

(No Model.)

J. NEIMEYER.

COMPASSES.

No. 275,403.

Patented Apr. 10, 1883.

Fig. 1

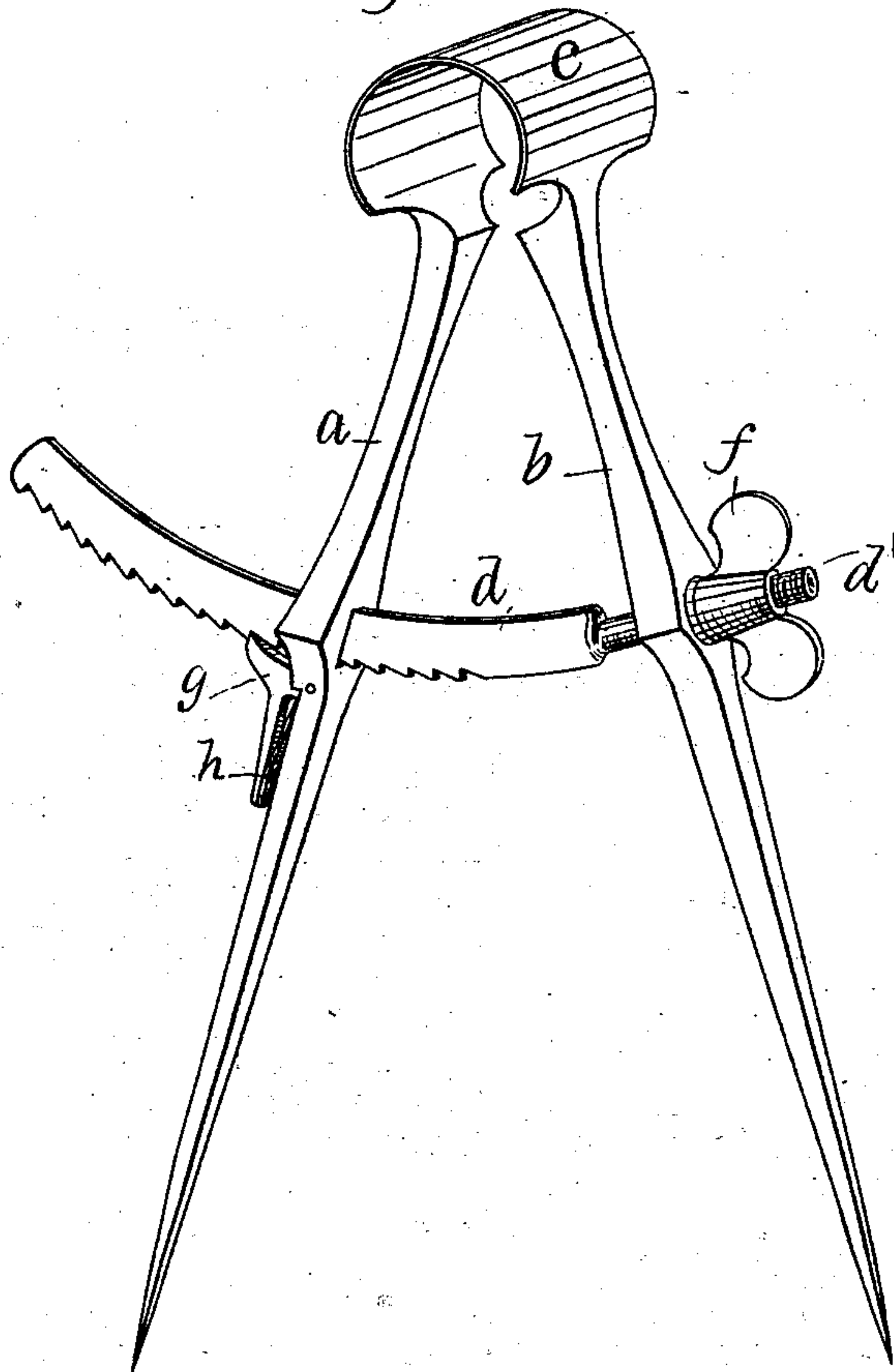
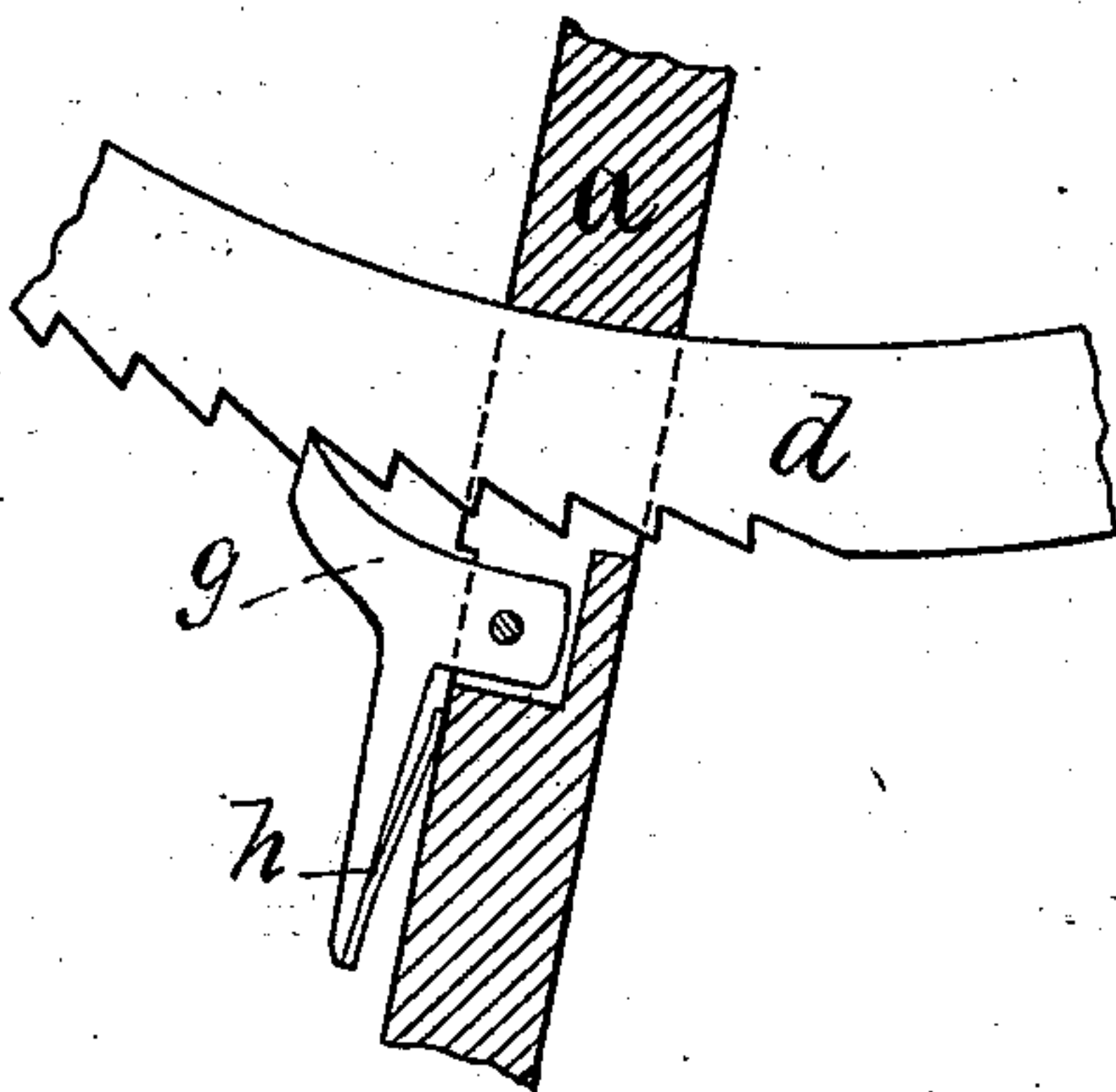


Fig. 2



Witnesses:
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UNITED STATES PATENT OFFICE.

JACOB NEIMEYER, OF ATLANTIC, IOWA.

COMPASSES.

SPECIFICATION forming part of Letters Patent No. 275,403, dated April 10, 1883.

Application filed January 8, 1883. (No model.)

To all whom it may concern:

Be it known that I, JACOB NEIMEYER, of Atlantic, in the county of Cass and State of Iowa, have invented an Improvement in Com-

passes, of which the following is a specification.

The object of my invention is to save time in adjusting compasses or spacing-dividers.

Heretofore steel-spring compasses or spacing-dividers have been adjusted by means of an arc and a screw; but to move the legs and points far apart, or to bring them close together when distended by means of a thumb-screw, is tedious and consumes much time. To facilitate the adjustment of the legs as required in spacing, and to save the valuable time of the artisan consumed in operating a screw, I form a ratchet-face on the edge of the arc and combine a spring-pawl with one of the legs to engage the ratchet, as hereinafter fully set forth, in such a manner that when the legs and points are spread apart I can instantly bring them near each other by hand-pressure and retain them by the automatic action of the pawl and ratchet and instantly spread them apart again into a distended position by simply pressing upon the spring-pawl to disengage it from the ratchet.

Figure 1 of my accompanying drawings is a perspective view of my improved compasses. Fig. 2 is an enlarged detail view, showing the ratchet device. Together they clearly illustrate the construction, operation, and utility of my complete invention.

a and *b* are the rigid legs, and *c* the spring, of compasses or dividers of common form.

d is an arc that has flat sides, and is adapted to extend through a corresponding slot in the leg *a*. It also has a screw-threaded section,

d', at one end adapted to extend through a perforation in the leg *b*.

f is a thumb-nut on the end of the screw-threaded portion *d'*.

A series of ratchet-teeth is formed on the lower and convex edge of the arc *d*.

g is an elbow-shaped pawl, pivoted to or in the leg *a* in such a position relative to the slot through which the arc extends that it will engage the ratchet-teeth 1 2 3.

h is a spring fixed to the pawl or leg in such a manner that it will, in its normal position, press the pawl upon the ratchet-faced edge of the arc.

In the practical use of my improved compasses I simply compress the spring *c* to bring the legs and their pointed ends toward each other when distended. To move them a limited degree relative to each other, as frequently required in accurate work, I simply turn the thumb-nut on the end of the arc and ratchet. To distend the legs when close together I simply release the pawl from the ratchet and allow the spring that connects their top ends to resume its normal position.

I claim as my invention—

As an improved article of manufacture, compasses composed of the legs *a b*, spring *c*, arc *d d'*, having a ratchet on its edge, a pawl, *g*, and spring *h*, substantially as shown and described, to operate in the manner set forth, for the purposes specified.

JACOB ^{his} X NEIMEYER.
mark.

Witnesses:

L. L. DE LANO,
C. H. YOUNG.