

[54] DISPOSABLE CUP WITH INTEGRAL SEAM
STRAW

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[51] Int. Cl.² A47G 19/22; B65D 5/02

[58] Field of Search 220/90.2; 206/436;
229/7 S

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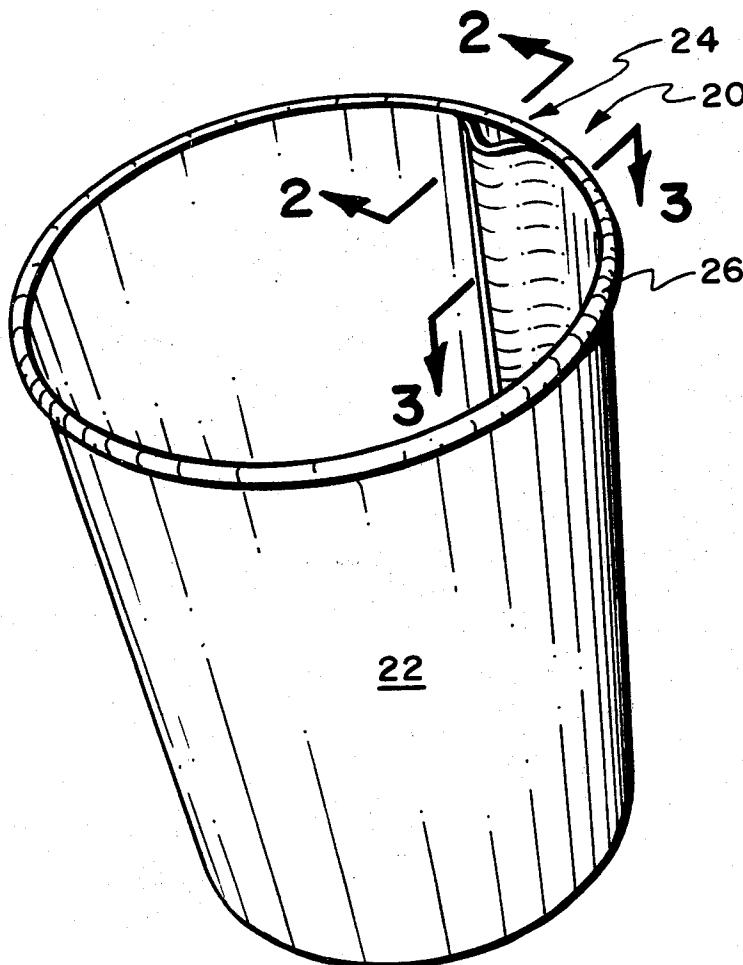
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[57] ABSTRACT

A disposable cup with integral straw situated at a lap joint of the cup such that the infirmed, infants and others desiring to elevate liquid from the cup into their mouth may do so using the seam straw without materially tipping the cup. The cup is preferably designed so that it will be economical and will nest with other cups whereby the seam straw is partially or completely though resiliently collapsed in such a fashion as to permit it to return at least in part to its original orientation adequate to permit fluid flow therethrough.

4 Claims, 7 Drawing Figures



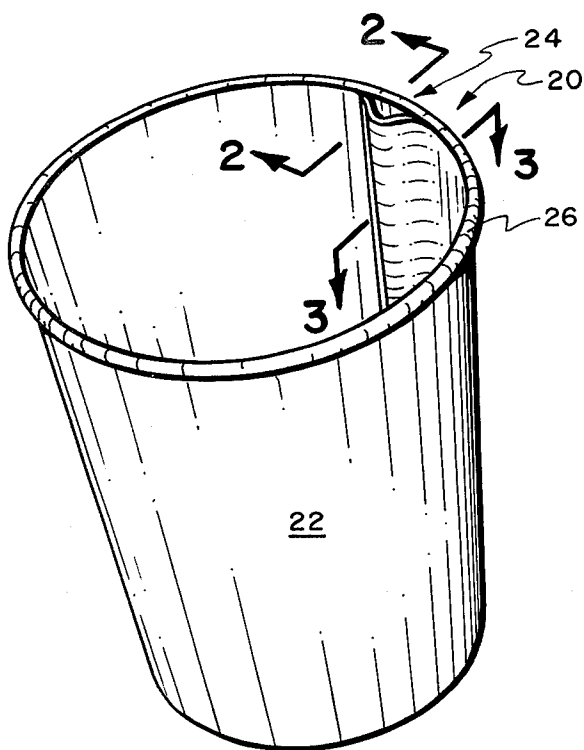


FIG. 1

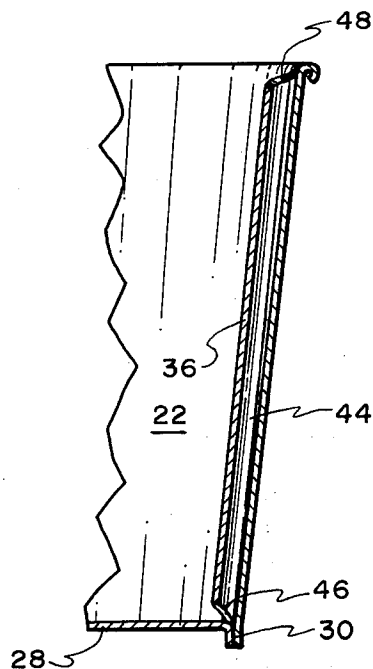


FIG. 2

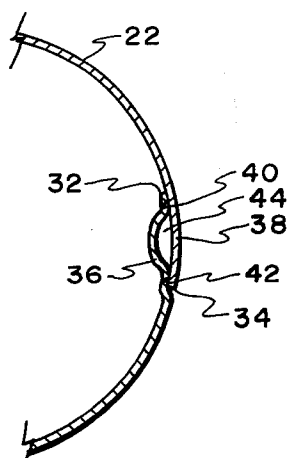


FIG. 3

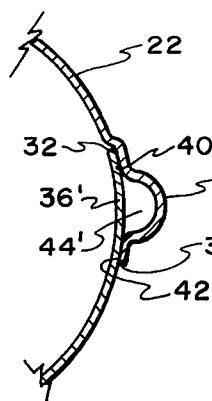


FIG. 4a

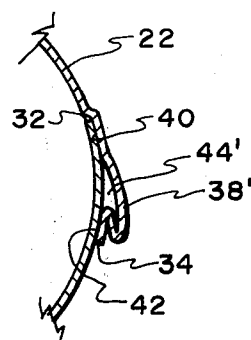


FIG. 4b

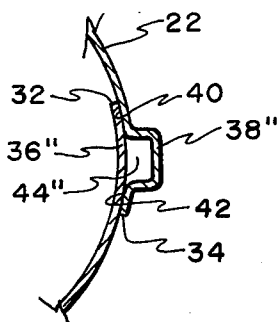


FIG. 5a

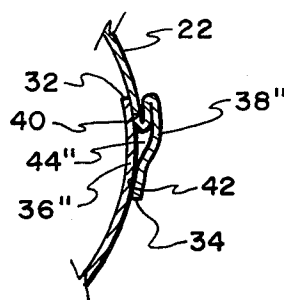


FIG. 5b

DISPOSABLE CUP WITH INTEGRAL SEAM STRAW

BACKGROUND

1. Field of Invention

The present invention relates generally to drinking vessels and more particularly to a disposable cup with an integral straw fabricated at a lap joint thereof.

2. Prior Art

Proposals of the past for elevating fluid from a cup without materially tilting the cup have consisted of complex arrangements which have been expensive to fabricate and burdensome to pack in quantities in any compact fashion for shipment.

BRIEF SUMMARY AND OBJECTS OF THE PRESENT INVENTION

In summary, the present invention comprises a disposable cup formed with a lap seam such that part of the seam comprises an essentially vertically directed passageway opening into the cup at the bottom thereof and also at the drinking lip of the cup, so as to function as a straw allowing the user to suck liquid from the cup into his mouth without materially tilting the cup. The fabrication of the cup is readily accomplished without material departure from existing methods and with only a negligible increase in cost in comparison with the fabrication of disposable cups of conventional design. Nesting is facilitated.

With the foregoing in mind, it is a primary object of the present invention to provide an improved disposable cup.

Another paramount object of the present invention is the provision of a disposable cup having a novel fluid dispensing cavity fabricated at a generally vertically extending lap joint, which cavity is open at top and bottom of the disposable cup.

Another important object of the present invention is the provision of a disposable cup with integral lap seam straw for use by the infirmed, infants and others without materially tilting the cup.

A further and significant object of the present invention is the provision of a disposable cup with an integral lap seam straw which may be fabricated in essentially the same fashion as disposable cups having no integral straw and with only a negligible increase in manufacturing cost.

These and other objects and features of the present invention will be apparent from the following detailed description, taken with reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective representation of a presently preferred disposable cup of paper or the like with a lap joint in which is formed the fluid communication passageway open at top and bottom to function as a straw;

FIG. 2 is a fragmentary cross-sectional view taken along lines 2—2 of FIG. 1;

FIG. 3 is a fragmentary transverse cross-sectional view taken along lines 3—3 of FIG. 1;

FIG. 4a is a modified form of the lap joint straw configuration with the passageway projecting external of the diameter of the cup as opposed to internal thereof;

FIG. 4b is a fragmentary cross-sectional representation of the joint of FIG. 4a with the passageway collapsed to allow nesting of one such cup within another;

FIG. 5a is a third lap joint straw embodiment which is external of the radius of the cup and essentially rectangular in cross section; and

FIG. 5b is a fragmentary cross-sectional view of the cup with integral straw of FIG. 5a where the passageway is collapsed to accommodate nesting of one said cup within another.

DETAILED DESCRIPTION OF THE ILLUSTRATED EMBODIMENTS

Reference is made to the drawings wherein like numerals are used to designate like parts throughout. FIG. 1 illustrates a presently preferred drinking cup, generally designated 20, fabricated in accordance with the present invention. The cup 20, other than as explained hereinafter may be of any sheet material, such as treated paper, typically and conventionally used in the fabrication of disposable cups and includes a generally vertical cylindrical wall 22 formed by wrapping a section of the sheet material from which the cup is formed upon itself to create a lap joint, generally designated 24. The top of the cup 20 is configured so as to form a lip 26 in a conventional fashion and a bottom wall 28 is conventionally configured and joined at seam 30 to the generally vertical cylindrical wall 22. A suitable bonding agent is incorporated at the lap joint 24 and the bottom joint 30 so as to cause the cup to retain structural stability during use and remain impervious to fluid flow.

The lap joint 24 which comprises edges 32 and 34 also includes coextensive side areas 36 and 38. The cup 20 is fabricated so that one of the two areas 36 and 38 will be substantially greater than the other, not in height but width. The greater area, area 36 as shown in FIG. 3 is caused to buckle prior to being adhered along interfaces 40 and 42 so as to create a hollow fluid passageway 44. The passageway 44 is caused to communicate with the interior of the cup adjacent the bottom 28 at lower port or opening 46 (FIG. 2). The passageway 44 also comprises upper port or opening 48, over which the user places his lips to create adequate suction to withdraw fluid from the cup 20 through the passageway 44. Thus, the passageway 44 comprises an integral lap joint straw of the cup 20. The cup 20 is particularly useful for the infirmed, infants and others who are either unable or unwilling to drink in a conventional fashion.

The particular type of lap joint integral straw configuration of FIGS. 1-3 lends itself significantly to ease of manufacture and does not materially increase the cost thereof while at the same time accommodating nesting of a plurality of such cups one within the next thereby facilitating shipment, storage and dispensing of the same. In like fashion the remaining two configurations also accommodate the same objectives. In FIGS. 4a and 4b a second lap joint integral straw configuration is shown, the only difference being that the passageway 44' formed by wall areas 36' and 38' is exterior of the diameter of the cup 20 rather than interior, as illustrated in FIGS. 1-3. FIG. 4b particularly emphasizes the manner in which the wall portion 38' is collapsed to accommodate nesting.

Similarly, the passageway 44'' of FIGS. 5a and 5b is shown to be of rectangular configuration brought into being by the relationship of the side wall portions 36'' and 38'' and is readily collapsible to accommodate nesting.

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The invention may be embodied in other specific forms without departing from the spirit or essential characteristics thereof. The present embodiments are therefore to be considered in all respects as illustrative and not restrictive, the scope of the invention being indicated by the appended claims rather than by the foregoing description, and all changes which come within the meaning and range of equivalency of the claims are therefore intended to be embraced therein.

What is claimed and desired to be secured by United States Letters Patent is:

1. A disposable drinking cup, which may be nested with one or more cups of the same construction, comprising:

a generally vertically directed thin wall of impervious sheet material having opposed overlapping end wall areas defining a lap joint extending along essentially the entire height of the wall;

upper edge means disposed at the top of the wall, the upper edge means defining a top opening to the cup of a first diameter;

a thin bottom wall of impervious sheet material filling the space between and being integral with the generally vertical wall at the bottom edge thereof, the diameter of said space being less than said first diameter;

the opposed overlapping end wall areas of said lap joint being overlapped one in respect to the other with the extreme end of each being flatly secured

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to the opposite wall area, each wall area having essentially the same height as the other and at least one having a substantially greater circumferential dimension than the straight line distance between the flatly secured ends, the at least one wall area having the greater circumferential dimension extending radially away from said straight line distance to form an unencumbered hollow passageway between the unattached wall areas adjacent the flatly secured ends thereof, said passageway comprising an open unobstructed liquid effluent port adjacent the upper edge of the cup;

the wall area comprising the passageway which is exposed to the interior of the cup comprising an open unobstructed liquid influent port adjacent the bottom wall of the cup.

2. A disposable drinking cup in accordance with claim 1 wherein only one wall area has the greater circumferential dimension and is disposed radially inwardly of the other wall area.

3. A disposable drinking cup according to claim 1 wherein only one wall area has the greater circumferential dimension and is radially outward of the other wall area.

4. A disposable drinking cup in accordance with claim 1 wherein the at least one wall area having the greater circumferential dimension is collapsible to accommodate said nesting of said cups.

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