

[54] **DOUBLE-WALL JAR**

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[58] Field of Search **215/12 R, 13 R**

[56] **References Cited**

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[57] **ABSTRACT**

A jar, generally made of light weight material such as polypropylene or medium impact styrene, and designed particularly for vending cosmetic materials such as facial cream, which jar is a two-part container (exclusive of cover), each part having a relatively thin wall, designed, when assembled, to provide an air-space between the walls of the two parts, but particularly with the interlocking and interconnecting portions of said parts concentrated in an upper zone near the rims of wall parts and adjacent the threaded portion holding the cover, so that all forces of anti-rotation and anti-part-separation are located in the same area adjacent the threaded portion.

14 Claims, 5 Drawing Figures

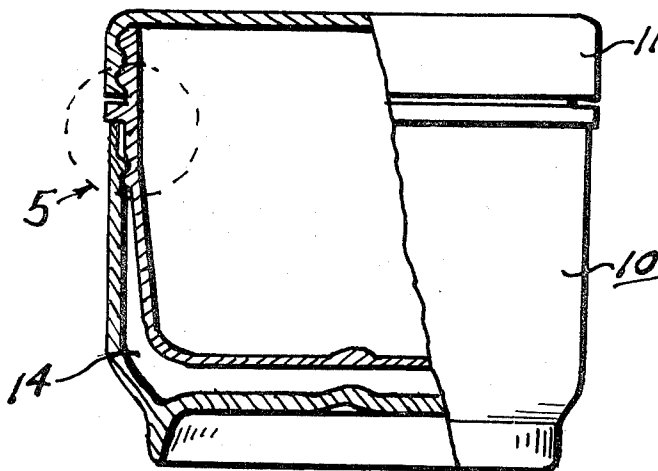


Fig. 1

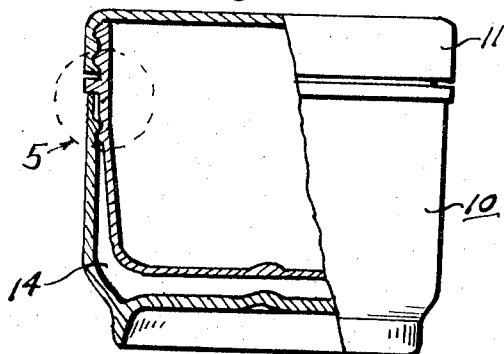


Fig. 2

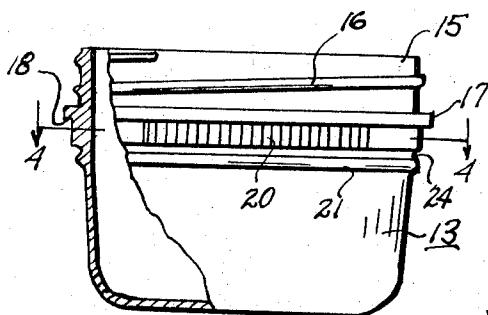
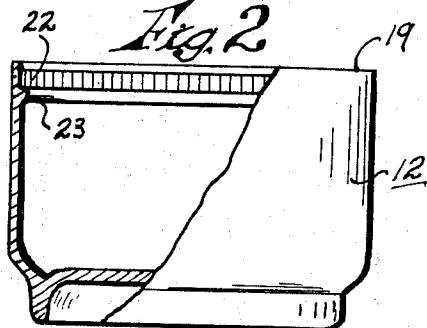


Fig. 3

Fig. 4

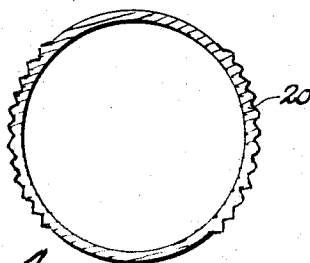
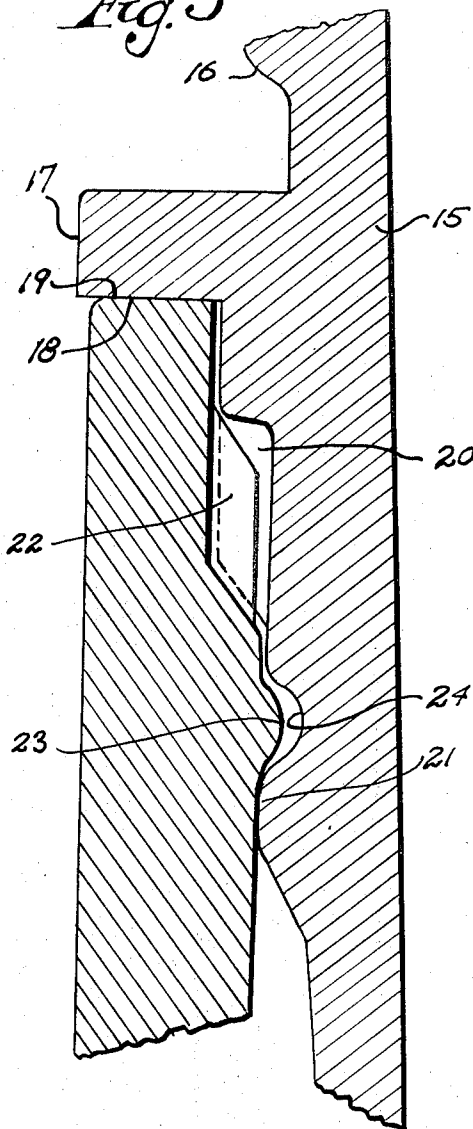


Fig. 5



DOUBLE-WALL JAR

BACKGROUND OF THE INVENTION

Cosmetic jars are not new, and for many years were made of milk-glass, not only for asthetic purposes, but also because of the resistance to the chemical action of the cosmetics.

More recently such jars have been made out of plastic materials, and even still more recently such jars have been developed in one or more parts, not only to give the general feeling and physical appearance of the milk-glass or opal-glass jars, but also to provide an insulating inner space between the contents within the jar and the outer wall of the jar.

Construction of such parts in the past has provided for interlocking means so that the two portions of the container do not rotate relative to each other and do not separate axially after once being combined. In the past, such construction has been complicated and, in many cases, ineffective because of the tendency of the two parts of the double wall jar to separate when the cover is applied or removed from the jar.

SUMMARY OF THE INVENTION

It is an object of the present invention to provide a double wall jar, for cosmetics or the like, which is easily assembled, which is absolutely secure against separation of the two parts of the jar, and which concentrates the interlocking portions of the members in an upper portion of the side walls near the cap-receiving threaded portion so that all forces which may tend to separate the two parts of the jar are concentrated closely in the area adjacent the interlocking portions.

DETAILED DESCRIPTION

For the purpose of illustrating the invention there are shown in the accompanying drawings forms thereof which are at present preferred, although it is to be understood that the various instrumentalities of which the invention consists can be variously arranged and organized, and that the invention is not limited to the precise arrangements and organizations of the instrumentalities as herein shown and described.

In the drawings, wherein like reference characters indicate like parts;

FIG. 1 represents a fragmentary, cross-sectional view of the jar of the present invention, with the two parts interlocked and with the cap in position thereon.

FIG. 2 represents a fragmentary, cross-sectional view of the outer part of the jar of the present invention, showing particularly the toothed connecting portion at the upper portion of the inner wall of said part.

FIG. 3 represents a fragmentary, cross-sectional view of the inner part of the two-wall jar of the present invention, illustrating particularly the toothed interconnecting members on the outer wall near the upper edge and adjacent the threaded portion.

FIG. 4 represents a horizontal, cross-sectional view taken along line 4—4 of FIG. 3.

FIG. 5 represents a greatly enlarged cross-sectional view of the interconnecting portions of the upper edges of the said parts of the two-wall jar of the present invention, taken in the area generally illustrated at 5 in FIG. 1.

In the illustration of FIG. 1, the two-wall jar 10 is shown in assembled position with the cover or cap 11 in place thereon. The jar 10 consists of the outer por-

tion 12 and the inner portion 13. The inner member is constructed, preferably, of polypropylene because of its inert characteristics to the components of cosmetic substances, whereas the outer member is constructed preferably of medium impact styrene because it affords a wider range of moulding characteristics and an opportunity to decorate the external surface of the outer member during the moulding operation. Needless to say, the outer member may be polypropylene and the inner styrene, or both may be of the same material, and of course, the material of either member may be other than styrene or polypropylene. The utilization of polypropylene and medium impact styrene provide not only strength and shock resistance but also flexibility for the snap-interconnection of the two parts, as hereinafter described.

As is evident in FIG. 1, the dimensions of the inner and outer members are such that a hollow air chamber is created between the two members, not only providing for better aesthetic arrangement of the two members, and of the total jar, but also providing an insulating air space between the two walls of the two portions, if such is desirable.

At the upper edge 15 of the inner member 13, there is a threaded rib 16 constructed and arranged to receive the internally threaded portion of the cap 11. The shoulder 17 provides an abutment, at its underside 18, against which the top lip or edge 19 of the inner member 12 can stop when in interlocking relationship, as shown in FIGS. 1 and 5.

Directly beneath the shoulder 17 on the member 13 are disposed one or more sections of toothed or notched portions 20, which may be in the shape of quadrants of gears. These quadrants or gears or toothed portions are arranged with the teeth extending in an axial direction, and preferably two of such quadrants are disposed diametrically opposite each other, as shown in FIG. 4, for better ease of moulding or forming the serrations in the plastic body of the member 13.

In close proximity to the teeth 20 is a rib 21 which extends outwardly from the outer surface of the body portion of the member 13, which provides an integrally moulded snapping for interlocking engagement with the mating portion on the outer body member 12.

The outer body portion 12 has, adjacent its upper edge 19, a circumferential ring of teeth 22 which are designed, constructed and arranged to mate with the teeth 20 on the other body portion, as shown particularly in FIGS. 1 and 5. Directly adjacent the teeth 22 a circumferential rib 23 is moulded into the inner wall of the outer member 12 and which projects radially inwardly from the inner wall, as shown particularly in FIGS. 2 and 5. This rib 23 is designed, constructed and arranged to mate with the groove 24 formed in the outer surface of the inner member 13, between the rib 21 and the teeth 20.

Because of the inherently flexible nature of the material from which the cup-shaped members 12 and 13 are made, the ribs 21 and 23 and the groove 24 are nicely and appropriately dimensioned so that the inner cup-member 13 will nest within the outer cup member 12, with the teeth 20 in interlocking alignment with opposed teeth 22, and with the rib 23, disposed between the rib 24 and the shoulder 17, extending into the groove 24, thus to interlock axially the two cup members and to prevent axial displacement thereof.

While such members are held in axial alignment by the ribs, grooves and shoulders as described above, the teeth 20 are in interlocking disposition with the teeth 22, preventing relative rotary movement between the two body members.

It can be clearly seen that with the teeth 20 and the teeth 22 directly beneath the shoulder 17, all the interlocking forces are concentrated directly beneath and adjacent the threaded portion on the inner jar member and the cap, and in the area where the forces tending to separate the two body members (when the cap is screwed on or off) are applied. Thus there is the maximum potential to hold the two body members together and to prevent separation thereof.

It is to be understood, however, that the present invention may be embodied in other specific forms without departing from the spirit or essential attributes thereof, and it is therefore desired that the present embodiments be considered in all respects as illustrative and therefore not restrictive, reference being made to the appended Claims rather than to the foregoing description to indicate the scope of the invention.

Having thus described my invention, what I claim as new and desire to protect by Letters Patent are the following:

1. A double wall jar comprising an inner cup nested within an outer cup, the inner cup having an annular shoulder at the upper end providing an abutment for the upper edge of the outer cup, the outer surface of the inner cup being spaced from the inner surface of the outer cup except at the upper ends of the wall of each cup, a plurality of axially aligned teeth at the upper edge of inner wall of the outer cup and a plurality of axially aligned teeth below the shoulder at upper end of the outer wall of the inner cup, said teeth being in interlocking engagement to prevent relative rotary motion between the two cups, a peripheral inwardly-extending groove in the outer wall of the inner cup directly adjacent the said teeth and a peripheral inwardly-extending rib on the inner wall of the outer cup di-

rectly adjacent the said teeth, said rib being snap-fitted into the said groove upon assembly of the two cups and preventing axial displacement between the said cups.

2. The double wall jar of claim 1, including a threaded portion on said inner cup adjacent said shoulder, groove and teeth.

3. The double wall jar of claim 2, including a cap fitted on said threaded portion.

4. The double wall jar of claim 1, wherein said inner cup is made of polypropylene.

5. The double wall jar of claim 1, wherein said outer cup is made of medium impact styrene.

6. The double wall jar of claim 1, wherein said inner cup is made of polypropylene and said outer cup is made of medium impact styrene.

7. The double wall jar of claim 1 wherein said teeth on said outer cup define a full circle around the top of said cup.

8. The double wall jar of claim 1 wherein said teeth on said outer cup define a full circle around the inner surface of said cup.

9. The double wall jar of claim 2 wherein the said teeth on said inner cup define a full circle around the periphery of said cup adjacent the said threaded portion.

10. The double wall jar of claim 2 wherein said teeth on said inner cup define less than a full circle around the periphery of said cup adjacent the said threaded portion.

11. The double wall jar of claim 1, wherein said outer cup is made of polypropylene.

12. The double wall jar of claim 1, wherein said inner cup is made of medium impact styrene.

13. The double wall jar of claim 1, wherein said inner and outer cups are both made of polypropylene.

14. The double wall jar of claim 1, wherein said inner and outer cups are both made of medium impact styrene.

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