Aug. 28, 1956 D. F. WIEDERSPAN ET AL 2,760,668

VACUUM BOTTLE HOLDERS

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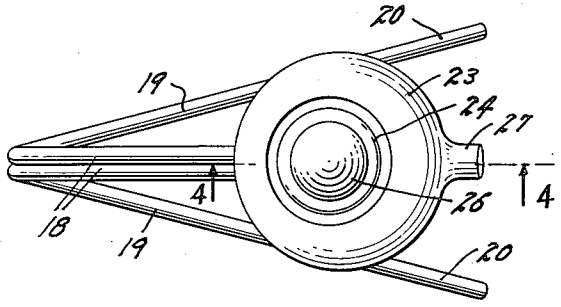


Fig. 1

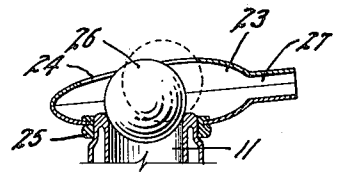


Fig. 4

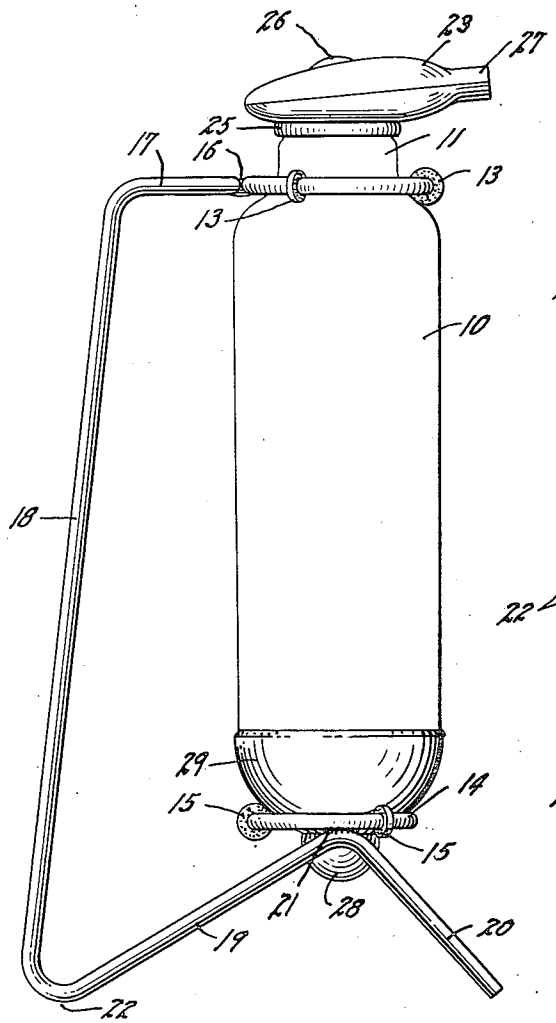


Fig. 2

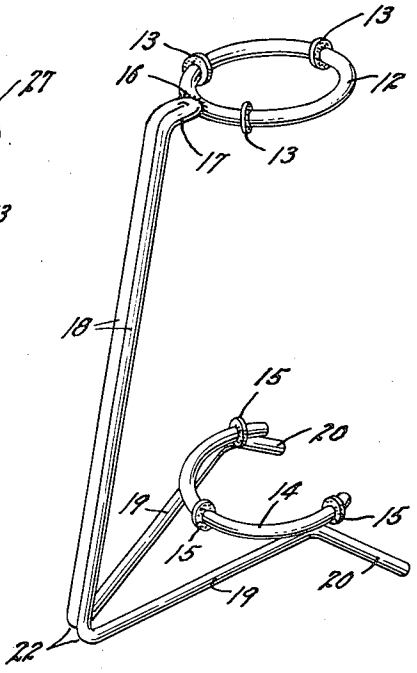


Fig. 3

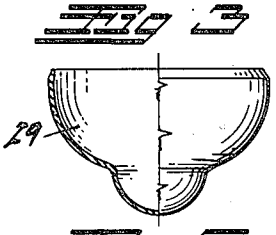


Fig. 5

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VACUUM BOTTLE HOLDERS

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2 Claims. (Cl. 215—100)

This invention relates to a portable table stand for vacuum bottles of the "thermos" type, and has for its principal object the provision of a neat, attractive, and inexpensive stand which can be quickly and easily applied to a conventional vacuum bottle without the use of tools, and which will securely, safely and resiliently support the thermos bottle in a vertical position and provide a convenient pouring handle for the bottle.

Another object of the invention is to provide means which will automatically open and close the vacuum bottle as the latter is tilted to and from the pouring position.

Other objects and advantages reside in the detail construction of the invention, which is designed for simplicity, economy, and efficiency. These will become more apparent from the following description.

In the following detailed description of the invention, reference is had to the accompanying drawing which forms a part hereof. Like numerals refer to like parts in all views of the drawing and throughout the description.

In the drawing:

Fig. 1 is a plan view of the improved vacuum bottle stand, with a conventional vacuum bottle in place therein;

Fig. 2 is a side view of the improved stand with its supported bottle;

Fig. 3 is a perspective view of the improved stand with the bottle removed therefrom;

Fig. 4 is a detail section through a bottle cup employed in this invention, the section being taken on the line 4—4, Fig. 1; and

Fig. 5 is a detail view of a bottle cup which may be used with the improved stand. In Fig. 5 the bottle cup is illustrated to show one half as a cross-section, and the other half as a side view of the cup.

In the drawing a conventional thermos bottle is indicated at **10**, with its neck at **11**.

The improved vacuum bottle stand is formed from three lengths of resiliently flexible metal rod. One length of the metal rod is arcuately bent to form an annular neck-encircling ring **12**, of sufficient diameter to freely encircle the neck **11** of the bottle **10**. A plurality of perforated, circular, rubber cushion discs **13** surround the rod forming the neck ring **12** at spaced intervals.

The second length of rod is arcuately bent to form an open, circular, C-shaped base ring **14** of sufficient diameter to partially encircle the conventional rounded base of the bottle **10**. The base ring **14** is also provided with a plurality of similar perforated rubber cushion discs **15** to prevent damage to the bottle **10**. The open side of the base ring is positioned forwardly.

The third length of rod is bent back upon itself at its middle to form two parallel portions. The bend joining the parallel rods is welded or otherwise secured to the neck ring **12**, as indicated at **16**. The parallel rod portions then extend horizontally rearward for a relatively short distance to form an upper bracket **17**, thence extend

in parallel relation rearwardly and downwardly to form an inclined handle portion **18**.

The two rods forming the handle portion **18** are arcuately curved at their lower extremities to form rear feet **22** thence extend in separated, V-shaped relation to form two diagonal brace portions **19**. A bend is formed at the upper extremity of each diagonal brace portion and the extremities of the latter extend forwardly, downwardly and outwardly to form two front leg members **20**. The bends between the diagonal brace portions **19** and the leg members **20** are welded or otherwise secured to the bottoms of the opposite sides of the base ring **14**, as indicated at **21**.

The neck of the vacuum bottle **10** is inserted in the neck ring **12** against the cushion members **13**, and the handle portion **18** is flexed upward and rearwardly sufficiently to allow the base of the bottle to be seated in the base ring **14**, with the resilient cushion members **15** clamped at three points against the rounded bottle bottom.

When the stand is released, the bottle is placed under longitudinal compression, so as to hold it securely in place supported in a vertical position by the two legs **20** and the rear foot **22**.

The stand may be used as above described, without further additions or attachments. However, it is preferred to employ a bottle cup **29**, molded from plastic or similar material, to enclose the bottom of the vacuum bottle. The cup has a contour and diameter to snugly enclose the entire bottom of the bottle, and is provided with a rounded protuberance or socket **28** to receive the conventional evacuating neck through which the bottle was exhausted, and which projects from the bottoms of all standard vacuum bottles.

The cup **29** and the protuberance **28** preferably contrast in color with the bottle and enhance the appearance of the entire assembly. They also serve to protect the bottom of the bottle and its evacuating neck from damage. The open forward portion of the base ring provides a passage for the bottle cup while the bottle is being removed and replaced.

The contents of the bottle will be subjected to rapid heat exchange unless some means are provided for closing the bottle neck. It is also necessary to provide a spout so that the contents of the bottle may be poured without spilling or dribbling. Both of these necessities are accomplished by means of a hollow, flat, pouring chamber **23** provided with a top opening **24** and a similar bottom opening. An angular, resilient gasket member **25** is mounted in the bottom opening and is adapted to be forced downwardly over the bottle neck **11** to frictionally engage the latter, as shown in Fig. 4. A pouring spout **27** extends forwardly from the pouring chamber **23** and provides a discharge therefor.

The top opening **24** in the chamber **23** surrounds a ball **26** which rests in and closes the neck **11** of the bottle **10**, as shown in Fig. 4. When the bottle **10** is tilted forwardly, the ball **26** rolls from the neck **11** to the position indicated in broken line in Fig. 4, where it is retained in place by the upper portion of the pouring chamber **23**. The fluid from the bottle, however, can flow freely around the ball and from the pouring spout **27**. The ball rolls back into the neck of the bottle when the latter is returned to its vertical position, to automatically provide a seal therefor.

The ball **26** may be formed from any suitable material, such as hollow plastic, and the pouring chamber **23** is preferably formed from two similar plastic members cemented together.

While a specific form of the improvement has been described and illustrated herein, it is to be understood that the same may be varied, within the scope of the appended

claims, without departing from the spirit of the invention.

Having thus described the invention, what is claimed and desired secured by Letters Patent is:

1. A self-supporting container comprising: a vertically-elongated cylindrical bottle; a neck portion of less diameter than said bottle formed on and extending upwardly from the latter; a rounded bottom formed on said bottle; a completely closed neck-encircling ring of metal rod encircling said neck portion; a lower annular base ring of metal rod and of less diameter than said bottle encircling the rounded bottom thereof; two straight rod portions secured together and to said neck-encircling ring at their upper extremities and extending horizontally rearward from the latter ring to form bracket portions; handle portions formed in said rods, said handle portions consisting of the two rods lying together and extending downwardly and outwardly from said bracket portions; diagonal brace portions formed on said rods, said diagonal brace portions consisting of a portion on each rod extending from the lower extremity of the handle portions upwardly and forwardly to positions below said bottle, the upper and inner extremities of the brace portions being secured to said base ring at opposite sides thereof so that the brace portions flare from the handle portion in V-shaped relation; and a leg portion on the extremity of each rod, said leg portions extending forwardly from said bottle and outwardly from each other to form two separated front supports for said bottle, the lower extremities of said handle portions forming a third support for said bottle, said handle portions acting to urge said neck-encircling ring and said base ring toward each other to clamp said bottle between said rings.

2. A self-supporting container as described in claim 1 in which the forward portion of the base ring is open to facilitate the insertion of the rounded bottom of said bottle therein, and having perforated resilient discs surrounding the rods forming the neck-encircling ring and the base ring and acting to space said rings from said bottle.

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