P. RÖGNER.

COMPASSES.

APPLICATION FILED FEB. 26, 1909.

954,885.

Patented Apr. 12, 1910.

2 SHEETS—SHEET 1.

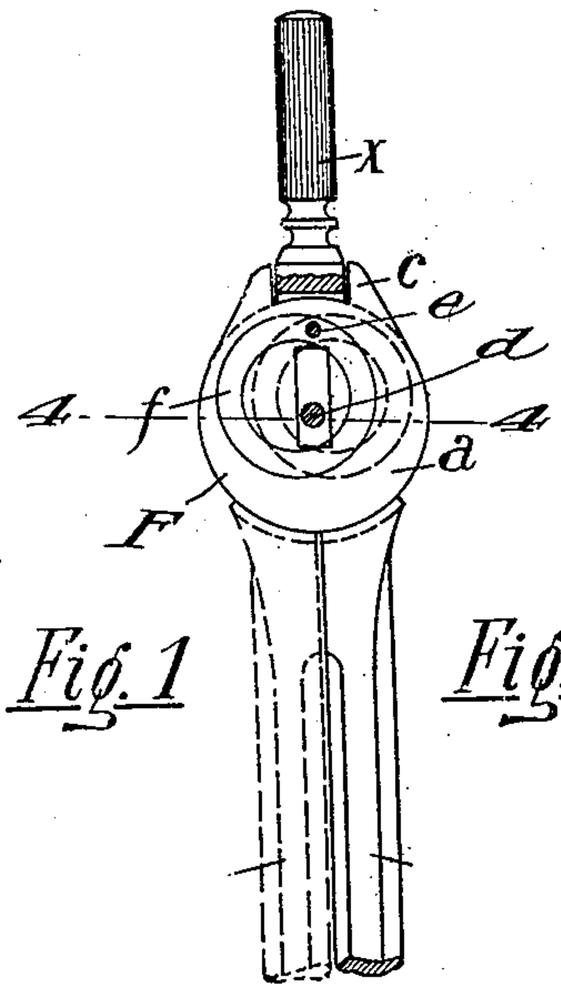


Fig. 1

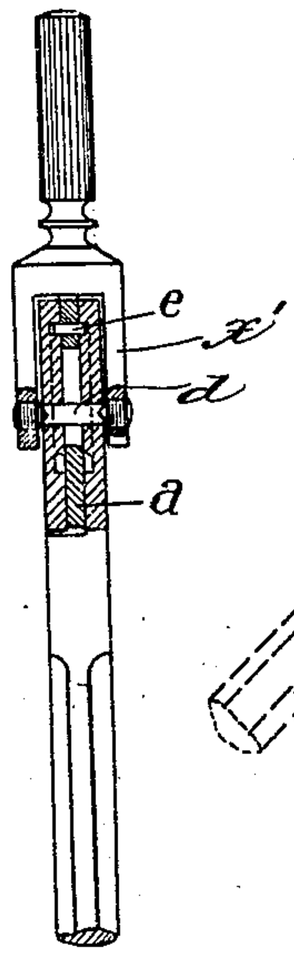


Fig. 2

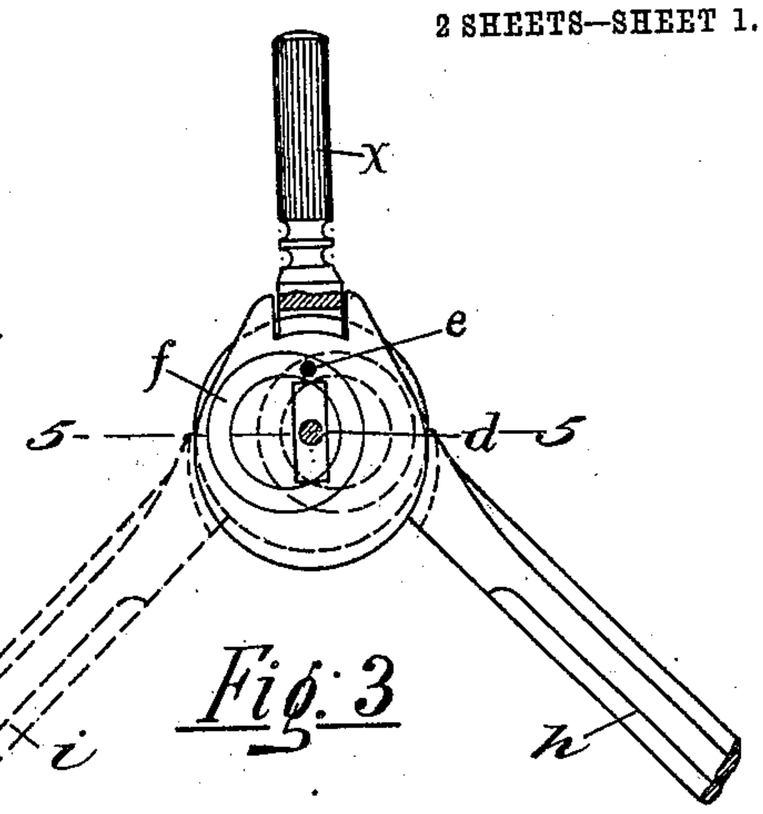


Fig. 3

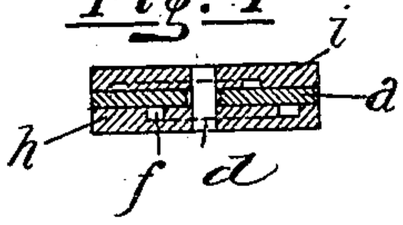


Fig. 4

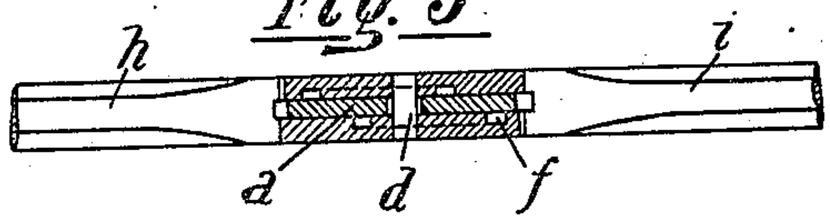


Fig. 5

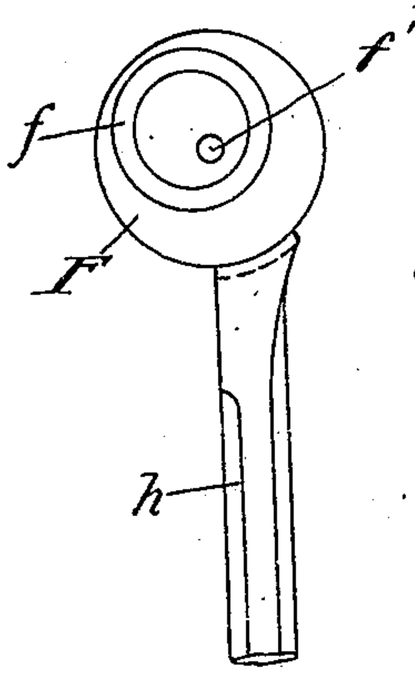


Fig. 6

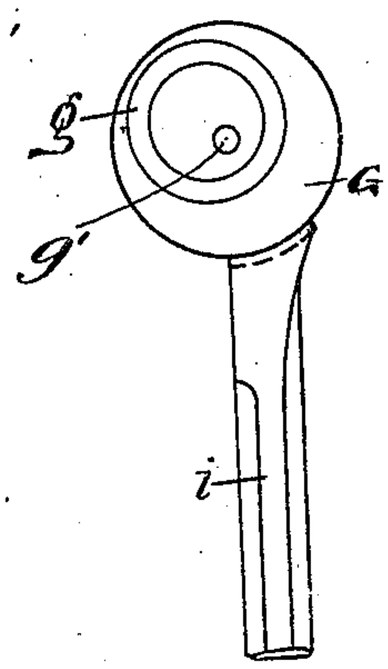


Fig. 7

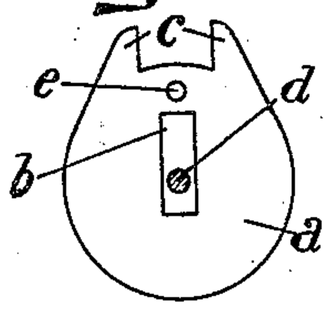


Fig. 8


Fig. 9

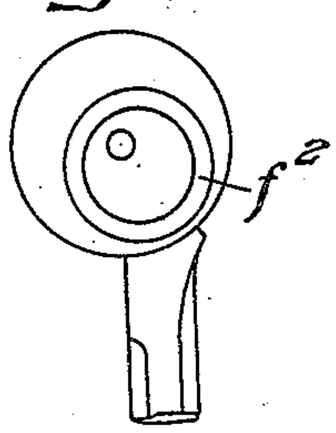


Fig. 10

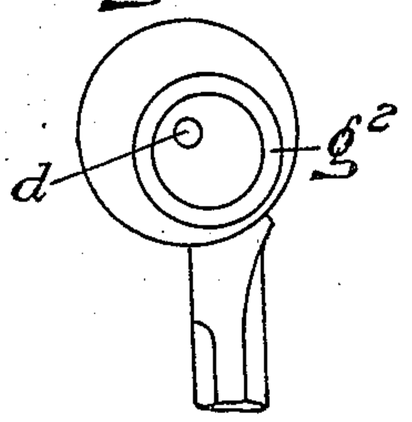


Fig. 11

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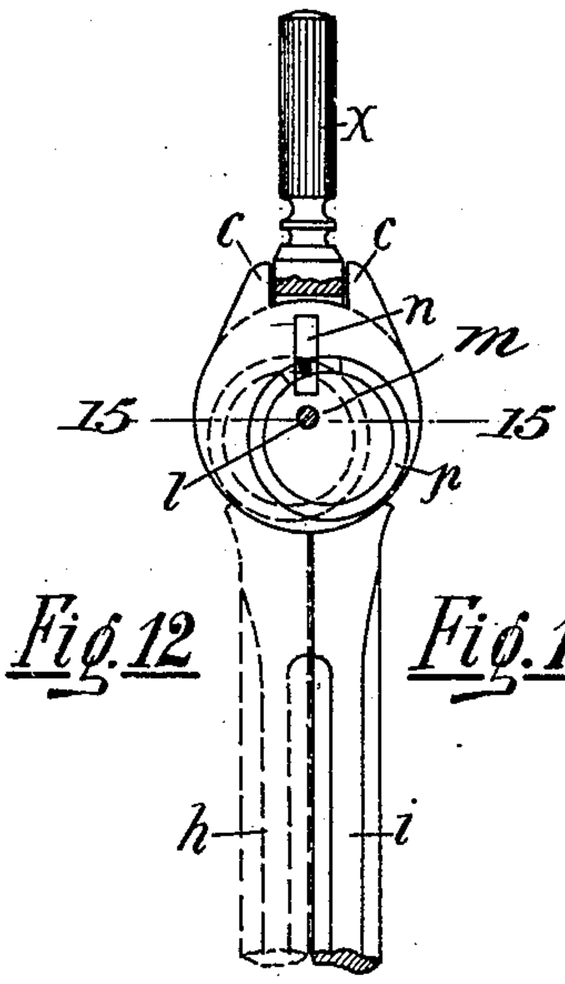


Fig. 12

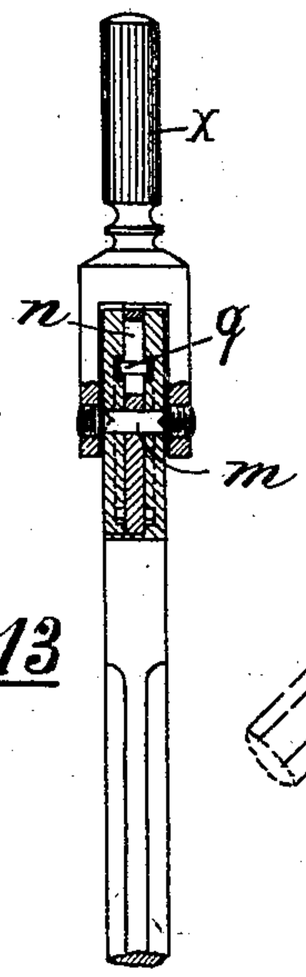


Fig. 13

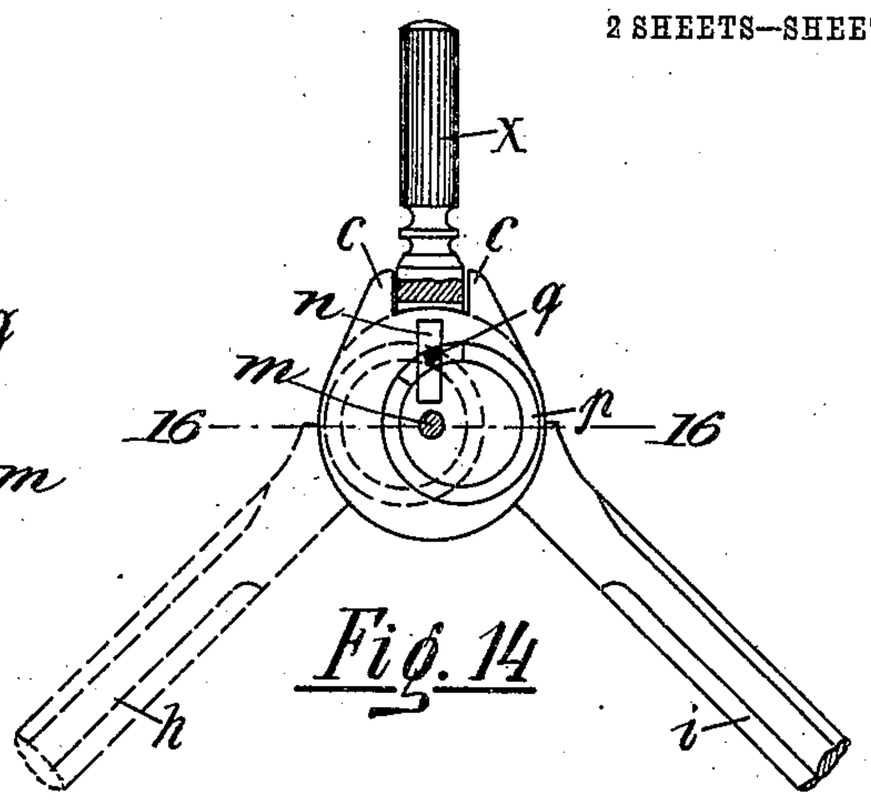


Fig. 14

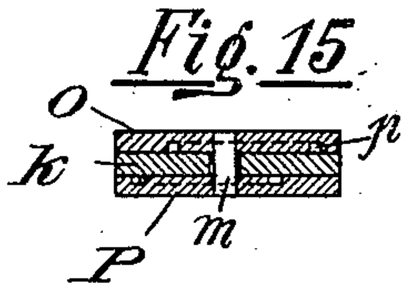


Fig. 15

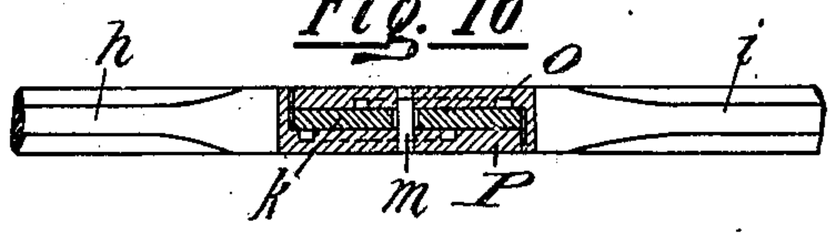


Fig. 16

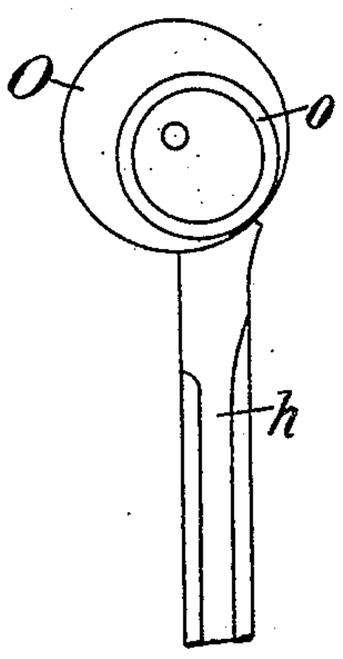


Fig. 17

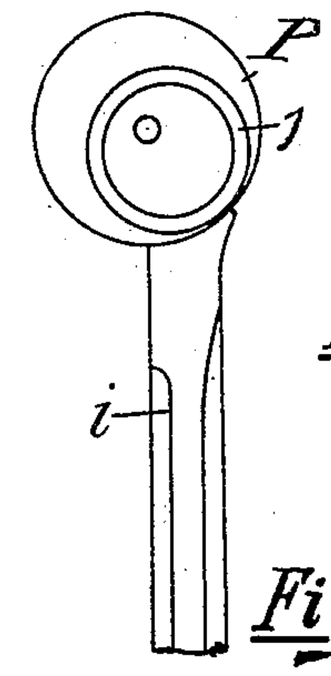


Fig. 18

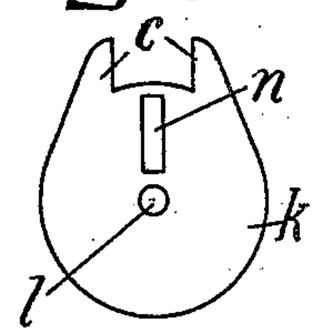


Fig. 19

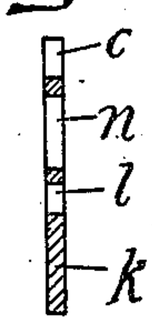


Fig. 20

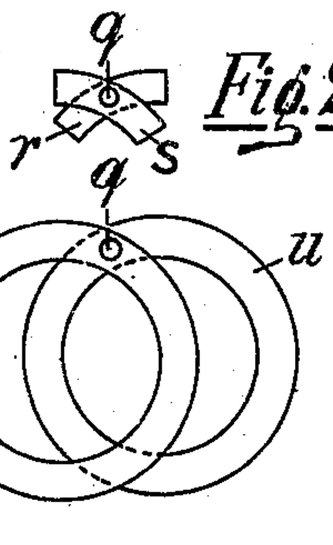


Fig. 21

Fig. 23

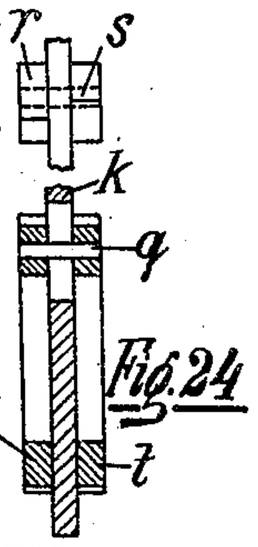


Fig. 22

Fig. 24

WITNESSES:

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Philipp Rögner

BY B. Singer

ATTORNEY

# UNITED STATES PATENT OFFICE.

PHILIPP RÖGNER, OF NUREMBERG, GERMANY.

## COMPASSES.

954,885. Specification of Letters Patent. Patented Apr. 12, 1910.

Application filed February 26, 1909. Serial No. 480,169.

*To all whom it may concern:*

Be it known that I, PHILIPP RÖGNER, manufacturer, of 44 Neue Gasse, Nuremberg, Bavaria, Germany, have invented an Improvement in Compasses, of which the following description is a specification.

This invention relates to improvements in compasses of that class wherein devices are provided for always maintaining the handle in a central position irrespective of the position of the legs of the compass, the object of such attachment being to prevent interference with the adjustment of the legs when turning the handle to a central position after the legs have been adjusted to the required span on the drawing board.

The objects of the improvements of my invention are to simplify the construction and render parts more efficient in action and the specific embodiment whereby these objects are attained will be more fully described in connection with the accompanying drawings and will be more particularly pointed out in and by the appended claims.

In the drawings:—Figure 1 is a view of the compass in side elevation with parts in section with one of the legs shown in dotted lines and the companion leg in full lines. Fig. 2 is a side elevation of the compass shown in Fig. 1 with the parts in section and parts in elevation. Fig. 3 is a view similar to Fig. 1 with the compass legs spread. Fig. 4 is a horizontal sectional view on line 4—4 of Fig. 1. Fig. 5 is a sectional view on line 5—5 of Fig. 3. Fig. 6 is a detail elevation of the upper portion of one of the compass legs detached. Fig. 7 is a similar view of the companion compass leg. Fig. 8 is a side elevation of one of the parts embodied in my improved attachment. Fig. 9 is a vertical sectional view thereof. Figs. 10 and 11 are side elevations of compass legs embodying a slight modification, from the form shown in Fig. 1. Fig. 12 is a view in side elevation, with parts in section, of a compass embodying a modified form of my invention with one of the compass legs shown in dotted lines. Fig. 13 is a side elevation thereof with parts in section and parts in elevation. Fig. 14 is a view similar to Fig. 12 with the compass legs spread. Fig. 15 is a sectional view on line 15—15 of Fig. 12. Fig. 16 is a sectional view on line 16—16 of Fig. 14. Fig. 17 is a side elevation of one of the compass legs detached from the compass. Fig. 18 is a similar view of a companion compass leg. Fig. 19 is a view in side elevation of one of the parts embodied in my improved attachment as shown in Fig. 12. Fig. 20 is a vertical sectional view of the part shown in Fig. 19. Fig. 21 is a view in side elevation of a portion of the attachment embodied in the form shown in Fig. 12. Fig. 22 is an end view thereof. Fig. 23 illustrates a modification of that portion of the attachment shown in Fig. 21. Fig. 24 is a vertical sectional view of the rings shown in Fig. 23, taken through the pivot *q* and showing a part between said rings.

Like characters of reference designate similar parts throughout the different figures of the drawings.

As shown, and with reference to Figs. 1 to 9, *h* and *i* designate companion compass legs each provided with enlarged heads preferably in the form of disks F and G respectively. The heads F and G are provided with circular grooves *f* and *g*, respectively, which are arranged eccentrically with respect to the compass pivot apertures *f'* and *g'*. As shown said grooves *f* and *g* are arranged on the inner opposing faces of the disks F and G so that when the parts are assembled the portions of the grooves *f* and *g* will always intersect regardless of the position of the legs *h* and *i*. The compass legs are united by a pivot *d* and a member *a* is interposed between the disks F and G and is provided with a slot *b* through which the pivot *d* passes. The slot *b* is designed to afford vertical movement of the member *a* when the legs *h* and *i* are spread or closed. The member *a* is provided with a pin which projects on opposite sides thereof a sufficient distance to engage the grooves *f* and *g* where the same intersect above the pivot *g*, as clearly shown in Fig. 1. A handle *x* is provided with a bifurcated end *x'* which embraces the disk F and G and is connected with the pivot *d* as clearly shown in Fig. 2. The member *a* is provided with a notched portion *c* which engages the base of the forked or bifurcated portion of the handle *x* as clearly shown in Fig. 1.

Assuming that the parts are in the position shown in Fig. 1, it will be readily seen that when the legs are spread as shown in

Fig. 3 the intersecting portions of the grooves will occupy a position nearer the pivot *d* than in the position shown in Fig. 1 thereby lowering the member a slight distance but not sufficient to disengage the same from the handle *x*. The slot *b* of the member *a* will permit movement of the latter and the walls of the slot *b* will engage the pivot *d* and maintain the member *a* at all times in a vertical position thereby insuring a similar position for the handle *x*.

If desired the grooves $f^2$ and $g^2$ may be disposed in the manner shown in Figs. 10 and 11.

Referring to the form shown in Fig. 12, the member *k* is provided with a slot *n* and with an aperture *l* which latter serves for receiving the pivot *m*. The compass legs *h* and *i* are provided with grooves *o* and *p* arranged eccentrically with respect to the centers of the disks O and P. Arcuate members *r* and *s* are pivoted on a pin *q* which extends through slot *n* and said arcuate members are disposed in the grooves *o* and *p*. If desired rings *u* and *t* may be substituted for the arcuate members *r* and *s* as clearly shown in Figs. 23 and 24.

It will be obvious by reference to Figs. 12 and 14 that the member *k* has no up or down movement similar to the first construction described. The opening *l* fits the pivot *m* and the slot *n* affords the requisite up and down movement for the pin *q*. As the grooves *o* and *p* always intersect at a point in vertical alinement with the pivot *m* it will be seen that the pin *q* and pivot *m* always hold the member *k* in a vertical position irrespective of the position of the compass legs. The member *k* is provided with a notched or jawed portion *c* for engaging the handle *x*, similar to the first construction described.

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

1. A compass comprising in combination, two legs each provided with a pivot disk, a pivot passing through said disks centrally thereof, a handle provided with bifurcated end embracing said disks and secured to said pivot, each of said disks having a circular groove in its inner face eccentrically disposed with respect to said pivot, a member interposed between said disks and provided with a slot receiving said pivot and a recessed portion embracing said handle, said member having a pin projecting on opposite sides thereof and engaging said grooves.

2. A compass comprising in combination, two legs each provided with a pivot disk, a pivot uniting said disks, a handle mounted on said pivot, each disk having a circular groove in its inner face eccentrically disposed with respect to said pivot, a member interposed between said disks and connected with said pivot and handle, and means acted upon by said grooves and connected with said member for maintaining the handle in a central position when the legs are spread.

3. A compass comprising in combination, a pair of compass legs provided with enlarged heads, a pivot uniting said heads, each head having a circular groove eccentrically disposed with respect to said pivot, a handle mounted on said pivot, an element engaging said handle and pivot, and means associated with said element and the grooves in said heads for maintaining said handle in a central position when the legs are closed or spread.

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

PHILIPP RÖGNER.

Witnesses:

HEINRICH FIETH,

H. W. HARRIS.