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3,263,334

BEAM COMPASS

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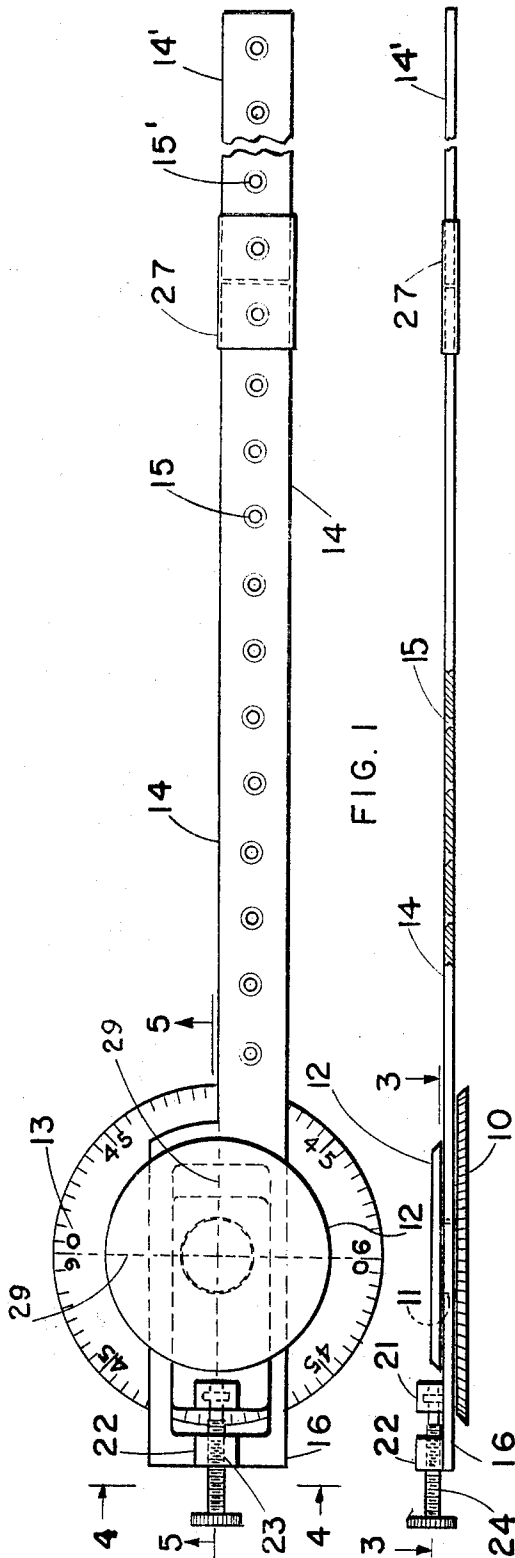
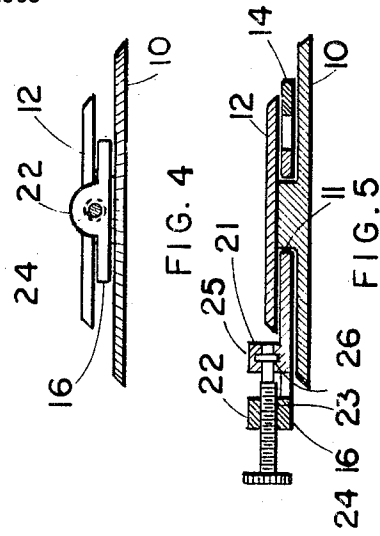
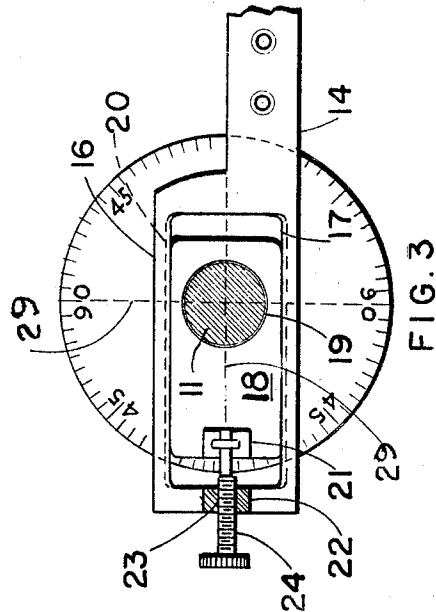


FIG. 2



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1

3,263,334

BEAM COMPASS

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1 Claim. (Cl. 33—27)

This invention deals with a beam compass employed in drafting and in similar applications. More specifically, it relates to a beam compass having an extendible arm, as well as a vernier adjustment and other valuable features.

The invention will be more readily understood by reference to the accompanying drawing in which a preferred embodiment is described, and in which FIGURE 1 presents a top or plan view of a preferred unit, with a portion of an arm extension cut away. FIGURE 2 illustrates a side view thereof, while FIGURE 3 depicts a top cross-sectional view taken along the plane of line 3—3 in FIGURE 2. FIGURE 4 shows a cross-sectional end view taken along the plane of line 4—4 in FIGURE 1, while FIGURE 5 depicts a cross-sectional side view of the body portion of the compass taken along the plane of line 5—5 in FIGURE 1. The same numerals refer to similar parts in the various figures.

Referring again to the drawing, numeral 10 represents a round base or body portion having a centrally-disposed upwardly projecting pivot-portion 11, and an upper plate or cover 12 attached to the top of, and overlapping, pivot portion 11. The upper exposed peripheral area of base 10 is engraved with a scale 13 depicting degrees of a circle.

Arm 14, which projects out of base 10, is provided with straight edges, and with drilled and chamfered holes 15 which are spaced on arm 14 at regular intervals and serve to take an inserted pencil point when the desired arc or circle is to be drawn. The engaged portion 16 of arm 14 is widened and hollowed to provide a rectangular space 17 in which is disposed vernier slide plate 18. Slide plate 18 has close-fitting hole 19 which fits over pivot 11 and is able to rotate thereabout. The inner edges of widened end 16 may be provided with grooves 20 in which may ride the sides or projections of the sides of plate 18. It is thus seen that arm end 16 is able to slide along the sides of plate 18.

Projecting upwardly from the outer end of plate 18 is a boss 21. Also projecting upwardly from the end of widened arm portion 16, and disposed opposite to boss 21, is another boss 22, having a threaded hole 23, in which rides a vernier screw 24. This screw is widened as its end at 25, so that the latter may merely turn in fixed position in opening 26 in boss 21, so that, when screw 24 is turned, arm end 16 may be moved back or forth, which of course would move arm 14 to the desired sharper setting.

As can be noted from FIGURES 1 and 2, there can be provided any number of arm extensions 14' provided with a sleeve 27 or other joining element for connecting extension 14' to arm 14.

When in use, the arm 14 (which may carry length graduations) and the necessary extensions 14' (which

2

also can carry the length graduations) are laid out, with the base as the center. Then, if it is necessary to lengthen or shorten the arm in order to insert the pencil point into hole 15 or 15' at the required location, the arm is lengthened or shortened, accordingly, by turning vernier screw 24.

As is apparent from the foregoing, the present invention provides a very useful beam compass of relatively uncomplicated construction. The present compass enables use of any pointed marker, it leaves no holes and, when made of transparent plastic, it enables use of center lines 29 to be visible, thus readily facilitating the finding of the center of the arc or circle drawn.

I claim:

A beam compass, comprising, in combination:

- a transparent base carrying visible protractor graduations,
- a transparent pivot post extending centrally and upwardly from said base,
- a slide plate disposed over said base and around said pivot, in pivoting relation thereto,
- a compass arm having straight edges and having a hollowed mounting end disposed around said slide plate in a manner such that said mounting end may be slid in the direction of the axis of the arm, with the edges of said plate serving as the guides,
- a threaded screw mounting disposed at the end of said hollowed mounting,
- a pivot screw mounting on said slide plate opposite said threaded screw mounting,
- a vernier screw passing through both screw mountings in a manner such as to enable movement thereby of said compass arm with respect to said slide plate,
- a cover disposed on said pivot post and extending over said slide plate and designed to prevent slipping out of said post, said cover being transparent at least in the portion over said post, and
- crossed center lines imprinted on at least the top surface of said cover and designed to facilitate finding, through the transparent cover, post and base portions, of the center of the arc or circle to be drawn by the compass.

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