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INSTRUMENT CASE AND THE LIKE

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Fig. 2

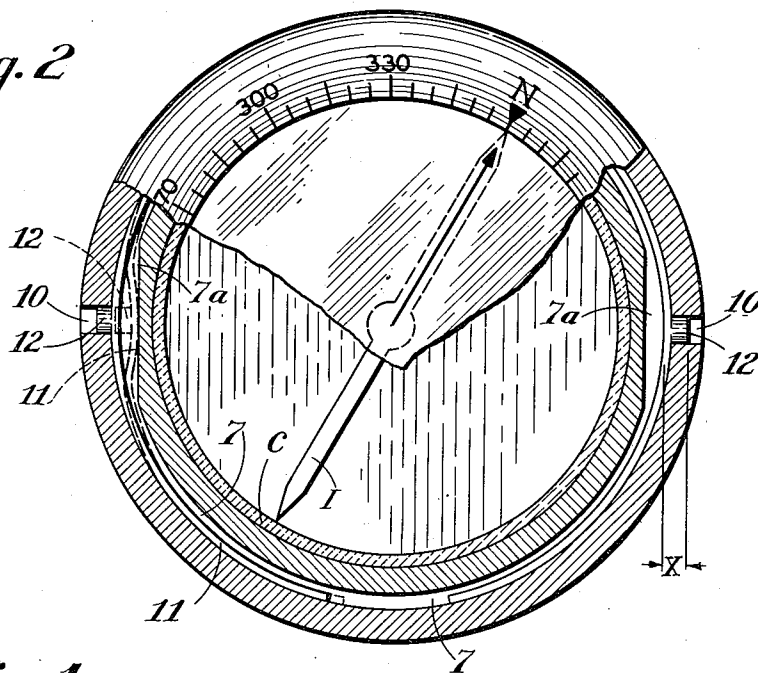


Fig. 1

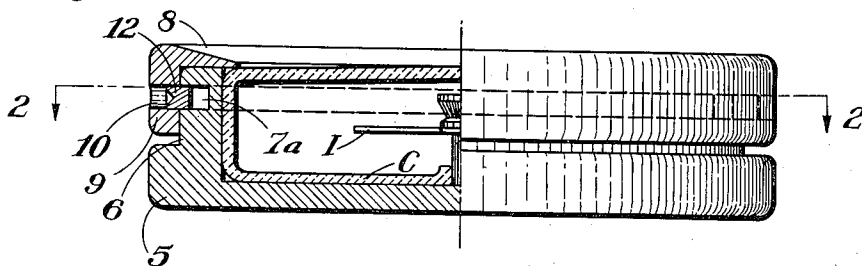
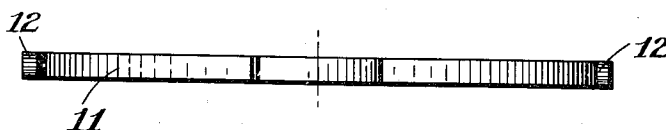


Fig. 3



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INSTRUMENT CASE AND THE LIKE

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3 Claims. (Cl. 73—151)

This invention relates to an arrangement for detachably locking a cover on a receptacle and more particularly to an arrangement for locking a bezel on a case for an instrument such as a compass.

While various arrangements have been suggested for detachably locking a cover on a case, these locking arrangements have not only been complicated in construction but they have failed in locking the cover against accidental removal while still permitting the cover to be readily detached when desired. This has been especially true where it was essential to have the bezel rotatably adjustable, for example, in a compass that was to be used to take bearings.

In accordance with the present invention, there is provided a simple, reliable arrangement for detachably locking a rotatable bezel or the like on a case.

The various features and advantages of the invention will best be understood by reference to the detailed description and claims when taken with the drawing in which Fig. 1 is a side elevation partially broken away, of the receptacle or instrument case of the present invention; Fig. 2 is a sectional view of the instrument, taken substantially on the line 2—2 of Fig. 1 particularly illustrating in full lines, the mounting of the locking ring, and in dotted lines the position which this ring occupies to enable the bezel or cover to be removed from the case; and Fig. 3 is a side view of the locking ring.

In the drawing, 5 designates a cup-like instrument case in which there is secured, a compass unit C formed in part of transparent plastic material and including a magnet needle or index I. This case has a rim which is provided with an annular groove 7 located in spaced parallel relation to the edge of the rim. The annular groove 7 has diametrically opposed portions 7a (Fig. 2), of greater depth than the remainder of the groove for a purpose to be hereinafter set forth. The instrument case is provided with a cover or bezel 8 having a flange 9 closely fitting in telescopic relation on the flange 6 of the instrument case. The rim 9 of the bezel has diametrically opposed apertures 10 extending therethrough to open into the groove 7 when the bezel is mounted on the case as shown in Fig. 1. If desired, the face of the bezel may be marked with points of the compass and with various angular degrees.

In order to lock the bezel on the case, there is provided an interrupted ring 11 of resilient material, such as metal, normally positioned in the groove 7. This ring is provided with nibs

or lugs 12 so positioned as to be received in the apertures 10 in the bezel rim 9. It will be noted that the combined thickness of the ring 11 and one of its lugs 12, represented by the dimension X in Fig. 2, is greater than the depth of the main portion of the groove 7. However, this dimension X is less than the depth of the portions 7a of the groove. From this, it will be understood that when it is desired to remove the bezel from the case, the bezel with the ring 11 is rotated to the position shown in Fig. 2. Then a stylus or other suitable tool (not shown) can be inserted through one of the apertures 10 to depress a lug 12 so that this lug and the adjacent portion of its ring can be distorted to the position shown in dotted lines in Fig. 2. When in this position, the adjacent side of the bezel can be lifted from the case, after which the other lug can be disengaged from the other aperture 10.

In locking the bezel on the case, the locking ring 11 is assembled in the groove 7 of the instrument case with the lugs 12 in registry with deepened portions 7a of the groove. The bezel is tilted with respect to the case until one lug 12 can be inserted in the bezel aperture 10, and then the other lug 12 and the adjacent portion of its ring is pushed into the groove 7 until the remainder of the bezel is moved into engagement with the rim of the case. If both lugs 12 have not entered the apertures 10, the stylus may be used to so position them. Thereafter the bezel with the ring 11 may be rotated so that the lugs 12 are moved out of registry with the deepened portions 7a of the groove. It will be understood that it will be impossible to remove the bezel from the case until the bezel and its locking ring are rotated again to the position illustrated in Fig. 2.

In the present disclosure, but two locking lugs engage openings 10 in the bezel rim 9 and only two diametrically opposed deepened sections 7a of the groove are provided. It will be understood, however, that a different number of the locking lugs and related parts may be utilized without departing from the spirit of the present invention.

What I claim is:

1. A case comprising a circular cup-like part and a cover part having a circular rim fitting in telescopic relation on the rim of said cup-like part, one of said parts having a circumferential groove in parallel spaced relation to the edge of its rim, the rim of the other part having spaced recesses therein in registry with said groove, a ring adapted to be received in said groove, spaced

lugs on said ring extending into said recesses, the major part of said groove having a depth less than the corresponding dimension of a lug and its ring while the remainder of said groove has portions of greater depth than the mentioned dimension of a lug and the ring, said portions being spaced apart circumferentially a distance of the order of the spacing between said lugs whereby said ring can be rotated with said other part to a position where it can be forced into said groove portions to permit said lugs to be disengaged from said recesses thereby enabling said parts to be separated.

2. A case comprising a circular cup-like part and a cover part fitting thereon, said cup-like part having a circumferential groove in parallel spaced relation to its rim, said cover part having a circular flange projecting in telescopic relation to said rim over said groove, said flange having a plurality of apertures extending therethrough in registry with said groove, and a ring adapted to be received in said groove, spaced lugs on said ring extending into the apertures on said cover, the major part of the groove in the cup having a depth less than the corresponding dimension of a lug and the ring, while the remainder of said groove has portions of greater depth than the mentioned dimension of a lug and the ring, said

portions being spaced apart circumferentially a distance of the order of the spacing between said lugs whereby said ring can be rotated with said cover to a position where it can be forced into said groove portions to permit said lugs to be disengaged from said apertures enabling the cover to be removed from said cup.

3. A case comprising a circular cup-like part and a cover part having a circular rim fitting in telescopic relation on the rim of said cup-like part, one of said parts having a circumferential groove in parallel spaced relation to the edge of its rim, the rim of the other part having at least one spaced recess therein in registry with said groove, and a ring adapted to be received in said groove, at least one spaced lug on said ring extending into said recess, the major part of said groove having a depth less than the corresponding dimension of a lug and its ring while the remainder of said groove has at least one portion of greater depth than the mentioned dimension of a lug and the ring whereby said ring can be rotated with said other part to a position where it can be forced into said groove portion to permit said lug to be disengaged from said recess thereby enabling said parts to be separated.

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