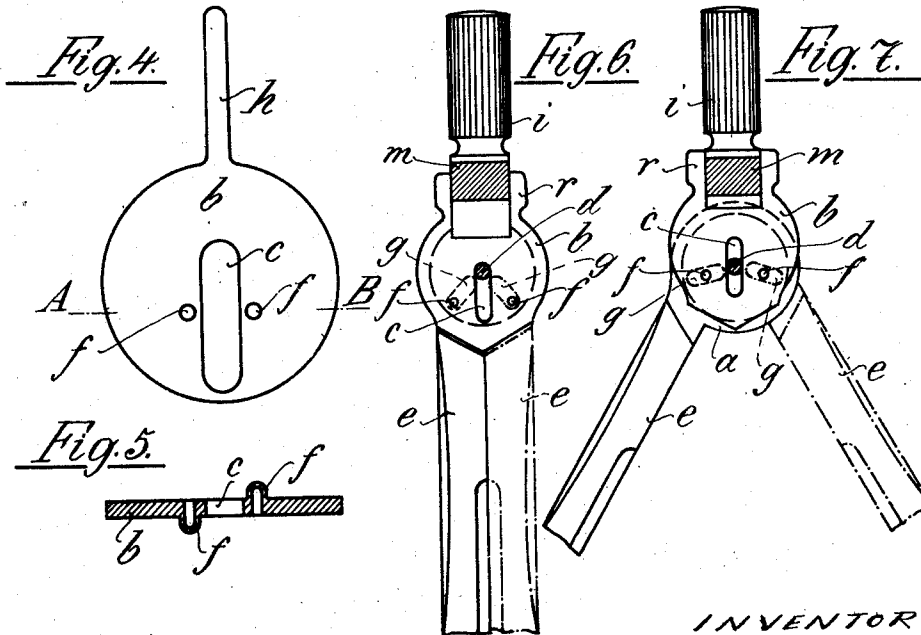
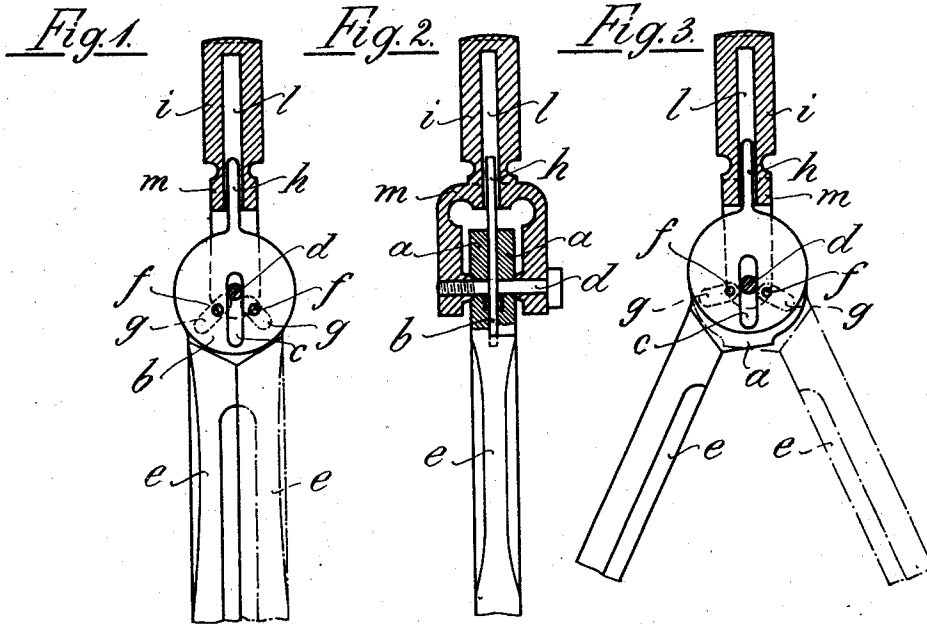


Patented Oct. 27, 1908.

2 SHEETS—SHEET 1.

902,257.



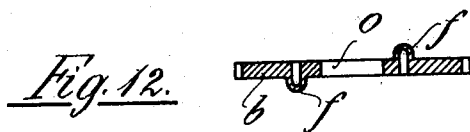
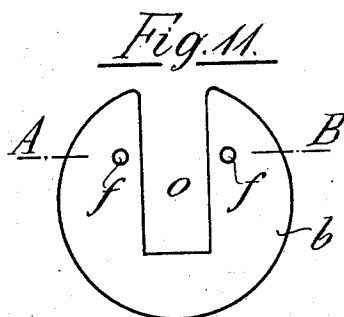
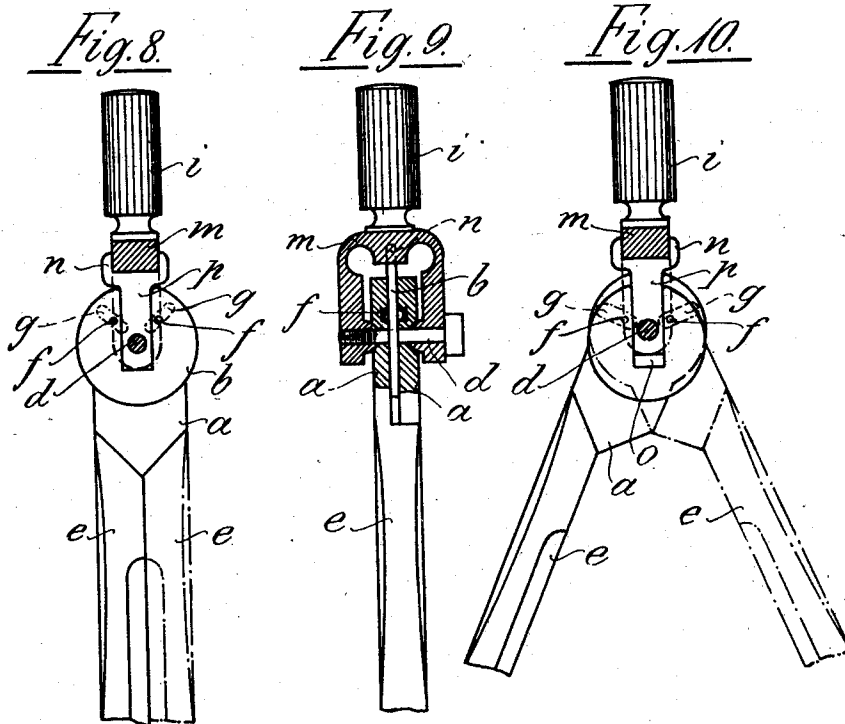
WITNESSES
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902,257.

Patented Oct. 27, 1908.

2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

GEORG SCHOENNER, OF NUREMBERG, GERMANY.

DRAWING-COMPASSES.

No. 902,257.

Specification of Letters Patent.

Patented Oct. 27, 1908.

Application filed November 26, 1907. Serial No. 403,910.

To all whom it may concern:

Be it known that I, GEORG SCHOENNER, manufacturer, subject of the German Emperor, residing at Nuremberg, Bavaria, Germany, have invented new and useful Improvements in Drawing-Compasses, of which the following is a specification.

Compasses are already known in which the handle is always held in the center line of the opening of the legs when the latter are opened and closed. In one known form of construction of such compasses, a disk is located between the lugs of the compasses head, while pins are inserted in the lugs which engage in slots and are guided therein.

The compasses forming the object of this invention differ substantially from this arrangement by the disk lying between the lugs of the head being provided with two studs or excrescences, and the lugs with recesses or grooves with which the studs engage.

The improved compasses have several essential advantages of construction as compared with the ordinary ones, as while in the latter the insertion of the pins in the lugs of the compasses head and the formation of the slots in the disk is very difficult, in the former the grooves in the lugs of the compasses head and the studs in the disk may be made by punching and drawing so that the compasses are especially adapted to be manufactured on a wholesale scale.

The invention is shown in the accompanying drawings, in which

Figure 1 is a front view, partly in section. Fig. 2 is a sectional view taken at right angles to Fig. 1. Fig. 3 is a view similar to Fig. 1, but showing the compass open. Fig. 4 is a side view of the disk. Fig. 5 is a section on line A—B Fig. 4. Fig. 6 is a front view partly in section showing a modification. Fig. 7 is a like view showing the compass open. Fig. 8 is a front view partly in section of another modification. Fig. 9 is a section taken through the center of Fig. 8. Fig. 10 is a view similar to Fig. 8 showing the compass open. Fig. 11 is a side view of the disk used in the modification illustrated in Figs. 8, 9 and 10. Fig. 12 is a section on line A—B Fig. 11.

In the first form of the invention shown in

Figs. 1-5, the disk *b* lying between the lugs *a* of the head of the compass is provided with an elongated slot *c* through which the hinge pin *d* of the compass arms *e* passes. On each side of the slot the disk has a stud *f*, said studs being displaced relative to one another so that each of them faces one of the two head lugs. In the latter, recesses or grooves *g* are provided in which the excrescences or studs engage. The disk *b* has at the portion which faces the handle *i* attached to the head yoke *m*, a projection *h* which enters a perforation *l* of the handle *i*, so that the disk *b* cannot be turned relatively to the compasses handle.

On the legs of the compasses, to which the disk *b* always lies symmetrically by reason of the studs fitting in the grooves *g*, being opened the disk is pushed upwards, the projection *h* being displaced in the perforation *l* of the handle and holding this also in a symmetrical position to the compass legs.

The second form of construction of the compasses Figs. 6 and 7, differs from the first by the disk *b*, lying between the lugs *a* of the compasses head, being prevented from turning relatively to the handle by a fork *r* embracing the bow or yoke *m*, and the arms of which slide up and down on said yoke *m* when the compasses are opened and closed, instead of as in the first case, by a projection provided on the disk *b* lying between the lugs *a* of the compasses head.

In the compasses shown in Figs. 8-12 the disk *b* is secured against displacement by a pin or shank *p* immovably held on the bow or yoke of the compasses head. This pin, which has at its upper end a clamp *n* which engages round the yoke, projects into a slot *o* in the disk. The disk *b*, which is perforated to allow of the passage of the joint pin *d*, slides along the pin *p* when the legs *e* are opened and closed. The grooves *g* impressed in the lugs *a* of the head are displaced through 180° relatively to the slots *g* in the compasses hereinbefore described, consequently the disk *b* slides downwards and not upwards when the compasses are opened.

I declare that what I claim is:—

A compass having a disk located between the lugs of the compass legs, said disk having a slot therein through which the pivot pin passes, a stud on each side of the disk, one

stud located on one side of the slot and one
on the other, and said lugs of the compass
legs having grooves therein adapted to en-
gage with the lugs on the disk, and means
5 for connecting said disk with the compass
head.

In testimony whereof I have signed my

name to this specification in the presence of
two subscribing witnesses.

GEORG SCHOENNER.

Witnesses:

LEONHARD KOERBER,
H. W. HARRIS.