SILICONE LID FOR SEALING ANY TYPE OF OPEN-ENDED CONTAINER

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Publication Classification

Int. Cl.
B65D 51/00 (2006.01)
B65D 51/12 (2006.01)
B65D 51/16 (2006.01)

U.S. Cl. 220/287; 220/305; 220/231

ABSTRACT

A silicone lid for sealing any type of open-ended container. The lid includes a top having a first center and a bottom having a second center. The second center being in the same center axis as the first center. The center axis being a certain thickness. The silicone lid is sealed to the container by placing the bottom of the lid on an open-ended side of an open-ended container and depressing the top forcing air out of the container and forming a vacuum seal.
Figure 1
SILICONE LID FOR SEALING ANY TYPE OF OPEN-ENDED CONTAINER

THE FIELD OF THE INVENTION

[0001] This particular invention generally pertains to silicone lids for closing various types of open-ended containers found in the kitchen. More specifically, it is directed to a lid that provides a novel and improved sealing arrangement by producing a vacuum seal on various types of open-ended containers made from a variety of materials.

BACKGROUND OF THE INVENTION

[0002] It is a rather widespread commercial and industrial practice to store a variety of goods or the like in re closable containers. Typically, these containers are comprised of a bowl-shaped container member having at least an open end, and removably associated therewith a closure member or lid. Normally, the closure member has relatively flexible characteristics, and is appropriately formed so as to have interfitting surfaces which usually cooperate with corresponding cooperating surfaces on the container to produce a snap-on type fit. The foregoing type of interfitting and cooperating relationship provides an ordinary seal. Such seal essentially serves the conventional purposes of preventing spoilage of the contents in the container and, in certain instances, undesired fluidic leakage into and from the container for well-known purposes.

[0003] There have been numerous forms of prior art constructions for providing the noted interfitting and cooperating relationship between the container and closure lid members of the above category. Often, many of these prior art constructions have interfitting and cooperating surfaces which are rather complicated in configuration and somewhat costly in production. Moreover, such category of prior art containers failed to furnish effective seals, especially through repeated usage. In addition, such container members and closure members were generally difficult to quickly and easily disassemble and reassemble. It is, of course, apparent that if a perfect or effective seal was not attained, the container would correspondingly be unsatisfactory for its intended use and thereby fail to perform its intended function.

[0004] Aside from the foregoing enumerated disadvantages, the typical prior art container constructions need to have a container member that fits to a specific lid. The prior art does not furnish any means for quickly, easily, and reliably sealing any type of container member with a single lid for all types of containers.

[0005] Attempts have been made to generally improve upon the effectiveness of the typical prior art container seal relationships by providing a container having relatively simply constructed interfitting and cooperating surfaces which provide for the seal. By way of specific example, an attempt to provide for such an improved resealable container is generally described in U.S. Pat. No. 2,850,786. The type of resealable container described in the above patent includes a plastic open ended container having an outer rim which is slidably insertable within a corresponding groove formed in the removable closure member. While this type of container was generally considered an improvement, it, however, needs the user to purchase both the open-ended container with its proper lid. That is, the arrangement has an interfitting lid with a cooperating bowl.

[0006] Other attempts to improve upon the foregoing type of seal arrangement have resulted in the manufacture of containers which enable the formation of at least double mechanical type seals between the closure lid member and container member. Although these attempts, such as described in U.S. Pat. Nos. 2,985,354 and 3,460,711, provide for a plurality of seals between the mating containers and closure members, they nevertheless are subject to several disadvantages. Among such disadvantages are the fact that the closure lid members are somewhat complicated in construction and manufacture. In addition, they are, in general, not as easily removable or replaceable as could otherwise be commercially desired. Moreover, in using this latter category of container, a user would not, in an easy fashion, be able to automatically and accurately ascertain whether or not the interfitting and cooperating surfaces of the lid and container had formed adequate and effective seals.

[0007] Other flexible containers have been proposed, such as described generally in U.S. Pat. No. 3,743,131, which essentially provide for a pop-top type of closure lid which produces an audible sound. The foregoing described container, however, suffers from the disadvantage in that only a single seal is provided which may not, under all circumstances, be able to provide the type of sealing that might be desired in certain situations.

[0008] In view of the foregoing comments directed to the various prior art constructions of resealable containers, it will be appreciated that such heretofore known prior art containers do not facilitate an easy and quick attachment and detachment of the lid to the closure member in a simple, economical, and reliable manner.

SUMMARY OF THE INVENTION

[0009] A silicone lid or closure member for sealing any type of open-ended container. The lid includes a top having a first center and a bottom having a second center. The second center being in the same axis as the first center. This axis being a certain thickness.

[0010] To facilitate sealing the container, the silicone lid is placed on an open-ended side of an open-ended container. A user then depresses the center of the lid forcing air out of the container and allowing a vacuum seal to form between the lid and the container. The vacuum seal is quite strong and reliable for its intended purpose.

[0011] Other features of the silicone lid include a peripheral edge that is thinner than the center axis and a rim lip which extends over an edge of the open-ended side of said container. The silicone lid further comprises a protrusion for removing the vacuum-sealed lid from the container as well as having protrusions arranged around the top and bottom center axis.

[0012] The lid is formed from silicone, and is pliable and able to conform to the shape of the open-ended container. The lid also has elastic characteristics which allow the edge of the open-ended container to be embedded or depressed in the silicone material. Once the lid is removed from the container, the lid will return to its normal state.
The silicone lid comes in a variety of sizes and can fit most standard kitchenware such as bowls, pans, pots and cups found in a kitchen. The kitchenware, however, must possess a uniform edge so that a proper seal can be attained.

Another advantage of the silicone lid is that the lid can be placed on a flat surface with the bottom of the container placed on its top. This action keeps the container from slipping off the surface when mixing items in the container because of a high-friction coefficient of silicone.

Some other features of the silicone lid is (1) keeping the contents of container fresh by holding in moisture and (2) keeping hot contents of container hot due to non-heat resistance characteristics of silicone. The lid is also microwave-safe and dishwasher-friendly.

BRIEF DESCRIPTION OF THE DRAWINGS

The following description of preferred embodiment of the present invention will be better understood when read in conjunction with the appended drawings. It should be understood, however, that the invention is not limited to the precise arrangements shown.

FIG. 1 is a front view of the present invention. FIG. 2 is a back view of the present invention. FIG. 3 is a top view of the present invention. FIG. 4 is a right view of the present invention. FIG. 5 is a side view of an embodiment of the present invention. FIG. 6 is a perspective view of an embodiment of the present invention. FIG. 7 is a side view of another embodiment of the present invention.

PREFERRED EMBODIMENT OF THE INVENTION

In most kitchens, leftovers are always in the refrigerator. Most of these leftovers are stored in ordinary kitchen bowls with plastic wrap or aluminum foil. Other items are stored in containers that have interleaved tops.

Problems that occur with the interlocking containers is that the interlocking containers are not easily stored because the tops and the lids do not easily stack. Another problem is that if a person buys more than one brand of interlocking container, the lids are not one size fits all and they do not interconnect to each other. Finding a particular lid that fits a particular container can be tedious at times.

The problem with plastic wraps is that liquids such as soups and gravies always leak out of the container and items cannot be stored one on top of another without squashing the item underneath.

That is why the present invention is a lid that fits any type of container that can be found in a kitchen. The present invention is also strong enough to hold items on top of the container without crushing the food held in another container stored beneath it. The present invention also vacuum seals the food held in the container so the food does not spoil. Other advantages will become apparent as the invention is discussed below.

In FIG. 1, a front view of the present invention is shown. Here, the present invention is in the shape of a circle even though other shapes, such as, squares or rectangles may be used. The lid 10 of the present invention has a peripheral edge 11 with a protrusion 12. This protrusion 12 allows a user to remove the lid 10 from a container (not shown).

The lid itself is made from a soft, durable silicone material. The silicone material easily molds to its surroundings but is rigid enough to provide protection for the contents held within the bowl. The edges of the lid are smooth to ensure that a proper seal is attained between the container and the lid.

Viewing the lid 10 from the front, longitudinal protrusions 14 are arranged around a center 13 of the lid 10. These protrusions 14 are made for two purposes. One is an aesthetic value adding to the visual effects of the lid 10. The other reason is for functionality. The protrusions 14 increase the surface area of the lid 10. This becomes an advantage when a user wants to store items, such as, other bowls, on top of the lid 10. These protrusions 14 will keep objects resting on the lid 10 from slipping off the lid 10. Another advantage is when the bowl is used as a friction device as will be discussed in FIG. 7.

FIG. 2 shows the back view of the present invention. The back view is very similar to that of FIG. 1. As can be seen the back view shares the same center point 22 and peripheral edge 21. This view also shows the back view of the protrusion 24 located on the peripheral edge 21.

The back side of the lid 20 also has longitudinal protrusions 23 surrounding its center 22. These are used for the embodiment shown in FIG. 7 discussed below.

FIG. 3 shows the side view of the present invention. In this view the thickness of the lid 30 can be clearly seen. Here, the center thickness 35 of the lid 30 can be defined by the distance between the front center 31 and back center 32. The thickness 36 for the peripheral edge 33 is shown to be much thinner than the center thickness 35.

Also seen are the front longitudinal protrusions 34 which are raised by a predetermined thickness. The thicker these protrusions are the more surface area will be added to the lid.

In FIG. 4 is another view of the present invention. Here, the protrusion 41 can be clearly seen on peripheral edge 43 of the lid 40.

FIG. 5 is a side view of the first embodiment of the present invention. The first embodiment shows a lid 50 sealed to an open-ended container 53. In this example, a bowl is used but other containers such as metal pots or ceramic cups may be used. Also keep in mind that even though in the preferred embodiment we use kitchen containers, the lid can be used for any type of open container. That is, these lids can close any type of open-ended container having a uniform edge and need not be limited to only kitchen items.

The method for sealing the lid 50 to the container 53 is as follows. First the lid 50 is placed on the open-ended portion of the container 53. Remember, the lid 50 itself is made from a soft silicone material. Just by placing the lid on the container the lid itself conforms to the uniform edge of the bowl and provides limited food protection.
To seal the lid 50, a user will place an index finger on the center 51 of the lid 50 and press down. By pressing down on the lid 50, the air inside the container 53 is forced out of the bowl 53 because the downward pressure causes the lid 50 to depress and makes the air volume inside the bowl 53 decrease. While the air is being forced out the bowl 53, the silicone lid edges 52 are pushed down upon the lid 50 forming a rim lip 57 between the peripheral edge 52 and container edge 55. This rim lip varies in size depending on the circumference of the bowl. (Please note, for larger or smaller containers different size lids may be utilized for convenience but is not necessary to attain the vacuum seal.)

Once a sufficient amount of air is forced from the bowl 53 the user removes his/her finger and the lid 50 because of the air volume pressure within the bowl 53 allows the lid 50 to seal to the bowl 53. Now any contents that were in the bowl are protected from spoiling. The resultant seal is very strong and will only be broken when a user decides to open the container.

Another feature of silicone is its heat resistance. Therefore, if the contents of the bowl were hot, the heat would remain inside the bowl for a considerable amount of time.

Removal of the lid from the bowl is just as easy as sealing the lid. All a user must do is pull the peripheral protrusion 56 up and towards the center 51 of the lid 50. This action allows air to be re-introduced into the bowl 53, increasing the air volume and allowing the vacuum seal to be broken.

FIG. 6 is another view of the embodiment discussed above. This view shows the front view of the lid 60 while the lid 60 is a sealed position. In the sealed position, the center 61 of the lid 60 is slightly depressed within the bowl 62 due to the air volume pressure in the sealed bowl.

FIG. 7 shows another embodiment of the present invention. In this embodiment, the lid 71 is used a friction device. This embodiment is best used for when a user is mixing items in the bowl 70. Often when a user mixes items on a hard surface with a low friction coefficient making the surface slippery. The bowl often has to be held tightly by the user otherwise the bowl will end up on the floor. But using the lid between the hard surface and the bowl instead of the surface directly cuts down on any messy accidents that might occur because the friction coefficient is increased.

For example, a user can place the lid 71 on a hard surface 72 and place the bowl 70 on the lid 71. Since silicone has a high friction coefficient the bowl 70 will not slide off the lid 71 and the lid 71 will stay firmly on the counter.

It is readily apparent that the above-described friction device meets all of the objects mentioned above and has the advantage of wide commercial utility. It should be understood that the specific form of the invention herein-above described is intended to be representative only, as certain modifications within the scope of these teachings will be apparent to those skilled in the art.

Accordingly, reference should be made to the following claims in determining the full scope of the invention.

What is claimed:
1. A silicone lid for sealing any type of open-ended container having a circumference, said silicone lid comprising,
a top having a first center;
a bottom having a second center; and
a rim lip having a length, said length being dependent on the circumference of said container.
2. The silicone lid as claimed in claim 1 whereby said silicone lid is sealed to said container by placing the bottom of said lid on an open-ended side of said container and depressing the top of said lid thereby forcing air out of the container and forming a vacuum seal.
3. The silicone lid as claimed in claim 1 whereby said first center and said second center have a center axis which is the same.
4. The silicone lid as claimed in claim 3 whereby said center axis is a certain thickness.
5. The silicone lid as claimed in claim 4 whereby said rim lip is thinner than said center axis.
6. The silicone lid as claimed in claim 1 whereby said silicone lid is substantially circular.
7. The silicone lid as claimed in claim 5 whereby said rim lip extends over an edge of said open-ended side of said container.
8. The silicone lid as claimed in claim 7 whereby said rim lip has a protrusion for removing said lid from said container.
9. The silicone lid as claimed in claim 1 whereby said lid is formed from silicone, and is pliable and able to conform to the shape of said open-ended container.
10. The silicone lid as claimed in claim 1 whereby said top has protrusions arranged around the first center.
11. The silicone lid as claimed in claim 1 whereby said bottom has protrusions arranged around the second center.
12. The silicone lid as claimed in claim 1 whereby said open-ended container is a bowl, pan, pot or cup.
13. The silicone lid as claimed in claim 1 whereby said lid comes in a variety of sizes.
14. The silicone lid as claimed in claim 1 whereby said container is made from plastic, glass, metal, wood, styrofoam or clay.
15. The silicone lid as claimed in claim 1 whereby said lid has elastic characteristics which allow the edge of the open-ended container to be depressed in the silicone material.
16. The silicone lid as claimed in claim 1 whereby said lid can be placed on a flat surface with a bottom of the container placed on its top, this action keeps the container from slipping off the flat surface.
17. The silicone lid as claimed in claim 1 whereby said silicone lid has a high-friction coefficient.
18. The silicone lid as claimed in claim 1 whereby said lid keeps contents of said container fresh by holding in moisture.
19. The silicone lid as claimed in claim 1 whereby said lid keeps hot contents of said container hot.
20. The silicone lid as claimed in claim 1 whereby said silicone lid has a heat resistant characteristic.
21. The silicone lid as claimed in claim 1 whereby said lid is microwave-safe and dishwasher-friendly.