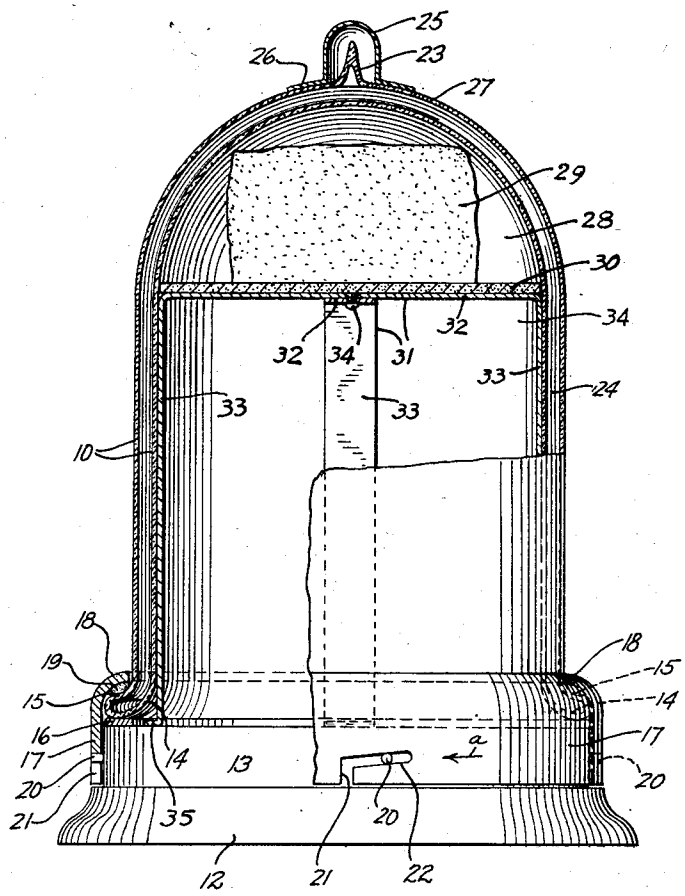
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HEAT INSULATING RECEPTACLE

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INVENTORS
AURIN E. PAYSON
MINER P. WETMORE
BY
Adolph A. Thomas
ATTORNEY

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AURIN E. PAYSON AND MINER P. WETMORE, OF NORWICH, CONNECTICUT

HEAT-INSULATING RECEPTACLE

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Our invention relates to receptacles adapted to maintain their contents at the required temperature, either hot or cold. For this purpose we use a double-walled vacuum jar or bottle supported in inverted position on a suitable base. The inside of the jar constitutes a chamber for foodstuffs to be kept at a certain temperature. If, for example, the jar contains ice cream bricks or other confections requiring a low temperature, a suitable refrigerant is placed in the jar, such as a small container of ordinary ice or so-called dry ice (solidified carbon dioxide). In one form of our invention, the dome of the inverted jar is used for the storage of dry ice, which is held on a porous or perforated disk suitably supported. The cooled confections are removed from the inverted jar in any practical way, either by dispensing means or by simply lifting the jar.

In a simplified form of our invention, a double-walled vacuum jar of Pyrex glass or other suitable material is placed in inverted position on a base, which may have a cushioning ring or disk to receive the lower edge of the jar. The walls of the jar project outwardly at the mouth to form an annular flange or shoulder which rests on the base. A ring having an inturned flange at the top is mounted on the base, and this inturned flange engages the outer flange of the jar, whereby the latter is firmly held in inverted position. A washer of cork, rubber and the like is preferably placed between the ring and the jar to prevent possible injury to the latter when the ring is forced into holding engagement with the flange of the jar.

In a preferred embodiment of our invention, the flanged ring that holds the inverted jar is rotatable on a cylindrical base to which it is removably secured by bayonet-slot joints or like connections. A suitable support inside the jar rests on the base, and the top of the support carries a plate or disk which partitions off the spherical dome of the jar to form a chamber for dry ice. This construction is shown by way of example in the accompanying drawing, which is partly in elevation and partly in section for clearness.

A double-walled vacuum jar 10, which in large sizes is made of Pyrex glass, is supported in inverted position on a suitable base 12. In the present instance, the base 12 has a cylindrical extension 13 on which the jar rests. The mouth of the double-walled vacuum jar 10 is formed with an integral flange 14 which extends outwardly to form an annular seat or shoulder 15. If desired, a cushioning disk or washer 16 may be placed on the base to receive the flanged mouth of the jar.

A cylindrical ring 17 is rotatably mounted on the extension 13 of base 12, and is formed at the top with an inturned flange 18 arranged to engage the annular shoulder 15 of jar 10. A ring 19 of cork, rubber or the like, may be interposed between the flanges 15 and 18 to prevent possible injury to the jar when the ring 17 is tightened. Any practical connection may be used for adjustably mounting the ring 17 on base 12 so as to clamp the jar in position and release it when desired. In the drawing we have shown the cylindrical base portion 13 provided with pins 20 arranged to enter bayonet-slots 21 in ring 17. The inclined portions 22 of slots 21 act like screw-threads for tightening and loosening the ring relatively to the jar 10.

It is clear that when the ring 17 is turned in the direction of arrow a, the inturned flange 18 is forced down against the annular shoulder 15 (or the interposed yieldable ring 19), whereby the inverted jar is rigidly clamped to the base. When the ring is turned the other way until the pins 20 encounter the open vertical ends of the bayonet-slots 21, the ring is disconnected from the base and can be lifted over the jar 10, so that the latter is now free to be tilted or removed.

In assembling the parts above described, the jar 10 is placed inverted on the base portion 13, the yieldable washer 19 (if one is used) is put on the annular flange or shoulder 15 of the jar, and finally the fastening ring 17 is slipped down over the jar and secured to the base. In the broader aspect of our invention, the ring 17 may be connected to the base in any other practical way.

The outer wall of jar 10 has a projecting

tip 23 through which the annular vacuum space 24 between the walls is exhausted. In order to protect this tip against injury, we provide a cap 25 which encloses the tip 23, and at the same time forms a grip for handling the jar. When these jars are made of several gallons capacity, they are very heavy and the grip 25 aids considerably in the handling of the jars. The member 25 may be spun out of sheet metal and provided with a flange 26 shaped to fit against the rounded or spherical surface 27 of the jar, to which it is cemented in any practical way. There are several kinds of cement on the market for use on glass. We have used silicate of soda with good results.

The spherical dome space 28 of the inverted jar is utilized as a storage chamber for dry ice or other suitable refrigerant 29. For this purpose a pervious disk 30 rests on a suitable support, which in this instance consists of a pair of inverted U-shaped strips 31 bent to form horizontal portions 32 and vertical legs 33. The strips 31 are arranged crosswise and connected at the center by a rivet 34 or otherwise. The legs 33 may be fastened to the top of base member 13 in any practical way. The disk 30, which merely rests on the top bars 32 or may be attached thereto, is a material adapted to permit the slow escape of carbon dioxide gas into the cooling compartment 34 of the jar. As examples of such material we may mention wood pulp, porous cement, perforated cork or metal, and others along the same line. The escape of refrigerating gas from chamber 28 may also be effected by so shaping the disk that it does not close against the jar all the way around, thereby providing passages for the gas. It will be noticed that the supporting legs 33 take up practically no room and leave the compartment 34 unobstructed for storing foodstuffs and other articles that must be kept cold. If desired, a suitable container may be placed on disk 30 to hold the ice dry in tightly packed form. Any other practical support may be used for disk 30, as for instance a central rod secured at its lower end to the base and carrying the disk at its other end. Manifestly, the dome chamber 28 could also be used to store a source of heat if the jar is to keep articles hot.

In removing or dispensing the articles from compartment 34', the jar 10 may be lifted or tilted at the bottom, or suitable delivery mechanism may be associated with the jar. We have not deemed it necessary to show or describe any delivery or ejecting mechanism, because the patented art as well as the market are replete with arrangements for dispensing confections and other articles from containers upon the deposit of a proper coin.

Although we have shown and described a specific construction, we want it understood that our invention is not limited to the details set forth. Changes and modifications may be made by those skilled in the art without departing from the scope of the invention as defined in the following claims.

We claim as our invention:

1. A temperature-retaining receptacle comprising a base, a double-walled vacuum jar supported on said base in inverted position, a ring on said base, and a flange on said jar at the mouth thereof engaged by said ring to hold the jar firmly in position on said base, said ring overlying said flange and being removably mounted on said base to permit removal of the jar.

2. A temperature-retaining receptacle comprising a base, a double-walled vacuum jar supported on said base in inverted position, the mouth of said jar having an annular flange formed integral with the glass walls of the jar and extending outwardly, and a ring on said base having an inturned flange arranged to overlie and engage said flange on the jar, whereby the latter is rigidly held in position on said base.

3. A temperature-retaining receptacle comprising a cylindrical base, a double-walled vacuum jar supported on said base in inverted position, a ring rotatably mounted on said base and adapted to pass over said jar for connection to the base or removal therefrom, and cooperating means on said ring and the mouth of said jar for rigidly holding the latter in position on the base, said ring leaving practically the entire jar exposed.

4. A temperature-retaining receptacle comprising a cylindrical base, a double-walled vacuum jar supported on said base in inverted position, the mouth of said jar having an annular flange formed integral with the glass walls of the jar and extending outwardly, a ring rotatably mounted on said base and adapted to pass over said jar for connection to the base or removal therefrom, and an inturned flange on said ring arranged to overlie and engage said flange on the jar, whereby the latter is rigidly held in position on said base.

5. A temperature-retaining receptacle comprising a cylindrical base, a double-walled vacuum jar supported on said base in inverted position, the mouth of said jar having an annular flange formed integral with the glass walls of the jar and extending outwardly, a ring rotatably mounted on said base and adapted to pass over said jar for connection to the base or removal therefrom, an inturned flange on said ring for engaging said flange on the jar, whereby the latter is rigidly held in position on said base, and a screw-like connection between said base and said ring for imparting to the latter a combined rotary and vertical movement, whereby the flange on said ring is forced into pressure engagement with the flange on said jar for holding the latter rigidly in position.

6. A refrigerating receptacle comprising a double-walled vacuum jar of glass provided at the mouth with an outwardly flaring annular flange formed as an integral double-walled extension of the cylindrical body of said jar, so that the evacuated space between the walls of the jar extends into said flange, in combination with a base on which said jar rests in inverted position, and means on said base overlying said flange and engaging the same for supporting the jar firmly in inverted position.

7. The combination of a base, a double-walled vacuum jar supported on said base in inverted position, a flat annular member adjustably mounted on said base, and outwardly projecting means on said jar near the mouth thereof arranged to be engaged by said member for holding the jar rigidly on said base.

AURIN E. PAYSON.
MINER P. WETMORE.