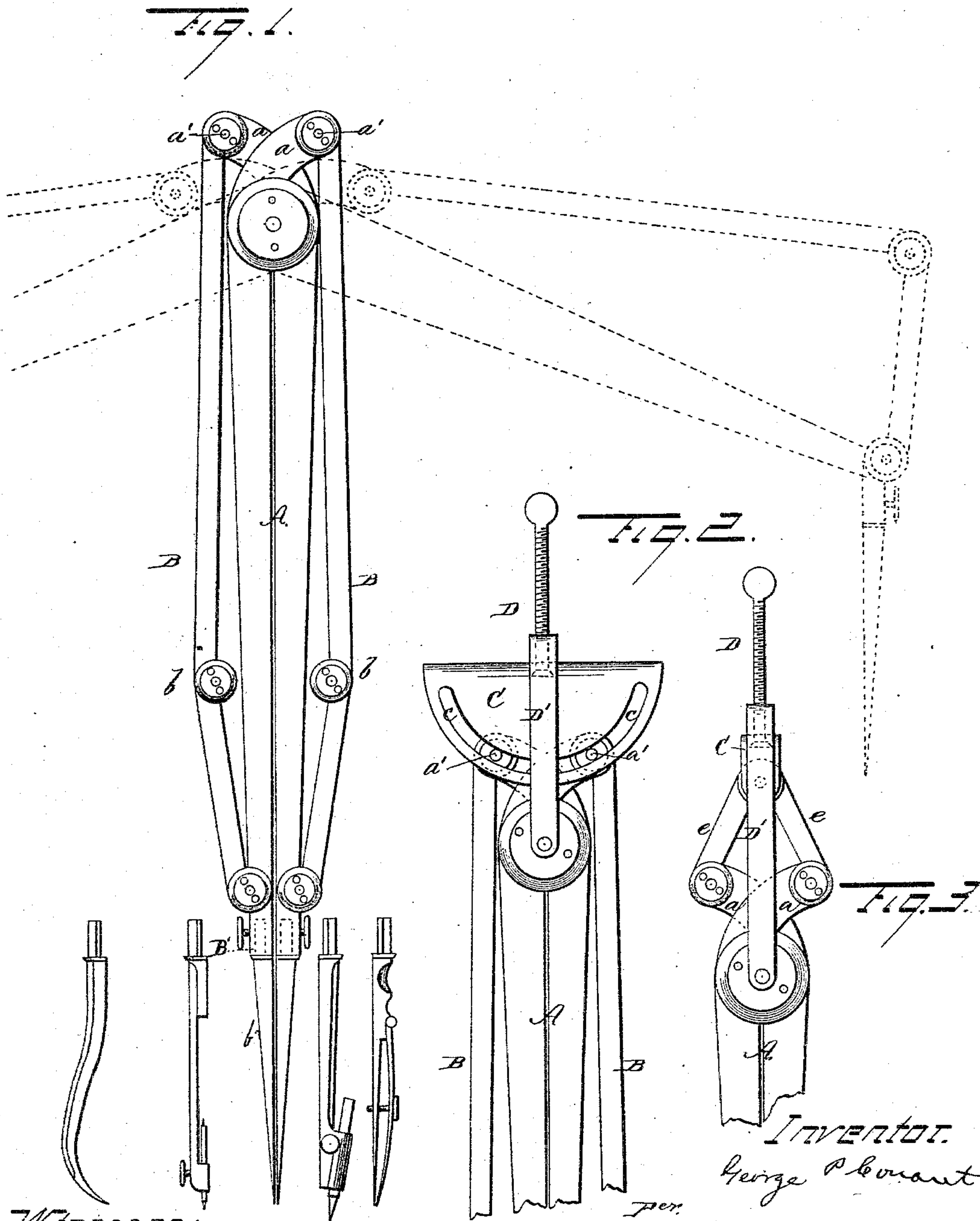
(No Model.)

G. P. CONANT.

COMBINED COMPASSES AND CALIPERS.

No. 288,163.

Patented Nov. 6, 1883.



Witnesses:

W. L. McArthur
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UNITED STATES PATENT OFFICE.

GEORGE P. CONANT, OF GENEVA LAKE, WISCONSIN.

COMBINED COMPASSES AND CALIPERS.

SPECIFICATION forming part of Letters Patent No. 288,163, dated November 6, 1883.

Application filed April 12, 1883. (No model.)

To all whom it may concern:

Be it known that I, GEORGE P. CONANT, a citizen of the United States, residing at Geneva Lake, in the county of Walworth and State of Wisconsin, have invented certain new and useful Improvements in Combined Compasses and Calipers, of which the following is a specification, to wit:

My invention relates to combined compasses and calipers; and it consists in certain peculiarities of construction and arrangement whereby the points are always kept perpendicular to the work, substantially as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the accompanying drawings, in which—

Figure 1 is a side elevation; Fig. 2, a similar view with the adjusting device; Fig. 3, a detail view of the same.

A represents the main legs of the compasses, which are pivoted together at their upper ends, as usual, but are formed with short arms *a a*, extending in rear of this pivotal point and crossing each other, as represented. To the ends of these arms *a a* are pivoted two braces or trusses, B B, each of which is jointed, as seen at *b*, and pivoted at its lower end to the lower ends of the corresponding legs, A A, of the compasses. To the lower ends of the smaller joints of the trusses B B are rigidly secured short extensions B' B', each of which is provided with removable points *b'*, in place of which may be inserted pen and pencil or caliper-points for different uses. It will therefore be understood that when opened out to any position the truss or brace rods B B will be bent at their joint *b*, and the smaller section always held in such a position as to retain the pen or pencil points in an upright or parallel position, which is a great advantage in all kinds of work.

In most cases the friction-joints will be sufficient to retain the parts in any desired position; but in order to provide for a firm adjustment and more positive action, I provide a clip or clevis, C, in which the ends of the short arms *a a* are inclosed, and the pivots *a'*,

connecting these arms with the braces B, are formed of sufficient length to engage with semicircular slots *c*, formed in the sides of this clip, as shown in Fig. 2. In the upper part of this clip I swivel the lower end of a set-screw, D, which passes through a second small clevis or clip, D', the arms of which are secured to the pivot of the main legs A. By this arrangement I am enabled to force apart or draw together the legs and braces of the device by a positive and delicate adjustment, as will be readily understood.

In Fig. 3 is shown a modification of this adjusting device, in which the arms *a a* are each provided with a hinged toggle, *e e*, which are pivoted together at their upper ends, and the clip C is secured to their pivotal point, while the clip D' is secured to that of the legs, as before described.

This device is applicable for use as a compasses, inside or outside calipers, circle-pen, or circle-pencil by simply substituting different points, as will be readily seen.

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

1. In a compasses, the combination, with the main legs having rearwardly and laterally extending arms, of two jointed arms or braces hinged to the arms and also to the lower ends of the legs, and the feet or points rigidly secured to the braces, and adapted to stand parallel in whatever position the device may be set, substantially as and for the purpose set forth.

2. In a compasses, the main legs, formed or provided with rearwardly and laterally extending arms, in combination with two clips, one of which acts upon the short arms and the other on the legs, and an adjusting-screw swiveled in one clip and passing through the other, substantially as shown and described.

3. In a compasses, the legs A A, hinged together and provided with short arms *a a*, in combination with the jointed braces B B, hinged to the arms *a a* and legs A A, and carrying the parallel extensions B', having removable points, substantially as and for the purpose set forth.

4. In a compasses, the legs A A, having

arms *a a*, jointed braces B B, having extensions B', and pivoted or hinged to the arms *a* and legs A, in combination with the clip C, provided with slots *c*, the swiveled screw D,
5 and clip D', all constructed and arranged to operate substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE P. CONANT.

Witnesses:

J. E. STEVENSON,
FRANK JOHNSON.