United States Patent

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[54] **MODULAR CONTAINER**
6 Claims, 5 Drawing Figs.

[52] **U.S. Cl.** ..... **220/97 R,** 150/0.5, 215/10
[51] **Int. Cl.** **B65d 21/02**
[50] **Field of Search** ..... 220/4 R, 97 R; 215/10; 150/0.5

[56] **References Cited**

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Primary Examiner—George E. Lowrance
Attorney—William H. Maxwell

ABSTRACT: A sectional container for storing and dispensing of a multiplicity of articles, especially articles such as medication pills that are accounted for in numbers, and comprised of like and/or identical vessels that are composed in cooperative coupled relation and preferably with one top closure, to thereby establish a straight cylinder or like compartmented container with normal ends.

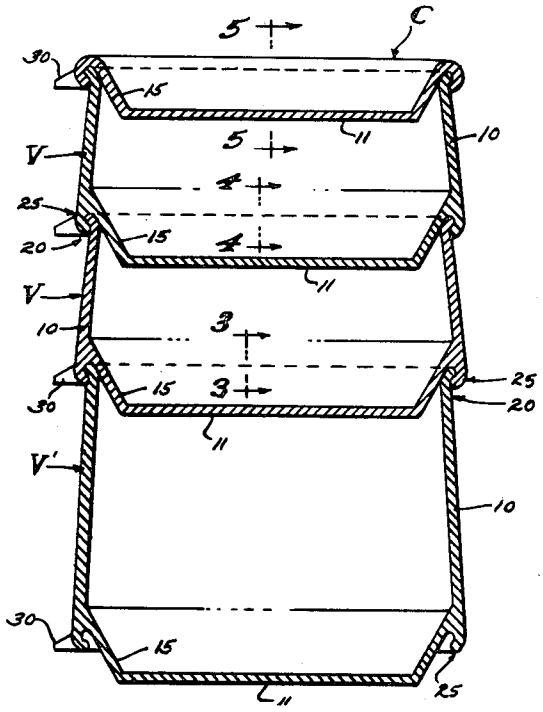


FIG. 1.

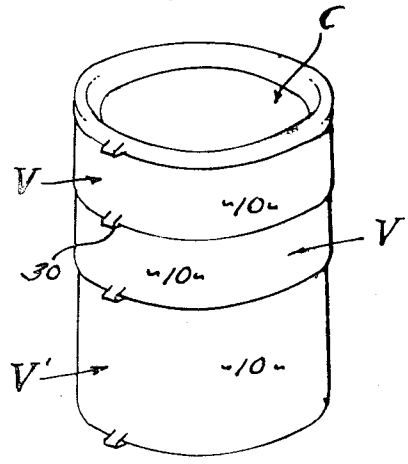


FIG. 3.

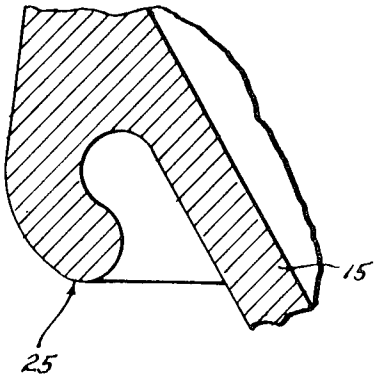


FIG. 4.

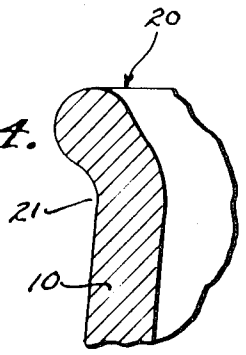


FIG. 2.

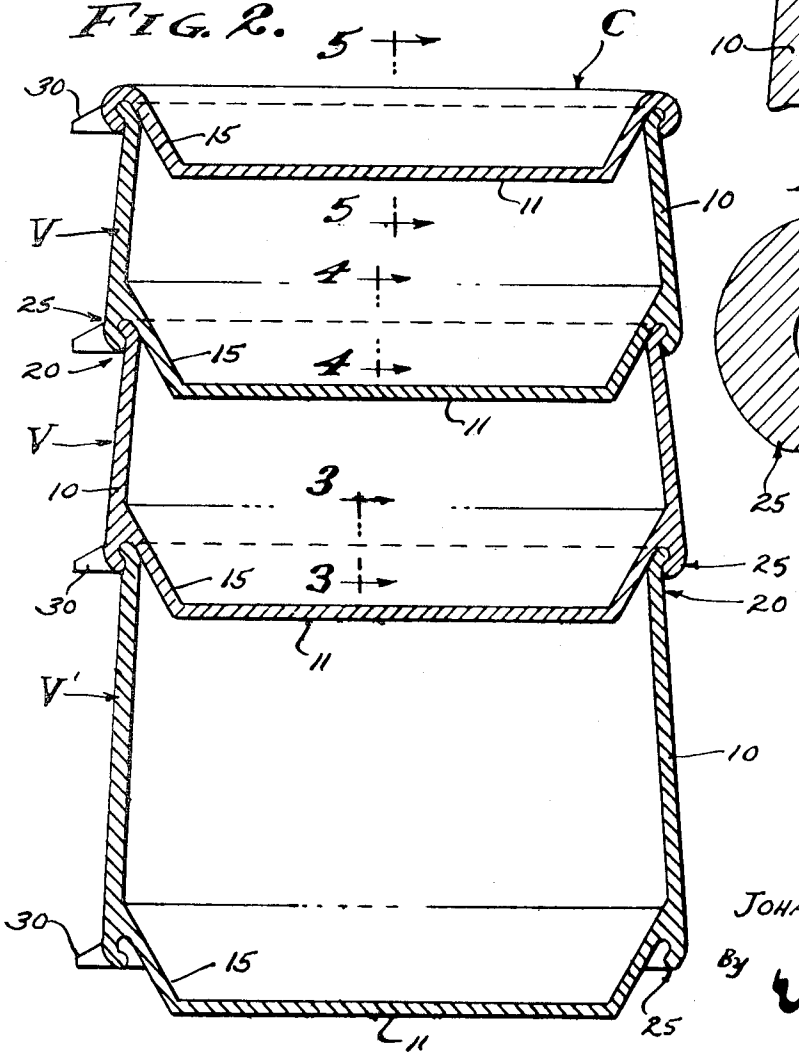
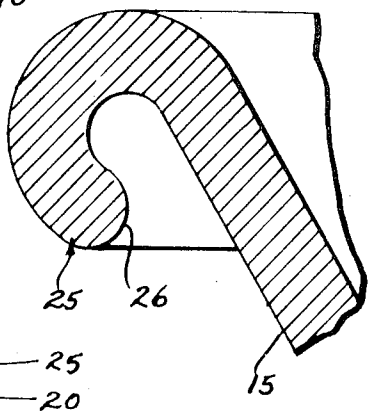


FIG. 5.



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MODULAR CONTAINER

The modular container hereinafter disclosed can take on various sizes and proportions, and it is characterized by a right cylinder with normal ends. Such containers are used widely for storage and dispensing of articles such as pills and the like; and in the instance of pills the number of articles is important. Not only is the initial supply of such articles sold by number, but consumption of such articles is also controlled by using them in prescribed number. Specifically, a person may purchase a large supply of medication in the form of pills stored in a large vessel, but said person's daily prescribed use or dosage of the pills must be knowingly controlled to an exact number of pills consumed. Further, the number of pills consumed during different periods can vary, in which case succeeding days will see the consumption of either increased or decreased numbers of pills, or even the use of different pills. To this end, the modular container of the present invention is provided and wherein a multiplicity of identical modular vessels is provided. Still further, the initial or bulk supply of such articles requires a larger vessel which is hereinafter described as a like vessel, the basic features of the vessels remaining the same, and the uppermost vessel being covered by a top closure also with the same basic features.

An object of this invention is to provide a modular vessel construction wherein like and/or identical vessels are securely coupled in stacked relation to establish a compartmented container of straight cylinder form with normal closed ends.

It is an object of this invention to provide a composite container of the type hereinabove referred to that has a supporting bottom that carries a supported coupling member above the plane of initial support, for cleanliness and reliable connection.

The various objects and features of this invention will be fully understood from the following detailed description of the typical preferred form and application thereof, throughout which description reference is made to the accompanying drawings, in which:

FIG. 1 is a perspective view of the composite modular container of the present invention, completely assembled;

FIG. 2 is an enlarged sectional view of the modular assembly shown in FIG. 1; and

FIGS. 3, 4 and 5 are enlarged detailed sectional views taken as indicated by lines 3—3, 4—4 and 5—5 on FIG. 2, showing independently the bottom portion, top portion and lid portion respectively.

The composite modular container of compartmented straight cylinder form is shown in FIG. 1 as comprised of one or more and for example two identical vessels V and like vessel V'. The difference in vessels V and V' is length only, the latter vessel being most extensive for increased storage. Also, the container involves a top closure C having the basic features of the vessel V and V'. As shown, the container configuration is round in cross section, though it will be apparent that other cross sections are feasible such as a square or any other multisided polygon.

The vessel V and V' are identical in all respects except for height of the exterior upstanding wall **10** of vessel V being minimized to establish a smaller volume vessel, and the upstanding wall **10'** of vessel V' being extended to establish a larger volume vessel. The vessel terminates in an open upper end characterized by the configuration of a male coupling member **20**, and the vessel terminates in a flat supporting bottom **11** characterized by a smaller plan configuration than the cross-sectional configuration of the vessel as defined by said wall **10**. And in accordance with the invention the said bottom **11** and wall **10** are integrally joined by an upwardly and outwardly flared flange **15** that carries an outermost peripheral female coupling member **25** adapted to engageably receive male coupling member **20**.

The male coupling member **20** is a circumferentially complete ring of convex section that faces upwardly and forms the smooth rim of the vessel. The section of member **20** is disposed radially outward and its curvature exceeds 180° and continues in a reversely curved and concaved depression **21** of like circumferential completeness (see FIG. 4).

The female coupling member **25** is a circumferentially complete ring of concave section that faces downwardly and forms a channel-shaped cavity at the joinder of wall **10** and the flared flange **15**. The section of member **25** is disposed radially inward and as shown its curvature is complementary to that of the coupling member **20** by exceeding 180°, and it also continues in a reversely curved and convex lip **26** of like circumferential completeness (see FIG. 5).

The male and female coupling members **20** and **25** are embraceably engaged by snapping the vessels V and/or V' together in stacked relation as circumstances require. The material from which the container is formed is flexible, preferably plastic, and finger lugs **30** are provided for deflecting the female coupling member for entry and release therein of the male member.

From the foregoing it will be apparent that I have provided a very practical and hygienically clean container of modular and compartmentalized form. The number of compartments is determined by the number of vessels V (and V') employed, and the joinder is established by tight-fitting male and female connections. The bottom **11** of the lowermost vessel is the supporting element in all instances, and the female coupling member **25** is always raised above the supporting surfaces and removed for any contamination or contact with said supporting surface. In practice, pills are merchandized in the compartmented container and predetermined dosage container in each vessel; for example, a prescription can require a combination of different pills and the number of pills can vary for different time periods. Thus, each vessel of the present invention is adapted to accommodate the prescribed dosage requirement set by a medical doctor. The concavo-convex configuration of the male and female coupling members is also conducive to cleanliness, and all of which makes for a highly utilitarium container for the purposes intended, for the containment of pills and like medications.

Having described only a typical preferred form and application of my invention, I do not wish to be limited or restricted to the specific details herein set forth, but wish to reserve to myself any modifications or variations that may appear to those skilled in the art.

Having described my invention, I claim:

1. A compartmentalized modular container comprised of a plurality of like vessels releasably coupled, and each vessel including; a circumferential vertically disposed sidewall defining a plan configuration, a bottom of smaller configuration than said plan configuration, an upwardly faced male coupling member disposed radially outward at and defining the upper horizontal extremity of the sidewall, and a downwardly faced female coupling member disposed radially inward at and defining the horizontal joinder of the sidewall and bottom, the male and female coupling members of the next adjacent vessels being of complementary convex cross-sectional curvature exceeding 180° and forcibly disengageable for attachment and detachment of the vessels one to the other and to close one with the bottom of another.

2. The compartmentalized modular container as set forth in claim **1** and wherein the uppermost of said plurality of vessels is closed by a cover having said female coupling member disposed horizontally at the joinder of its sidewall and bottom.

3. The compartmentalized modular container as set forth in claim **1**, wherein the said male coupling member faces upwardly and forms a smooth convex rim and wherein the said female coupling member faces downwardly and forms a channel-shaped cavity to receive the male coupling member.

4. The compartmentalized modular container as set forth in claim **1**, wherein the bottom of the vessel is joined to the sidewall by an upwardly and outwardly flared flange and wherein the horizontal disposition of the said female coupling member is above the plane of the bottom.

5. The compartmentalized modular container as set forth in claim **1**, wherein the said male coupling member faces upwardly and forms a smooth convex rim and wherein the bottom of the vessel is joined to the sidewall by an upwardly and outwardly flared flange, and wherein the said female coupling

member faces downwardly and forms a channel-shaped cavity above the plane of the bottom and to receive the said male coupling member.

6. The compartmentalized modular container as set forth in claim 1, wherein a radially projecting manually engageable finger extends from the female coupling member to rotate the same out of engagement with the said male coupling member.

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