Feb. 3, 1942. N. KLEIN ET AL 2,271,943

CENTRAL PILLAR CONTAINER

Filed June 1, 1939

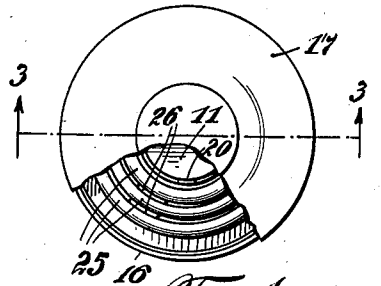


Fig. 1.

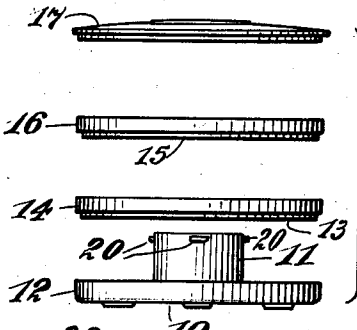


Fig. 2.

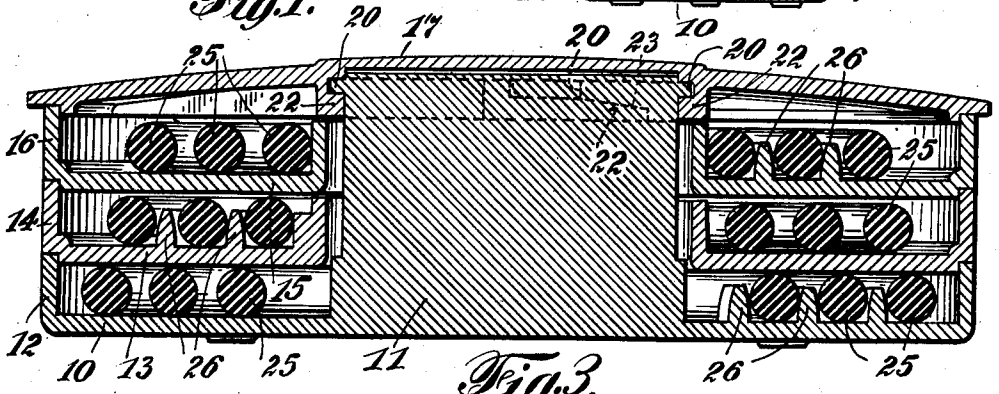


Fig. 3.

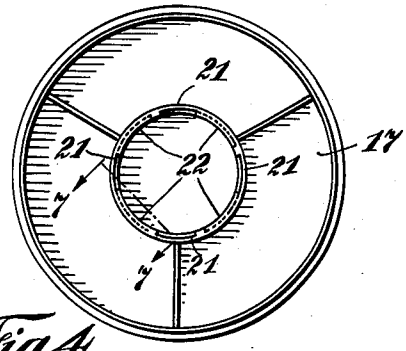


Fig. 4.

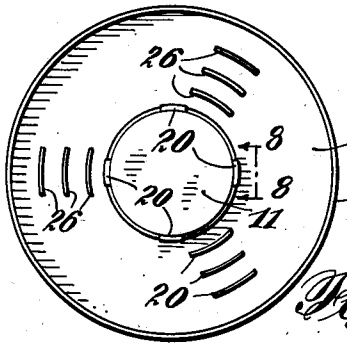


Fig. 6.

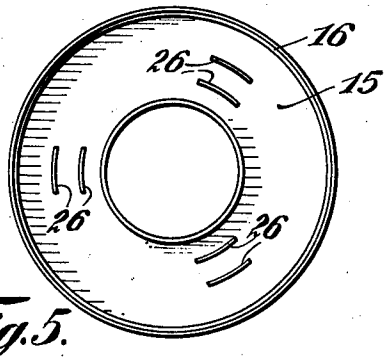


Fig. 5.

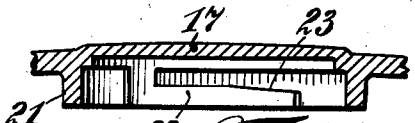


Fig. 7.

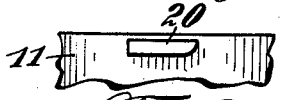


Fig. 8.

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CENTRAL PILLAR CONTAINER

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2 Claims. (Cl. 206—1)

This invention relates to containers of the screw-top type, especially those in which the top and the body are provided with spaced coacting lugs arranged so that they can be brought into and out of engagement by turning the top through a relatively small angle with respect to the body of the container. The engaging faces of these lugs are inclined so that, after the lugs have been brought into engagement by turning the top, continued turning movement of the top forces the latter down onto the mouth of the container. The lugs are, in effect, screw threads mutilated to permit engagement and disengagement by a relatively small angular movement.

Heretofore the screw threads or the lugs on the body of the container having been arranged on the outside of the mouth thereof and the lugs on the top have been located on the inside of a flange depending from the margin of the top. Usually the top and body of the container are molded, or stamped, a method which, while cheap, is not well adapted to the production of exact accuracy of form, especially with regard to screw threads, lugs and the like. Hence, a lug on one side of the top may be in firm locked contact with the corresponding lug on the body before the other lugs are in operative contact with each other. As a result, the top and the container mouth are drawn together at one side only. This difficulty may be overcome by using a rubber gasket which, being resilient, allows the top to be drawn down on one side until the lugs on the other side are in engagement. The use of a gasket, however, not only involves an added element, but has the further disadvantage that the gasket is liable to become displaced and lost.

Another disadvantage of the previous type of screw-top containers is that the method of securing the tops does not lend itself to the production of multiple tray containers. Where the locking engagement is between the outer wall and the top, the wall cannot be made of a series of separable annular nested sections, each of which forms the outer margin of a tray, for the reason that the only operative connection between the base and the top is the outer wall, which must therefore be integral.

The principal objects of the present invention are to overcome these objections to the screw-top type of container.

According to the present invention, the body of the container is provided with a central pillar on which are formed screw threads or inclined lugs for engagement with corresponding screw threads or lugs on the underside of the cover. The downward pull produced by such engagement, being exerted on the central portion of the top, causes the outer edge of the top to be pressed against the entire periphery of the mouth of the container with substantially uniform pressure at all points. This occurs even though there is only one part of the screw thread or only one lug actually operative. If desired, the contacting surfaces of the top and vessel mouth can be ground or machined to give such close contact that, irrespective of inaccuracies in the form of the screw threads or lugs, the container when closed is practically air-tight, even in the absence of a rubber gasket or the like.

Another features of the invention is the arrangement of a series of annular nesting trays surrounding the central pillar and clamped between the base and top by interlocking means on the pillar and top, respectively.

One suitable embodiment of my invention is illustrated, by way of example, in the accompanying drawing, wherein:

Figure 1 is a top plan view of the container with part of the top broken away;

Figure 2 is a side elevation of the various parts of the container separated from each other;

Figure 3 is a section on the line 3—3 of Figure 1;

Figure 4 is a bottom plan view of the container top;

Figure 5 is a plan view of the upper tray of the container with its contents removed;

Figure 6 is a plan view of the base of the container with its top, two upper trays, and contents removed;

Figure 7 is a section on the line 7—7 of Figure 4; and

Figure 8 is a side elevation on an enlarged scale taken on the line 8—8 of Figure 6.

As shown, the container comprises a base 10 having a central pillar 11 and an upstanding flange 12. Resting on the upper margin of the flange 12 is an annular tray 13 having a peripheral flange 14. On this flange 14 rests a second tray 15 also having a peripheral flange 16. Seated on the top of the flange 16 is the top 17 of the container. On the underside of the top and each of the trays is a shoulder, shown more particularly in Figure 3, the function of which is to hold all four parts in concentric relation.

It will be noted that the flanges 12, 14 and 16, taken as a unit, form the side wall of the container and for many uses the trays may be

omitted and the container made with an integral side wall extending from the base to the top.

Around the top of the pillar are a series of outwardly extending peripherally spaced lugs **20**. As shown, they are four in number spaced 90° apart. Depending from the underside of the top is a flange **21** having an equal number of inwardly extending lugs **22** spaced the same distance apart. These lugs **22** are shorter than the distance between the lugs **20**, so that when the top is placed on the container or removed therefrom, the lugs **22** can pass between the lugs **20**. One set of these lugs, as shown the set **22**, each have an inclined face **23** for wedging engagement with the other set of lugs. Both sets of lugs could have similarly inclined surfaces, but that is unnecessary for practical operation.

As the base, trays and top are held together centrally, the peripheral wall of the container may, as shown, be divided into sections, one for each tray and one for the base, so that each tray can be grasped peripherally and lifted off the tray or base below as soon as the top has been disengaged from the pillar.

The container illustrated is designed specifically for holding a series of rubber rings **25** of graduated sizes. For holding these rings in place upstanding projections **26** are formed on the bottom of the base and of each tray.

We do not limit ourselves to the specific size, shape, number, arrangement, or material of parts as shown and described, as these are given simply for the purpose of clearly describing the devices of our invention.

What we claim is:

1. A container comprising a base having an upwardly extended peripheral wall and an upwardly extended centrally positioned cylindrical pillar extending above the upper edge of the wall having a plurality of outwardly extended peripherally spaced lugs in its upper portion, a plurality of stacked upwardly flanged receptacles supported on said wall each having a centrally positioned opening adapted to receive said pillar, said flanges forming the exterior of the device when said pillar is extended through said receptacle openings, a top member having an interior recess adapted to receive the upper portion of said pillar, a plurality of wedge-shaped lugs carried by said top adapted to be placed beneath said pillar lugs, adapted to affix said top to said pillar by a partial revolution of said top.

2. A container comprising a base having an upwardly extended peripheral wall and an upwardly extended centrally positioned cylindrical pillar extending above the upper edge of the wall having a plurality of outwardly extended peripherally spaced lugs in its upper portion, a plurality of stacked receptacles supported on said wall each having a central opening adapted to receive said pillar, said pillar extending above the topmost receptacle, a top member having an interior recess adapted to receive the upper portion of said pillar, a plurality of wedge-shaped lugs carried by said top and extending into said top recess, said lugs being capable of being passed beneath said pillar lugs and to affix said top to said pillar.

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