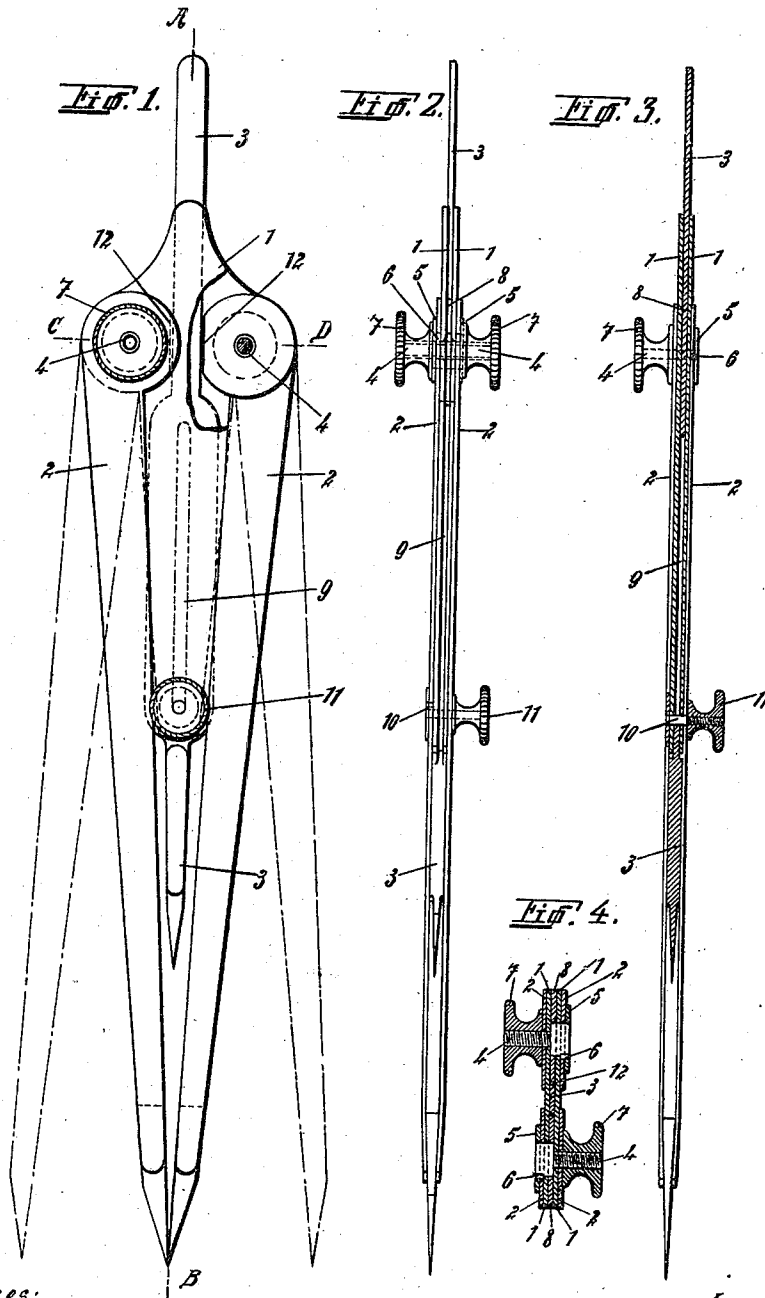


F. PFAFF.
COMPASSES.

APPLICATION FILED OCT. 28, 1909.

984,697.

Patented Feb. 21, 1911.



Witnesses:

L. P. Paul.

[Signature]

Inventor:

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per *[Signature]*

Attorney.

UNITED STATES PATENT OFFICE.

FRITZ PFAFF, OF ACACIAS, GENEVA, SWITZERLAND.

COMPASSES.

984,697.

Specification of Letters Patent.

Patented Feb. 21, 1911.

Application filed October 28, 1909. Serial No. 525,218.

To all whom it may concern:

Be it known that I, FRITZ PFAFF, a citizen of Switzerland, and resident of Acacias, Geneva, Switzerland, have invented Improvements in and Relating to Compasses, of which the following is a specification.

The subject of the present invention concerns improvements in and relating to compasses.

The essential features of this invention consist of a compass having three legs whereby two circles having a different radius can be drawn simultaneously. The two outer legs are of the same length, but the middle leg is adjustable in length; furthermore either of the outer legs can turn on its own pivot independently of the other.

In order that this invention may be fully understood, reference is made to the accompanying drawing, in which—

Figure 1 is a front elevation showing the compass closed up. Fig. 2 is a side elevation of same. Fig. 3 is a sectional side elevation on line A—B of Fig. 1. Fig. 4 is a section on line C—D of Fig. 1.

The compass consists of two suitably shaped plates 1 adapted to carry two pairs of side members 2; said plates 1 also carry the central leg 3, while the two pairs of members 2 are also suitably formed and constitute the side legs. The members 2 are rounded off at the top and each pair is secured by a screw 4 on which it is revolubly mounted. The screws 4 carry integral heads 5 provided with a projecting point 6 which fits in a suitable recess in one of the members thereby preventing the screw from turning when the nut 7 is being tightened up. Thus the legs can be adjusted to any desired position by first loosening the nut 7, pulling out the leg to the required extent, then tightening up the nut. Two disks 8 are inserted between the plates 1 to keep them apart, the screws 4 passing through said disks 8. (Figs. 3 and 4).

The leg 3 is provided with a longitudinal slot 9 in which is carried a screw 10 provided with a nut 11. The upper part of the leg 3 is adapted to slide between the flat portions 12 of the disks 8. If the leg 3 is drawn up in the position shown in Fig. 1, the two outer legs can be used in the ordinary way as with the known type of compasses. By unscrewing or loosening the nut 11, the leg 3 slides down between the lower continuations of the

plates 1 until its point is in the same plane as the points of the other legs. The screw 10 passes through the plates 1 and the leg 3 situated between said plates, so that by screwing up the nut 11, the leg 3 is secured immovably. Thus by using one of the outer legs as an axis, the other two legs can be made to simultaneously describe two circles, each circle having a different radius.

An important feature lies therein, that if the radius of a given circle has been established, say for instance by means of the right hand outer leg and the middle leg, the same radius can be employed any time thereafter if meantime the left-hand outer leg and the middle leg are used as ordinary compasses, that is to say the left hand leg can now be moved in and out to describe circles of different radii, while when it is desired to draw a circle of the first established radius, the left hand leg is moved around up out of the way, the middle leg is lowered again, and the compass is already for drawing the required circle.

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

Improvements in and relating to compasses, comprising in combination, two plates, two pairs of members having recesses secured to said plates, a leg formed by each pair of the said members, a middle leg having a slot and being secured between said plates, a screw passing through said plates and the slot in said middle leg, a nut adapted to screw on to said screw, disks placed between said plates, a screw passing through each pair of said members, said plates and a disk, nuts adapted to screw on to the ends of said screws, the latter having pointed projections integral therewith, each of said projections engaging in a suitable recess in one of each pair of members, whereby said screws are prevented from turning when the nuts are being tightened up, substantially as described and shown and for the purpose set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

FRITZ PFAFF.

Witnesses:

L. H. MUNIER,
G. VULLIE.