Nov. 15, 1955 A. TREFF 2,723,541

CUP HOLDERS

Filed Feb. 21, 1951

Fig. 1

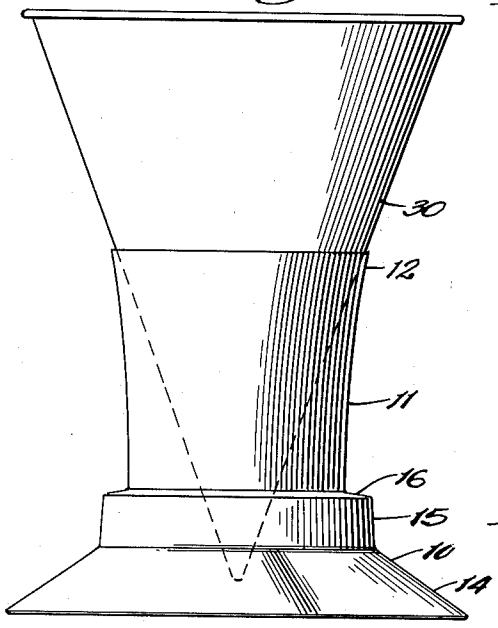


Fig. 2

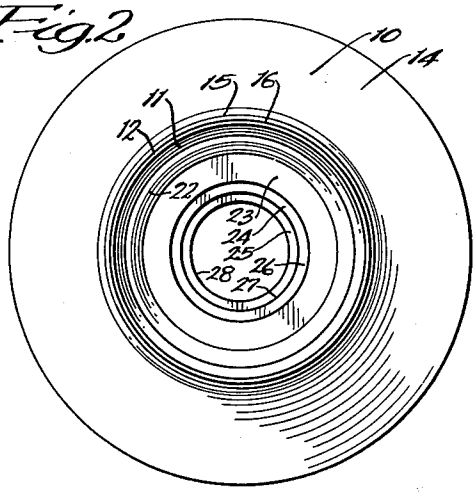


Fig. 3

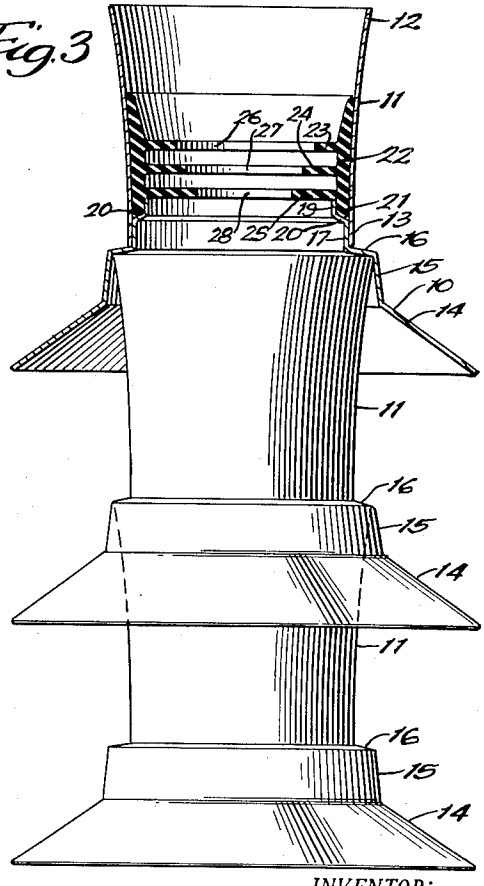
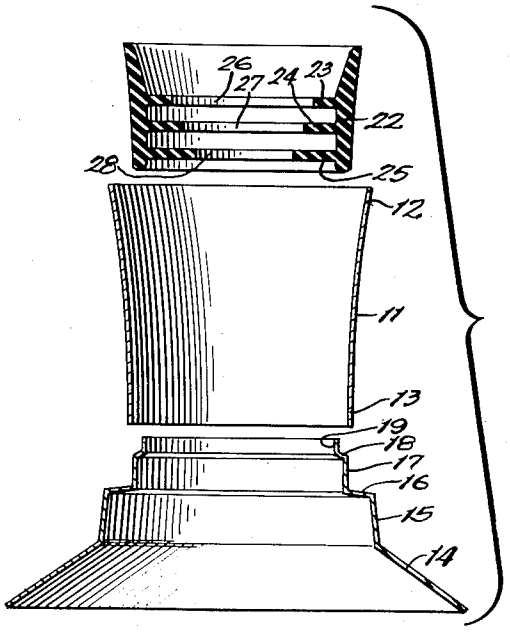


Fig. 4



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2,723,541

CUP HOLDERS

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4 Claims. (Cl. 65—61)

This invention relates to cup holders and it relates particularly to an improved holder for conically shaped paper cups which permits the holders to be stacked in a manner to provide for optimum use of available space while at the same time providing a neat appearance of the cup holders when in stacked relation.

It is an object of this invention to produce cup holders of the type described which may be stacked one on top of the other with sufficient stability to militate against inadvertent separation or tumbling and it is a related object to produce cup holders of the type described embodying means for stacking into neat columns having sufficient stability to maintain their stacked relation.

Another object is to produce a cup holder of the type described embodying means for stacking which does not interfere or rely upon elements by which the cup member is gripped and held in position of use.

A further object is to produce a cup holder of the type described formed of relatively few simple parts that are readily assembled into a holder which permits separation of the parts for purposes of replacement, repair or cleaning; which provides a comfortable grip when being held in the hand; which can be readily cleaned; which offers little, if any, projections that might prove dangerous as an incidence to normal use; which is light in weight and formed of a minimum amount of metal or other structural material; which provides a sturdy support for the cup when set upon relatively flat surfaces or otherwise held; which can be stacked in a manner to conserve space, and which stacks into a neat and attractive arrangement of holders ready for use.

These and other objects and advantages of this invention will hereinafter appear and for purposes of illustration, but not of limitation, an embodiment is shown in the accompanying drawing in which—

Figure 1 is an elevational view of a cup holder embodying features of this invention showing a conically shaped cup anchored therein in position of use;

Figure 2 is a plan view taken from the underside of the assembly shown in Figure 1;

Figure 3 is an elevational view partially in section showing a number of cups in stacked relation, and

Figure 4 is a sectional elevational view showing the separate parts in relative position for assembly of a cup holder of the type shown in the foregoing figures.

Description of a cup holder embodying feautres of this invention will be made in connection with a cup holder adapted to develop sufficient frictional grip over an extensive surface area at different levels about the outside wall of the cup for purposes of anchoring the cup in position of use with sufficient force to prevent inadvertent displacement and with sufficient distribution of such forces to minimize distortion of the cup or danger of piercing the cup when in position of use. It will be evident that the concepts of this invention for stacking the holders may be embodied in other assemblies employing other techniques for anchoring the cup in position of use.

As shown in the drawing, a holder embodying features of this invention comprises a base portion **10** formed of metal, wood, plastics or the like relatively rigid material which receives a relatively short tubular body portion **11** formed of substantially the same material in partial telescoping relation.

The tubular body portion **11** is curvilinear in shape with the short upper end portion **12** being of slightly larger diameter than the lower end portion **13**.

The base portion **10** is formed with a tubular section **15** having an opening therethrough dimensioned to be of larger diameter than the distance across the upper edge portion of the tubular body member **11** so as to enable the latter to be telescoped into the tubular section **17** from the underside for stacking. It is preferred to form the tubular section **15** with a slight inward taper to facilitate the entrance of the upper edge portion of the tubular body member into the described telescoping relation but with the opening at the upper edge portion of the tubular member being just slightly greater than the distance across the upper edge to minimize relative sidewise movement when in stacked relation. Extending outwardly from the lower edge of the tubular section **15** is a flared end portion **14** which provides a more stable support for the holder when resting upon a relatively flat surface. Extending inwardly from the upper edge of the tubular section **15** is an annular flange **16** which limits the telescoping relation between the tubular body member **11** and the tubular section **15** and also provides a flat rest for the upper edge of the tubular body portion to impart greater stability when one holder is staked upon another. Extending upwardly from the inner edge of the flanged portion **16** is another relatively short tubular section **17** dimensioned to correspond with the opening defined by the lower edge portion **13** of the tubular body portion **11** so as to permit the tubular section **17** to be telescoped within the body portion **13** to the extent permitted by the abutment **16**.

Integral with the upper edge of the tubular section **17** is an inwardly extending portion **18** and an upwardly extending lip **19** which defines an annular groove **20** between the lip **19** and the inner wall of the body portion **11** for receiving the lower end portion **21** of an adapter **22** which establishes the desired gripping relation with the conically shaped cup when in position of use.

The adapter shown in the drawing comprises a tubular section dimensioned to seat within the tubular body portion **11** and has an end portion **21** which seats within the groove **20** when in the assembled relation. Extending inwardly in vertically spaced apart relation from intermediate portions of the tubular member **20** are two or more horizontally disposed shelves, three of which are shown in the drawing as represented by numerals **23**, **24** and **25**. The shelves and the tubular member are preferably formed of highly flexible material having a high coefficient of friction and aligned openings **26**, **27** and **28** are provided through central portions thereof to enable the conical cup **30** to pass therethrough and deflect the shelves in a downward direction for the purpose of establishing an area of contact between the surrounding edge portions of each of the shelves and the adjacent side walls of the conically shaped cup. For this purpose it is preferred to vary the dimensions of the openings substantially to correspond with the taper of the cup, such for example as by providing an opening in the upper shelf **23** of larger dimension than the opening in the shelf **24** which in turn is of larger dimension than the opening **28** in shelf **25**. It is also preferred to dimension the openings so that the edges of the shelves defining the opening will define a wall which when projected to the upper edge of the tubular body member will be spaced a short distance inwardly therefrom so that a gripping relation will be established of substantially uniform character all around the conically shaped cup in vertically spaced apart portions while the outer edge of the cup **30** rests upon the upper edge of the tubular body portion **11** when in position of use.

It is possible to form the shelves **23**, **24** and **25** and the tubular member **22** as an integral unit of substantially the

same material or the shelves may be formed of one material having the desired characteristics while the tubular portion may be formed of another which will be more rigid in character.

It will be apparent from this description that the various parts of which the holder is formed may be separately fabricated to permit ready assembly by telescoping the edge portion **13** of the tubular body portion **11** about the upright section **17** until the lower edge of the portion **13** comes to rest against the abutment **16**. The frictional force developed by the contacting telescoping surfaces may be sufficient to maintain the assembled relation or else other fastening means may be provided, as heretofore described. The adapter may be inserted into the open end of the tubular body portion until the lower edge portion **21** comes to rest within the groove **20** whereby sufficient frictional force may be developed to fix the adapter in position of use to prevent inadvertent displacement as an incidence to normal use.

In this assembled relation, one cup holder may be stacked onto another by moving one cup downwardly on top of another so as to project the upper edge portion **12** of the lower cup into the opening defined by the upright tubular sections **15** until the upper edge of the lower cup comes to rest against the underside of the abutment **16**. Thus a secure stacked relation may be effected, as shown in Figure 3, which economizes on space and which provides a neat appearance.

When it is desired to make use of one of the holders with a conically shaped cup, the operator may remove the uppermost holder by raising slightly and the conically shaped cup may be inserted in position of use without handling the cup merely by inverting the holder and pressing downwardly over an inverted stack of cups while supplying sufficient downward force to cause the edge portions of the shelves **23, 24** and **25** to be flexed upon forced engagement with the side wall of the uppermost cup as it is partially projected therethrough. When the holder is removed, the uppermost cup will be removed with it from the stack and it will be all ready in position of use for purposes of dispensing various types of fluids.

It will be understood that numerous changes may be made in the details of construction, arrangement and operation without departing from the spirit of the invention, especially as defined in the following claims.

I claim:

1. In a cup holder of the type described, a tubular body member in which the cup is adapted to be positioned, a base for supporting said tubular body member comprising a vertically disposed tapered tubular section having an inside diameter dimensioned to be slightly greater than the distance across the upper edge portion of the tubular body member to enable the latter to be telescoped into the tubular section from the underside, an annular flange extending inwardly from the upper edge of the tubular section to limit the telescoping relation and to provide a rest for the upper edge of the tubular body member when one holder is stacked upon another, a second tubular section extending upwardly from said flange and dimensioned to correspond with the opening in the lower end of the tubular body member to permit said second tubular section to telescope into the lower end portion of the tubular body member up to a distance limited by said annular flange thereby to effect an assembled relation between the tubular body portion and the base.

2. In a cup holder of the type described, a tubular body member in which the cup is adapted to be positioned and having a cup gripping member including a cylindrical section adapted to fit against the inner wall of the tubular body member, a base for said tubular body member comprising a vertically disposed tapered tubular section having an inside diameter dimensioned to be slightly greater than the distance across the upper end portion of said tubular body member to enable the latter to be telescoped into the tubular section from the underside for stacking, an annular flange extending inwardly from the upper edge of the tubular section to limit the telescoping relation and to provide a suitable rest for the upper edge of the tubular body member when one holder is stacked upon another, a second tubular section extending upwardly from the flange and dimensioned to telescope within the lower end of the tubular body member to effect an assembled relation between the tubular body member and said base, and inwardly and upwardly extending sections on the end of the latter tubular section which together with the adjacent inner wall of the tubular body member, define, when in assembled relation, an annular groove for receiving the lower edge portion of the cup gripping member.

3. A cup holder formed of two separate parts joined together in the assembled relation including a tubular body member in which the cup is adapted to be positioned and a base for said tubular body member comprising a cylindrical portion open at the top and bottom and having a vertically disposed sleeve section dimensioned between the outer walls to be slightly less than the dimension between the inner walls at the lower end portion of the tubular body member which is telescoped thereover in the assembled relation and which is dimensioned to be less than the upper end portion of the tubular body member, an annular rim integral with the lower edge of the sleeve section and extending outwardly therefrom to function as a supporting surface for the lower edge of the telescoped tubular body member, a second sleeve section extending downwardly from the outer edge portion of the annular rim and dimensioned to have an inside diameter slightly greater than the upper edge portion of the tubular body member to enable the latter to be telescoped therein from the under side into engagement with the under side of the rim, and a skirt flaring outwardly from the lower edge of the second sleeve section for resting upon a supporting surface.

4. A cup holder formed of two separate parts joined together in the assembled relation including a tubular body member in which the cup is adapted to be positioned and a base for said tubular body member comprising a cylindrical portion open at the top and bottom and having a vertically disposed sleeve section dimensioned between the outer walls to be slightly less than the dimension between the inner walls at the lower end portion of the tubular body member which is telescoped thereover in the assembled relation and which is dimensioned to be less than the upper end portion of the tubular body member, an annular rim integral with the lower edge of the sleeve section and extending outwardly therefrom to function as a supporting surface for the lower edge of the telescoped tubular body member, a second sleeve section extending downwardly from the outer edge portion of the annular rim and dimensioned to have an inside diameter slightly greater than the upper edge portion of the tubular body member to enable the latter to be telescoped therein from the under side into engagement with the under side of the rim, an annular rim extending inwardly a short distance from the upper edge portion of the first sleeve section, a third sleeve section extending upwardly from the inner edge of the latter rim to provide a spaced relation between the said sleeve section and the base of the tubular body member telescoped into position of use for receiving a cup-gripping member therebetween, and a skirt flaring outwardly from the lower edge of the second sleeve section for resting upon a supporting surface.

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