March 7, 1933. H. C. GESSLER 1,900,643

SELF CLOSING SUGAR BOWL MOUNTING

Filed Oct. 19, 1931

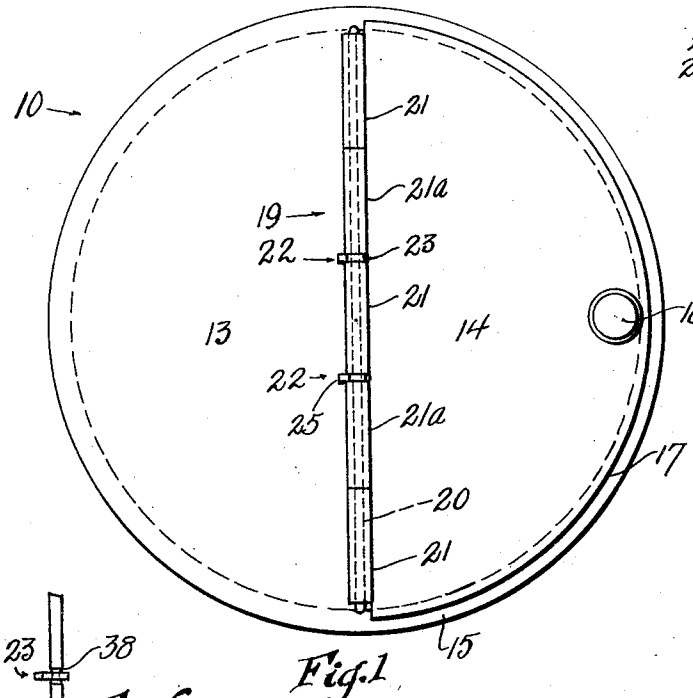


Fig. 1

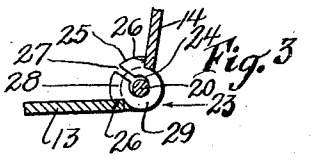


Fig. 3

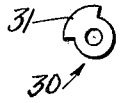


Fig. 4

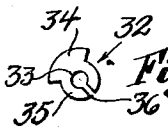


Fig. 5

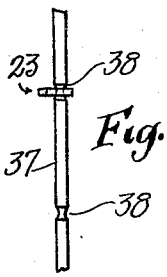


Fig. 6

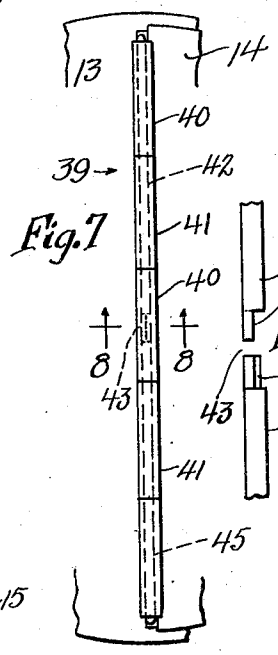


Fig. 7

Fig. 9

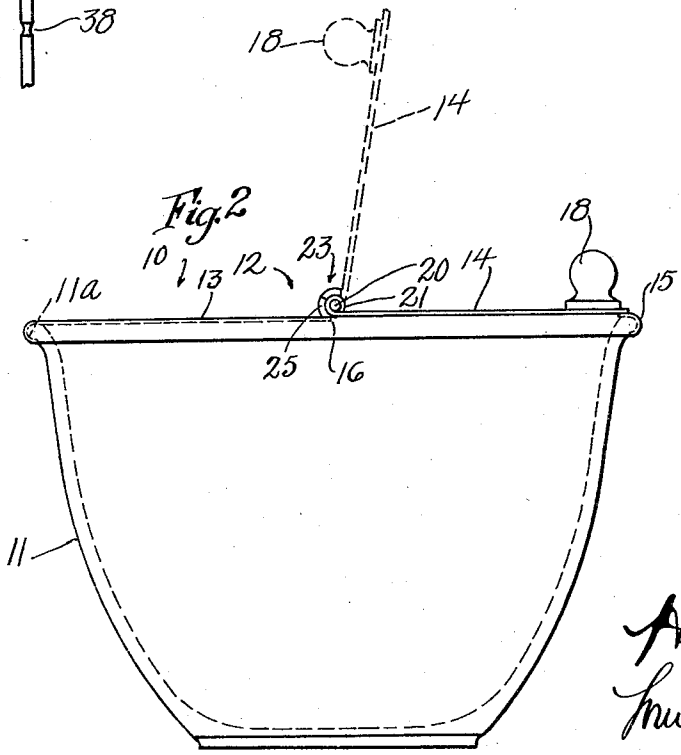


Fig. 2

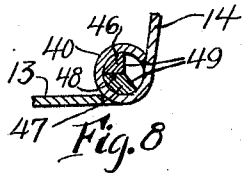


Fig. 8

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UNITED STATES PATENT OFFICE

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SELF-CLOSING SUGAR BOWL MOUNTING

Application filed October 19, 1931. Serial No. 569,624.

This invention relates to containers, and has particular reference to sugar bowls.

One object of the invention is to provide a device of the character described having an improved positive acting self closing cover mounting, whereby closure of the cover is at all times assured, so that the cover may not accidentally be left open to receive dust and the like.

Another object of the invention is the provision of a device of the nature set forth including a hinge construction having any or all of the following improved features: a stop means directly associated with the hinge and forming a part thereof; a stop means mounted on the hinge pintle, and forming an inconspicuous part thereof, but preferably separably or independently mounted thereon adjacent to or between a plurality of knuckles; a stop means mounted at the hinge and adapted to act in direct compression; a stop means so arranged as to afford stress distribution in exerting an opening force on the cover; a stop means having a resilient abutting coaction for positively limiting the movement of a cover.

A further object of the invention is to construct a container, such as a sugar bowl, having an improved combined hinge and stop means having relatively few and simple parts, and which is inexpensive to manufacture, small, compact, easy to clean and neat in appearance, and durable, reliable and efficient in use.

Other objects and advantages of the invention will become apparent as the specification proceeds.

With the aforesaid objects in view, the invention consists in the novel combinations and arrangements of parts hereinafter described in their preferred embodiments, pointed out in the subjoined claims, and illustrated on the annexed drawing, wherein like parts are designated by the same reference characters throughout the several views.

In the drawing:

Figure 1 is a top plan view of a sugar bowl embodying the invention.

Fig. 2 is a view in side elevation thereof, showing an open position of the cover in dotted lines.

Fig. 3 is a fragmentary enlarged sectional view of the combined hinge and stop means.

Figs. 4 and 5 are side views of modified forms of stops.

Fig. 6 is a fragmentary view of a modified pintle and a stop thereon.

Fig. 7 is a fragmentary plan view of a modified stop hinge construction.

Fig. 8 is a sectional view taken on line 8—8 of Fig. 7, in the open position of the cover.

Fig. 9 is a fragmentary enlarged view of the pintle with the parts thereof separated.

The advantages of the invention as here outlined are best realized when all of its features and instrumentalities are combined in one and the same structure, but, useful devices may be produced embodying less than the whole.

It will be obvious to those skilled in the art to which this invention appertains, that the same may be incorporated in several different constructions. The accompanying drawing, therefore, is submitted merely as showing the preferred exemplification of the invention.

Generally described, this invention relates to containers and particularly to sugar bowls wherein a cover is hingedly mounted and has coacting means tending to close the cover by its own inherent weight as by stopping the movement of the cover at a suitable angle or position. In one form of the invention, elements such as stop washers may be mounted on the hinge pintle between the knuckles thereof, each element having a projecting wing or segment in the plane thereof, provided with substantially radial shoulders adapted to abut the cover and a wall of the sugar bowl. The wing thus acts in direct compression, and cannot be deformed by any ordinary stresses. The element may be separable from the pintle, and forms a part of the hinge structure in a neat appearing manner. By utilizing a plurality of the elements, stresses on the cover may be distributed therealong. The elements may be resilient or split so that the opening movement of the cover is stopped with little jar, and in fact the

resilience of the cover tends to return the cover to closed position. The pintle may be resiliently gripped by the element to prevent accidental removal of the pintle and without necessitating that the pintle be otherwise secured. It will be appreciated that the invention is in various features thereof applicable to hinge structures per se.

Referring in detail to the drawing, 10 denotes a device embodying the invention. Without limiting, but for the purpose of illustrating the invention, the same may include a sugar bowl having a bowl portion 11 that may be made of clay, porcelain, or other materials, and a top sheet metal closure means 12. The latter may be substantially split along a diametrical line to provide members 13, 14, of which the former may be permanently secured to the bowl portion, and the latter hingedly mounted on the member 13. To secure the member 13 to the bowl portion, the latter may have an annular curved rim 11*a*, and the member 13 may have a circular flange 15 adapted to extend completely around the rim and being preferably spun thereon for strong engagement. The member 13 may terminate at 16 to afford a semicircular opening that is closed by the cover 14, the arcuate edge 17 whereof overlaps on a part of the flange 15. The cover 14 may have a knob 18 for opening the same.

For mounting the cover 14, a hinge means such as 19 may be provided, including a pintle 20 and a plurality of knuckles 21 and 21*a* alternately successively extending from the members 14, 13 respectively to take around the pintle. To limit the opening movement of the cover 14, a stop means such as 22 may be provided with is so arranged as to prevent the cover from opening substantially beyond the position shown in dotted lines in Fig. 2. In this position the cover may extend at slightly less than a right angle in respect to the center of gravity thereof to the vertical so that the cover automatically tends to close without requiring the use of springs or the like. Hence the closing of the cover will not be dependent upon the attention of the user of the sugar bowl.

One form of stop means may include an element such as a washer 23 having a central hole 24 adapted to receive the pintle 20 with a proper clearance. This washer may have a projecting segment or wing 25 providing preferably radial stop shoulders 26 at the ends thereof. One or more of these stop washers may be mounted on the pintle, preferably between pairs of adjacent knuckles 21, 21*a*. This can be accomplished merely by passing the pintle through the knuckles and washers in proper succession, it being understood that certain of the knuckles are spaced to afford room for the washers. When so mounted, the segment 25 lies above the member 13, and may be freely turned upon its pintle. But when the cover is opened, the stop shoulders act as abutments against the cover and the member 13 limiting the opening of the cover. By providing a plurality of the washers, the stresses caused in the stopping action are distributed. The washer in the stopping position of the device exerts a tension on the pintle which is amply held and re-enforced by the knuckles. The segment 25 acts in substantially direct compression and is guidingly retained between the knuckles so that it will sustain an ample stress without deforming. It will be noted that the washers are a neat and inconspicuous part of the hinge construction, and are relatively uniform therewith.

To afford a resilient stopping action so as to avoid any jar upon the device, the segment 25 may be split, slotted or otherwise separated at 27 to divide the segment into a plurality of heads 28. Each of these heads has an abutting shoulder 26, and the heads are spaced but in alinement and in relative proximity to each other so that they come into direct abutment with each other when the segment is subjected to compression. In that case the part 29 of the washer may act as a resilient portion and may snugly enwrap the pintle. The device 23 may be made in various ways as by stamping, casting, and the like.

In Fig. 4 is shown a modified form of stop washer 30 which may in all respects be similar to that shown in Fig. 3, except that the segment 31 thereof is not split.

In Fig. 5 is shown a modification of a stop washer 32 having the central hole 33, a stop segment 34, and a circular or hub portion 35 which may be split at 36 so that the same may be readily applied to a pintle.

In Fig. 6 is shown a modified pintle 37 for use in the hinge 19. This pintle may have recesses such as 38 for engagement by resilient portions of the stop elements, such as the parts 29 and 35. In this manner the stop elements tend to prevent any longitudinal movement of the pintle in its hinge. The recesses may be of sufficient depth to permit the resilient movement of the washers in expansion or contraction.

In Figs. 7 to 9 is shown a further modification of a combined hinge and stop 39 including knuckles 40 for cover 14 and knuckles 41 for the member 13. A pintle means 42 for the knuckles, is split substantially centrally at 43 into pintle elements 44, 45. One of these elements is secured to one knuckle 40, and the other to a knuckle 41. The pintle elements have portions 46, 47 engageable with each other and extending toward each other in the longitudinal direction of the pintle. The stop portions 46, 47 may be in the nature of radial members, each being preferably of angular cross section, but the total combined angle for both being considerably less than

360 degrees so as to afford relative angular movement therebetween. For example, the element 46 may be approximately a right angle, and the element 47 somewhat greater than a right angle. The elements have faces at 48 and 49 for abutment in opening and closing positions of the cover 14, particularly the former. If the members 44 and 45 be assumed to be secured to the respective members 14 and 13, then Fig. 8 shows the portions 46, 47 in stop opening position of the cover.

It will be appreciated that various changes and modifications may be made in the device as shown in the drawing, and that the same is submitted in an illustrative and not in a limiting sense, the scope of the invention being defined in the following claims.

I claim:

1. A device including a container, a cover therefor, a hinge mounting for the cover including a pintle, and stop means for the cover including a resilient element taking around the pintle and mounted thereon, said element having end heads in spaced relation to each other, said heads having opposite faces adapted for abutting the cover and an adjacent wall of the container, said heads having inner faces in proximity to each other for abutment of the heads against each other upon flexing the resilient element, to positively limit the opening of the cover.

2. A sugar bowl having a bowl portion, top closure means split along a substantially diametral line to provide a plurality of segmental members, one of said members being permanently secured to the bowl portion, hinge means connecting the other member to the first member along said line, the hinge means including a pintle and a plurality of knuckles, and a stop washer mounted on the pintle between said knuckles, said stop washer having a segmental wing in the plane of the washer, said wing having radial shoulders adapted to abut between the members to limit the opening movement of the hinged member, said wing being split to afford a plurality of spaced heads, having the radial shoulders, said washer having a resilient portion, whereby the heads are movable toward and into abutment with each other on springing the washer by causing the hinged member to exert a stress on said heads.

3. A sugar bowl having a bowl portion, top closure means split along a substantially diametral line to provide a plurality of segmental members, one of said members being permanently secured to the bowl portion, hinge means connecting the other member to the first member along said line, the hinge means including a pintle and a plurality of knuckles, and a resilient element between the knuckles, said element extending around the pintle and having a plurality of shoulders outside of the bowel portion, said shoulders lying in the plane of the element between the knuckles and terminating in close proximity thereto, said shoulders bearing on the members for resiliently limiting the opening of the hinged member.

In testimony whereof I affix my signature.

HARRY C. GESSLER.