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Brown(10) **Pub. No.: US 2013/0299521 A1**(43) **Pub. Date: Nov. 14, 2013**(54) **VISCOUS MATERIAL CONTAINER
ASSEMBLY**(71) Applicant: **Scott Brown**, Valparaiso, IN (US)(72) Inventor: **Scott Brown**, Valparaiso, IN (US)(21) Appl. No.: **13/889,943**(22) Filed: **May 8, 2013****Related U.S. Application Data**

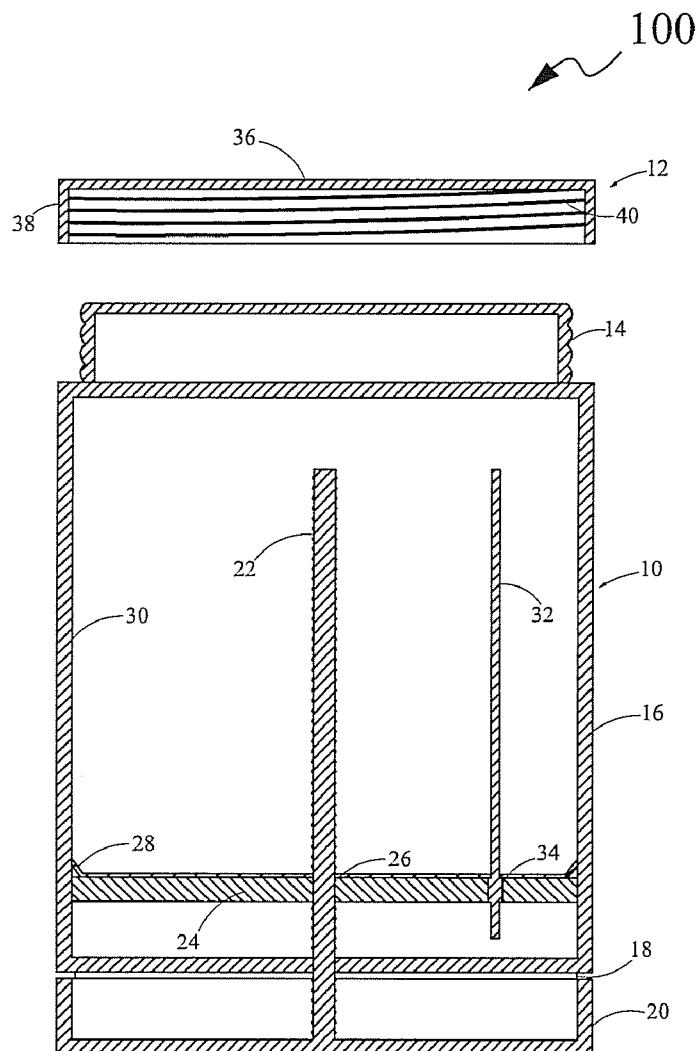
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(57)

ABSTRACT

A container assembly for storing and dispensing viscous and other materials comprises a container body, a lid, a disc, an elongated threaded member, and a base structure. The elongated threaded member is connected to the disc and received by the base structure. Rotating the disc causes the base structure to ascend or descend within the container body such that the materials stored therein may be conveniently and efficiently dispensed. At least one scraper scrapes materials stored on the inner surface of the container body therefrom, thereby reducing wastage by retrieving otherwise difficult to dispense materials. A rotation limiter precludes rotation of the base structure while the disc is rotated, which rotation limiter may be a rail contacting the bottom of the container body or a friction fit between the base structure and the inner surface of the container body.



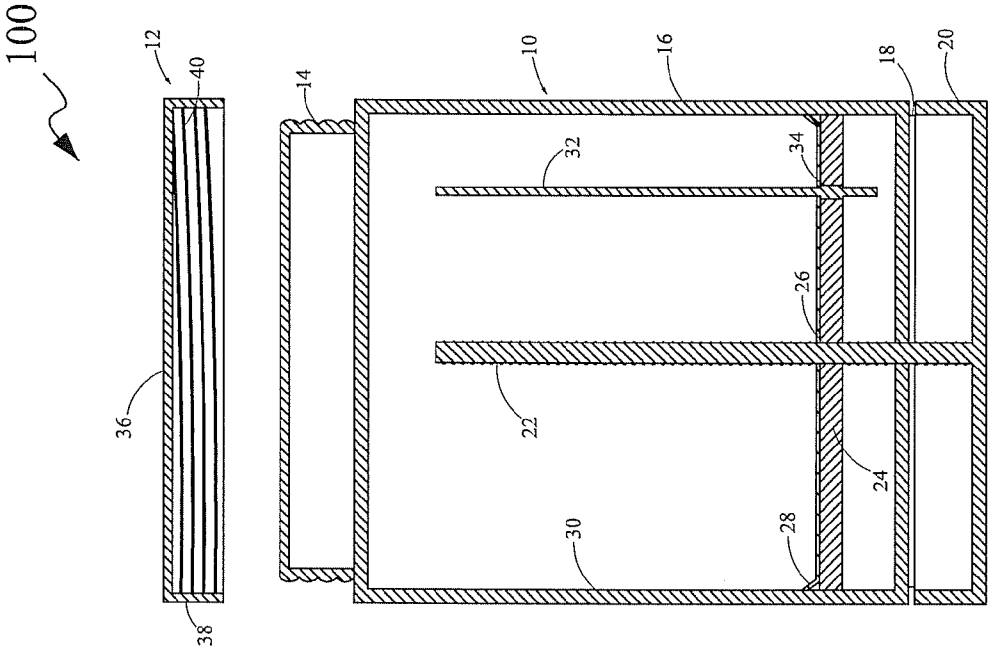


FIG. 1

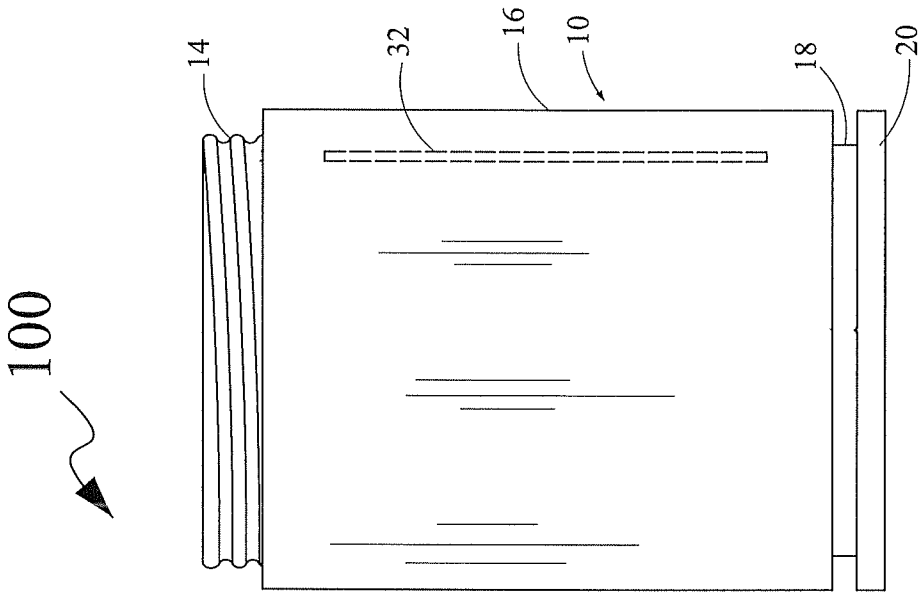
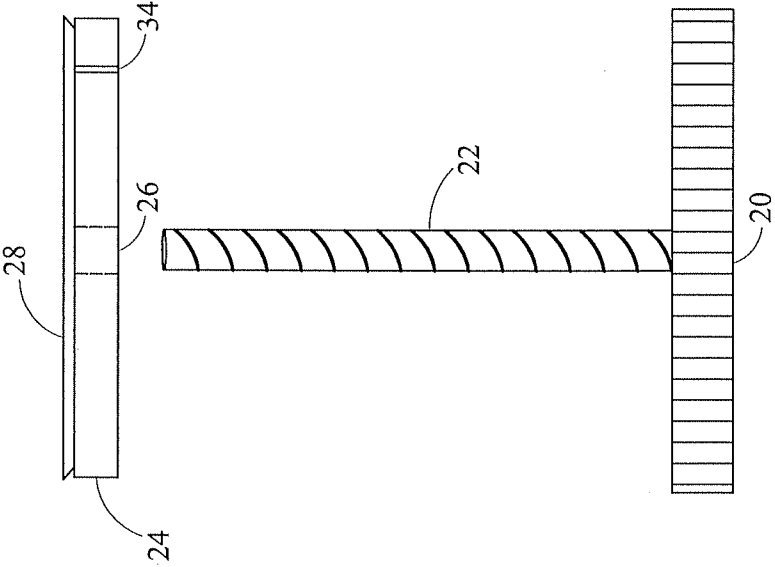


FIG. 2



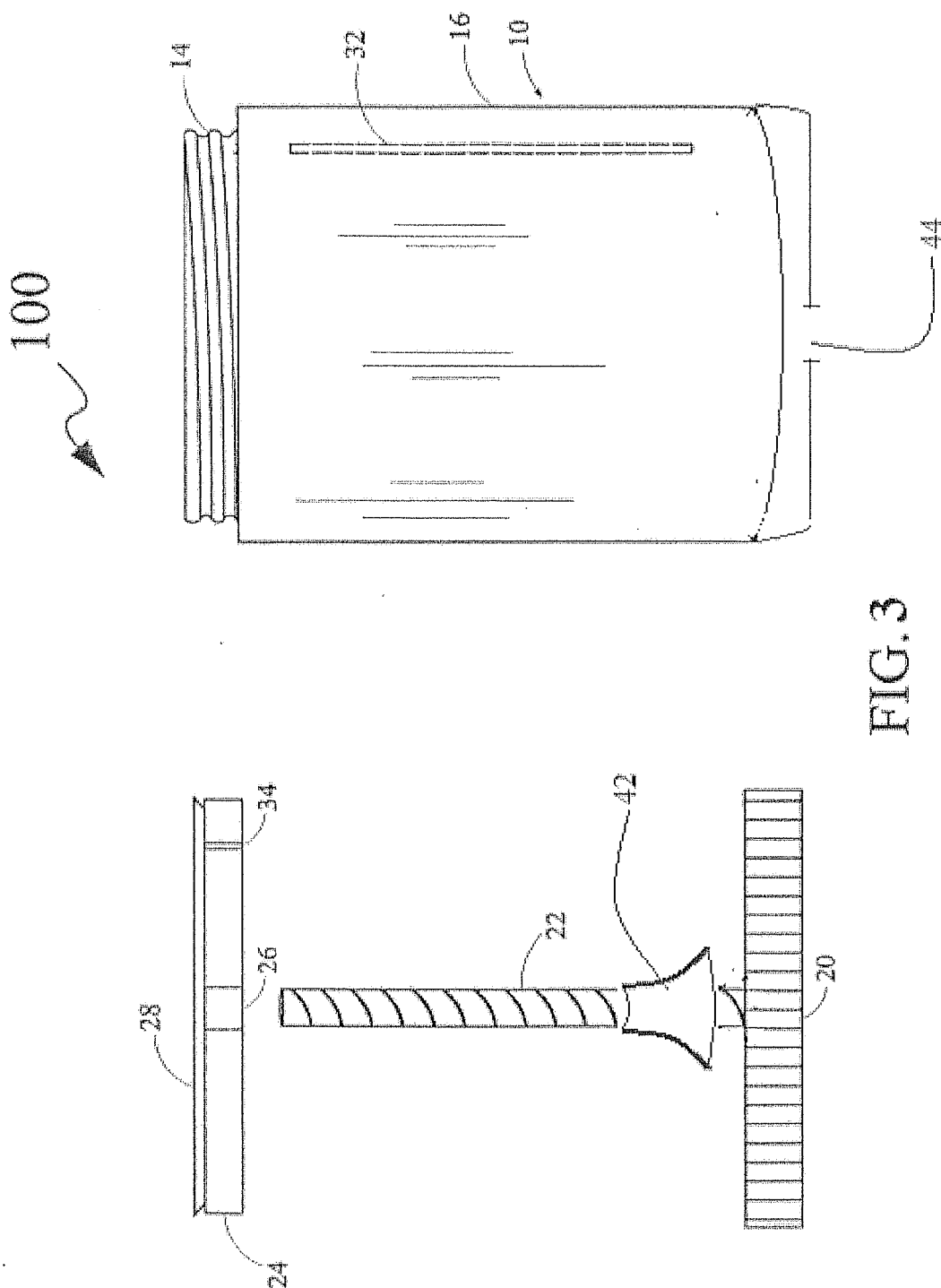


FIG. 3

VISCOUS MATERIAL CONTAINER ASSEMBLY

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] The present disclosure claims priority under 35 U.S.C. §119 on pending U.S. Provisional Application Ser. No. 61/644,683, filed on May 9, 2012, the disclosure of which is incorporated by reference.

FIELD OF THE DISCLOSURE

[0002] The present disclosure generally relates to receptacles, and, more particularly, to a container assembly for storing and dispensing viscous materials.

BACKGROUND

[0003] Receptacles, such as a container, a box, a jar, and the like, are generally used for storing materials. The materials may be in a solid state, a liquid state, a semi-solid state, a viscous state and the like. Generally, material, such as a viscous material, is stored in a conventional container having a body portion and a lid. It has been observed that the viscous material, such as grease, wax, butter, peanut butter, almond butter, jams and the like, have a tendency of sticking to an inner wall of the body portion of the conventional container. In a majority of instances, removing the viscous material from the body portion of the conventional container is time consuming. Further, removing the viscous material that may have stuck to the inner wall of the conventional container is difficult. The viscous material stuck to the inner wall of the conventional container may be removed with the help of a knife or a spoon.

[0004] Removal of the viscous material stuck to the inner wall of the conventional container may involve scraping of the inner wall of the conventional container with the knife or the spoon. The removal of the viscous material stuck to the inner wall of the conventional container is time consuming and is also associated with health hazards since use of the knife for scraping the inner wall of the conventional container may cause injury to a user, especially children. Further, the viscous material left in a bottom portion of the conventional container may be difficult to remove, which in turn causes wastage of the viscous material. Over time, the amount of viscous material that becomes discarded in this way becomes significant, and the user may be required to purchase additional materials to make up for the quantity wasted. This is both highly wasteful and expensive.

[0005] A solution in the art for reducing the risk of injury to a user and for reducing wastage of the viscous material is shown in U.S. Pat. No. 5,538,161, which teaches a container comprising a platform capable of being raised and lowered by the rotation of a dial affixed thereto and a viewing opening vertically disposed across the height of the container. A user may rotate the dial to raise the platform to a higher height, which ascension makes it much easier for the materials stored within the container to be dispensed therefrom, and the viewing opening provides a visual representation of the remaining portion of such materials within the container. However, the viewing opening does not allow a user to retrieve the leftover portions of the materials and the platform may be incapable of raising the materials to a height at which they may be conveniently dispensed.

[0006] Accordingly, there exists a need for a viscous material container assembly that enables a user to conveniently and efficiently remove viscous material stored therein. Further, there exists a need for a viscous material container assembly capable of avoiding wastage of viscous material. Additionally, there exists a need for a viscous material container assembly that is user-friendly and devoid of any health hazard.

SUMMARY OF THE DISCLOSURE

[0007] In view of the foregoing disadvantages of the prior art, a container assembly for storing and dispensing viscous and other materials is disclosed. The assembly includes a container body having one open side that is suitable for storing and dispensing a viscous or other-stated material and a lid for sealing the open side thereof. A rotatable disc is disposed below the container body and has an elongated threaded member connected thereto. A base structure receives at least a portion of the elongated threaded member through an opening thereon, which base structure is capable of being raised and lowered within the container body by rotating the disc in the clockwise and counterclockwise directions. As the base structure is raised, it causes the materials stored within the container assembly to be raised with it such that the depth at which one must retrieve the materials is significantly reduced. The disclosure as described provides a convenient and efficient way by which the viscous and other materials stored within a container assembly may be retrieved or dispensed therefrom, which further significantly reduces wastage and precludes the aforementioned health hazards to the user.

[0008] In an embodiment, a container assembly for storing and dispensing viscous and other materials comprises a container body, a lid, a disc, an elongated threaded member, a base structure, and at least one scraper. The container body has a first end and a second end and further comprises a body portion, a neck portion, and a bottom portion, wherein the neck portion is disposed at the first end, the bottom portion is disposed at the second end, and the body portion is disposed therebetween, and wherein the body portion has an inner surface. The lid further comprises a top and a skirt, wherein the skirt extends angularly from the top and is capable of being operatively coupled to the neck portion of the container body. The disc is capable of being rotated in the clockwise and counterclockwise directions and is disposed below the bottom portion of the container body. The elongated threaded member has a top end and a bottom end, which bottom end is operatively connected to the disc. The base structure further comprises an opening capable of receiving the elongated threaded member, and is disposed above the bottom portion of the container body and within at least a portion of the body portion of the container body. The at least one scraper is disposed on the base structure and is capable of contacting at least a portion of the body portion of the container body.

[0009] In another embodiment, the container assembly comprises a disc, an elongated threaded member, a base structure, and at least one scraper, which components may be removably retrofit to an existing container comprising, such as a container with a container body and lid. In a further embodiment of the retrofit embodiment, the container assembly further comprises a base skirt for covering an opening at the bottom of the container.

[0010] In a further embodiment, the base structure extends for the entire perimeter of the inner surface of the body portion of the container body.

[0011] In a further embodiment, a rotation limiter is included, which precludes the base structure from rotating during the rotation of the disc. In another embodiment, the rotation limiter is at least one of a rail fitting within a groove of the base structure for contacting the bottom portion of the container body or a friction fit between the base structure and the inner surface of the body portion of the container body.

[0012] In a further embodiment, the neck portion of the container body and the skirt of the lid are threaded and may be operatively connected.

[0013] In a further embodiment, the assembly has one of a generally circular cross section and a generally elliptical cross section.

[0014] These together with other aspects of the present disclosure, along with the various features of novelty that characterize the present disclosure, are pointed out with particularity in the claims annexed hereto and form a part of the present disclosure. For a better understanding of the present disclosure, its operating advantages, and the specific objects attained by its uses, reference should be made to the accompanying drawings and detailed description in which there are illustrated and described exemplary embodiments of the present disclosure.

DESCRIPTION OF THE DRAWINGS

[0015] The advantages and features of the present disclosure will become better understood with reference to the following detailed description and claims taken in conjunction with the accompanying drawings, wherein like elements are identified with like symbols, and in which:

[0016] FIG. 1 shows an exemplary cross-sectional view of a viscous material container assembly in accordance with an exemplary embodiment of the present disclosure;

[0017] FIG. 2 shows an exploded view of a viscous material container assembly in accordance with an exemplary embodiment of the present disclosure; and

[0018] FIG. 3 shows an exploded view of a viscous material container assembly capable of being retrofit with an existing container in accordance with an exemplary embodiment of the present disclosure.

[0019] Like reference numerals refer to like parts throughout the description of several views of the drawings.

DETAILED DESCRIPTION OF THE DISCLOSURE

[0020] The best mode for carrying out the present disclosure is presented in terms of its preferred embodiments, herein depicted in the accompanying figures. The preferred embodiments described herein detail for illustrative purposes are subject to many variations. It is understood that various omissions and substitutions of equivalents are contemplated as circumstances may suggest or render expedient, but are intended to cover the application or implementation without departing from the spirit or scope of the present disclosure.

[0021] The terms “a” and “an” herein do not denote a limitation of quantity, but rather denote the presence of at least one of the referenced items.

[0022] The present disclosure provides a viscous material container assembly for storing and dispensing viscous materials, such as grease, wax, butter, peanut butter, almond butter, jams, and the like. The present disclosure may find its utility in storing and dispensing all type of materials; however, for the sake of brevity, the present disclosure has been explained

in conjunction with viscous materials, such as grease, wax, butter, peanut butter, almond butter, jams and the like.

[0023] The disclose relates to a container assembly for reducing wastage of viscous materials stored therein and dispensed therefrom and preventing a risk of injury to the user or container from having to use an instrument such as a knife or spoon to remove the materials from the lower areas thereof. A rotatable disc is operatively coupled to a threaded elongated member, which disc and elongated member are received by the bottom of the container assembly and which elongated member is engaged to a base structure. The base structure further has at least one scraper on it for contacting the inner surface of the assembly and scraping and materials therefrom. Rotation of the disc in one direction causes the base structure to slidably move within the container assembly and the at least one scraper to scrape the inner surface thereof, thereby removing all viscous material from such inner surface and elevating the material to an easily retrievable height. Rotation in the other direction lowers the base structure within the container assembly.

[0024] Referring now to FIGS. 1 and 2, a viscous material container assembly is shown at 100 in accordance with an embodiment of the present disclosure. The viscous material container assembly (hereinafter referred to as “container assembly”) 100 includes a container body 10 and a lid 12 to enclose an opening of container body 10 or otherwise cover the container body 10. In a preferred embodiment, the container body 10 of the present disclosure is of a generally cylindrical shape. The container body 10 includes a neck portion 14 disposed at a first end or top thereof, a bottom portion 18 disposed at a second end of the body 10, and a body portion 16 disposed therebetween. In a preferred embodiment, the neck portion 14 of the container body 10 has external threading.

[0025] The lid 12 of the container assembly 100 is configured to removably attach with the container body 10. The lid 12 includes a top 36 with a skirt 38 extending from a periphery of the top 36. In a preferred embodiment, the skirt 38 has internal threads 40 capable of mating with the threaded neck portion 14 of the container body 10. Still, the present disclosure is not limited to the attachment means as described herein above. The lid 12 may be removably attached with the container body 10 in various arrangements known in the art. For example, and in an embodiment of the present disclosure, the lid 12 may be removably coupled with the container body 10 in a snap fit relationship.

[0026] A disc 20 is configured on the bottom portion 18 of the container body 10. The disc 20 is disposed below the bottom portion 18 and is capable of being rotated by the user in the clockwise and counterclockwise directions. An elongated threaded member 22 is operatively coupled to and preferably disposed on a central portion of the disc 20 and extends upwards therefrom. The elongated threaded member 22 may be rotated by rotation of the disc 20 at the bottom portion 18 of the container body 10. The container assembly 100 further includes a base structure 24 configured to slidably move in the body portion 16 of the container 10. The base structure 24 includes an opening 26 capable of receiving the elongated threaded member therethrough. Rotation of the disc 20 causes rotation of the elongated threaded member 22 which in turn causes the slidable movement of the base structure 24. In this way, the base structure 24 can move upwards and downwards within the container body 10, which movement is controlled by the user rotating the disc 20.

[0027] Additionally, the base structure 24 includes at least one scraper 28 disposed at a periphery of the base structure 24. The at least one scraper 28 is configured to slidably move in proximity or close contact with an inner surface 30 of the body portion 16. In a preferred embodiment, the at least one scraper 28 contacts every portion of a cross section of the inner surface 30 of the body portion 16. In an alternate embodiment, the at least one scraper 28 contacts only certain or spaced-apart portions of the inner surface 30 of the body portion 16. The at least one scraper 28 is designed to remove any viscous materials on the inner surface 30 of the container body 10 such that a user may retrieve them from the container body 10 in order to eliminate or otherwise reduce wastage.

[0028] The container assembly 100 may further include a rotation limiter that precludes the base structure 24 from rotating as a result of the user rotating the disc 20. In a preferred embodiment, the rotation limiter is a rail 32 disposed on the inner surface 30 of the body portion 16. The rail 32 is configured to line up with a groove 34 on the base structure 24 and to contact a point on the base structure 24. The rail 32 lined up with the groove 34 helps to slidably move the base structure 24 and also prevents the base structure 24 from being rotated while the disc 20 and elongated threaded member 22 are being rotated. In a further embodiment, the rotation limiter is a friction fit between the base structure 24 and the inner surface 30 of the body portion 16 of the container body 10.

[0029] In another embodiment, and as shown in FIG. 3, the container assembly 100 comprises a disc 20, elongated threaded member 22, base structure 24, and at least one scraper 28. In this way, the assembly 100 excludes the container body 10 and lid 12, which assembly 100 instead is capable of being retrofit with an existing container body 10 and lid 12. The retrofit is preferably accomplished by inserting the threaded member through an aperture 44 in the bottom of the existing container body. (The aperture 44 may need to be created before the threaded member may be inserted therein and the assembly attached to the container.) In such an embodiment, a base skirt 42 may be disposed on the threaded member 22 after the assembly is attached to such a container to prevent viscous material from leaking out of any space between the aperture 44 in the container and the threaded member 22. In a preferred embodiment thereof, the base skirt 42 has a generally frustoconical disposition. After the elongated threaded member 22 is received by the container, the base structure 24 may thereafter be placed over the elongated threaded member 22 within the body portion of the existing container. In this way, the assembly 100 is removably attached to the existing container body and lid and thus can be removed and installed on a separate container body thereafter.

[0030] In use, a user may store viscous materials such as grease, wax, butter, peanut butter, almond butter, jams, or the like, in the container body 10. For removing a viscous material from the container body 10, the user may rotate the disc 20, which in turn rotates the elongated threaded member 22. A rotation of the elongated threaded member 22 causes the base structure 24 to slidably move in the body portion 16 of the container body 10. The base structure 24 is capable of being slidably moved in an upward direction towards the threaded neck portion 14 and in a downward direction towards the bottom portion 18 of the container body 10. Accordingly, the viscous material is moved in upward direction by the movement of the base structure 24 in the upward direction. The upward movement of the base structure 24

provides an easy access to the viscous material present in the container assembly 100. Further, the scraper 28 is capable of scraping the viscous material that may get stuck to the inner surface 30 of the body portion 16. The container body 10 may be covered by the lid 12 in order to prevent contaminants from entering into the container assembly 100.

[0031] It is to be noted that the container assembly 100, is not limited to the exemplary configuration as described herein with respect to the figures. Specifically, the container assembly 100 may include a multitude of configurational arrangements, material of construction and structural designs. Additionally, the base structure 24 of container assembly 100 may be in any shape, and, in a preferred embodiment, has a circular or elliptical cross section and in any event preferably has a configuration that is complementary to the configuration of the container body 10.

[0032] The described embodiments of the present disclosure offer following advantages. The container assembly 100 enables a user to remove viscous material contained in the container body 10 conveniently. Further, the viscous material that usually gets stuck with the inner surface 30 of the body portion 16 of the container body 10 may easily be scraped therefrom and raised to a dispensible height at which the user can easily and conveniently remove the materials from the container body 10. As such, the container assembly 100 obviates the scraping of the inner surface 30 by means of a knife, a spoon, and like instruments, thereby reducing wastage and the risk of injury to the user associated with using such instruments.

[0033] The foregoing descriptions of specific embodiments of the present disclosure have been presented for purposes of illustration and description. They are not intended to be exhaustive or to limit the present disclosure to the precise forms disclosed, and obviously many modifications and variations are possible in light of the above teaching. The exemplary embodiment was chosen and described in order to best explain the principles of the present disclosure and its practical application, to thereby enable others skilled in the art to best utilize the disclosure and various embodiments with various modifications as are suited to the particular use contemplated.

What is claimed is:

1. A container assembly for storing and dispensing viscous and other materials, the assembly comprising:
 - a container body, said container body having a first end and a second end, said container body open on said first end, said container body further comprising a neck portion, a body portion, and a bottom portion, said neck portion disposed at said first end, said bottom portion disposed at said second end, said body portion disposed between said neck portion and said bottom portion, said body portion having an inner surface;
 - a lid, said lid further comprising a top and a skirt, said skirt extending angularly from said top, said skirt capable of being operatively coupled to at least a portion said neck portion of said container body;
 - a disc, said disc capable of being rotated in at least one of a clockwise direction and a counterclockwise direction, said disc disposed below said bottom portion of said container body;
 - an elongated threaded member, said elongated threaded member having a top end and a bottom end, said bottom end operatively connected to said disc;

a base structure, said base structure further comprising an opening, said opening capable of receiving at least a portion of said elongated threaded member, said base structure disposed above said bottom portion of said container body, said base structure slidably disposed within at least a portion of said body portion of said container body; and

at least one scraper, said at least one scraper disposed on said base structure, said at least one scraper capable of contacting at least a portion of said inner surface of said body portion of said container body,

wherein a user may rotate said disc in one of the clockwise direction and the counterclockwise direction in order to move said base structure from said second end of said container body to said first end of said container body, the user capable of selectively stopping said base structure at an intermediate position between said second end of said container body and said first end of said container body, and

wherein the user may rotate said disc in the opposing direction in order to move said base structure from said first end of said container body to said second end of said container body, the user capable of selectively stopping said base structure at an intermediate position between said first end of said container body and said second end of said container body.

2. The assembly as claimed in claim 1, wherein said base structure extends for the entire perimeter of said inner surface of said body portion of said container body.

3. The assembly as claimed in claim 1, wherein the assembly further comprises a rotation limiter, said rotation limiter precluding said base structure from rotating during the rotation of said disc.

4. The assembly as claimed in claim 3, wherein said rotation limiter is a rail and said base structure further comprises a groove, said groove capable of receiving at least a portion of said rail, said rail being disposed against a portion of said container body.

5. The assembly as claimed in claim 3, wherein said rotation limiter is a friction fit between said base structure and said inner surface of said body portion of said container body.

6. The assembly as claimed in claim 1, wherein said neck portion of said container body has a threaded outer surface, said skirt of said lid having a threaded inner surface, said threaded inner surface of said skirt capable of operatively connecting to said threaded outer surface of said neck portion.

7. The assembly as claimed in claim 1, wherein said base structure has one of a generally circular cross section and a generally elliptical cross section.

8. A container assembly for storing and dispensing viscous and other materials, the assembly comprising:

a disc, said disc capable of being rotated in at least one of a clockwise direction and a counterclockwise direction; an elongated threaded member, said elongated threaded member having a top end and a bottom end, said bottom end operatively connected to said disc;

a base structure, said base structure further comprising an opening, said opening capable of receiving at least a portion of said elongated threaded member; and

at least one scraper, said at least one scraper disposed on said base structure, said at least one scraper capable of contacting at least a portion of the inner surface of the body portion of the container,

wherein a user may removably attach the assembly to an existing container having a first end and a second end, the container being open on the first end, the container having a neck portion disposed at the first end, a bottom portion disposed at the second end, and a body portion disposed between the neck portion and the bottom portion, the body portion having an inner surface, said disc disposed below the bottom portion of the container, said base structure disposed above the bottom portion of the container, said base structure slidably disposed within at least a portion of the body portion of the container, and

wherein after the assembly is removably attached to the container, the user may rotate said disc in one of the clockwise direction and the counterclockwise direction in order to move said base structure from the second end of the container to the first end of the container, the user capable of selectively stopping said base structure at an intermediate position between the second end of the container and the first end of the container, and

wherein after the assembly is removably attached to the container, the user may rotate said disc in the opposing direction in order to move said base structure from the first end of the container to the second end of the container, the user capable of selectively stopping said base structure at an intermediate position between the first end of the container and the second end of the container.

9. The assembly as claimed in claim 8, wherein said base structure extends for the entire perimeter of the inner surface of the body portion of the container.

10. The assembly as claimed in claim 8, wherein the assembly further comprises a base skirt, said base skirt having an aperture capable of receiving at least a portion of said elongated threaded member, said base skirt having a first end and a second end, said first end operatively coupled to said elongated threaded member, said second end operatively coupled to the bottom portion of the container.

11. The assembly as claimed in claim 8, wherein the assembly further comprises a rotation limiter, said rotation limiter precluding said base structure from rotating during the rotation of said disc.

12. The assembly as claimed in claim 11, wherein said rotation limiter is a rail and said base structure further comprises a groove, said groove capable of receiving at least a portion of said rail, said rail being disposed against a portion of the container.

13. The assembly as claimed in claim 11, wherein said rotation limiter is a friction fit between said base structure and the inner surface of the body portion of the container.

14. The assembly as claimed in claim 8, wherein said base structure has one of a generally circular cross section and a generally elliptical cross section, the container having one of a generally circular cross section and a generally elliptical cross section.

15. A container assembly for storing and dispensing viscous and other materials, the assembly comprising:

a container body, said container body having a first end and a second end, said container body open on said first end, said container body further comprising a neck portion, a body portion, and a bottom portion, said neck portion disposed at said first end, said bottom portion disposed at said second end, said body portion disposed between said neck portion and said bottom portion, said body portion having an inner surface;

a lid, said lid further comprising a top and a skirt, said skirt extending angularly from said top, said skirt capable of being operatively coupled to at least a portion said neck portion of said container body;

a disc, said disc capable of being rotated in at least one of a clockwise direction and a counterclockwise direction, said disc disposed below said bottom portion of said container body;

an elongated threaded member, said elongated threaded member having a top end and a bottom end, said bottom end operatively connected to said disc;

a base structure, said base structure further comprising an opening and a groove, said opening capable of receiving at least a portion of said elongated threaded member, said base structure disposed above said bottom portion of said container body, said base structure slidably disposed within at least a portion of said body portion of said container body;

at least one scraper, said at least one scraper disposed on said base structure, said at least one scraper capable of contacting at least a portion of said inner surface of said body portion of said container body; and

a rail, said groove of said base structure capable of receiving at least a portion of said rail, said rail being disposed against a portion of said container body,

wherein a user may rotate said disc in one of the clockwise direction and the counterclockwise direction in order to

move said base structure from said second end of said container body to said first end of said container body, the user capable of selectively stopping said base structure at an intermediate position between said second end of said container body and said first end of said container body, and

wherein the user may rotate said disc in the opposing direction in order to move said base structure from said first end of said container body to said second end of said container body, the user capable of selectively stopping said base structure at an intermediate position between said first end of said container body and said second end of said container body.

16. The assembly as claimed in claim **15**, wherein said base structure extends for the entire perimeter of said inner surface of said body portion of said container body.

17. The assembly as claimed in claim **15**, wherein said neck portion of said container body has a threaded outer surface, said skirt of said lid having a threaded inner surface, said threaded inner surface of said skirt capable of operatively connecting to said threaded outer surface of said neck portion.

18. The assembly as claimed in claim **15**, wherein said base structure has one of a generally circular cross section and a generally elliptical cross section.

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