June 26, 1951 W. E. AMBERG 2,558,287

PAPER CUP AND HANDLE THEREFOR

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Fig. 1

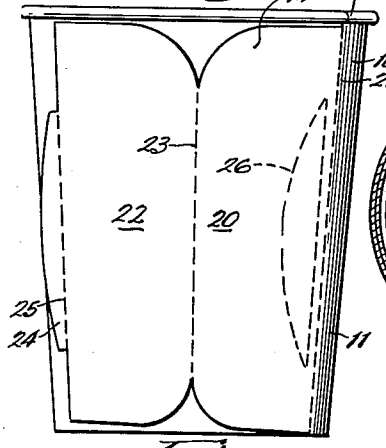


Fig. 4

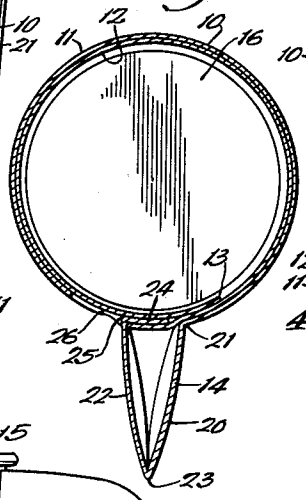


Fig. 2

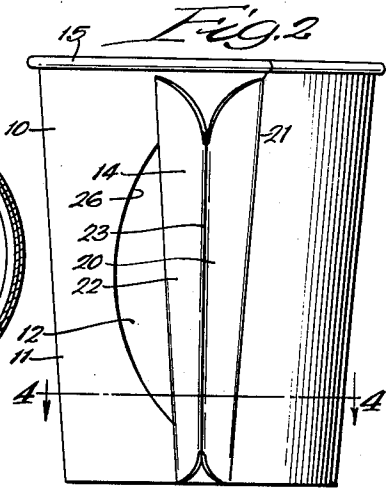


Fig. 3

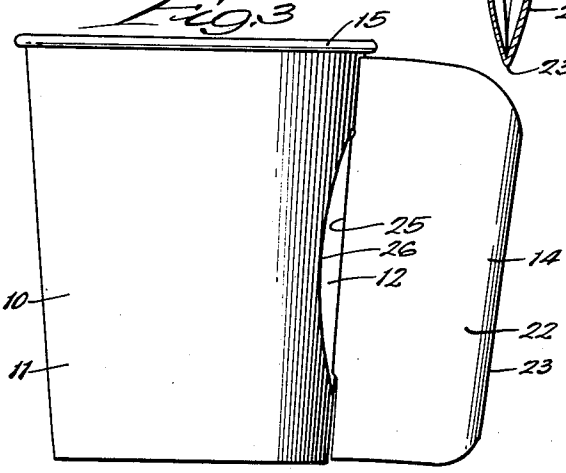


Fig. 6

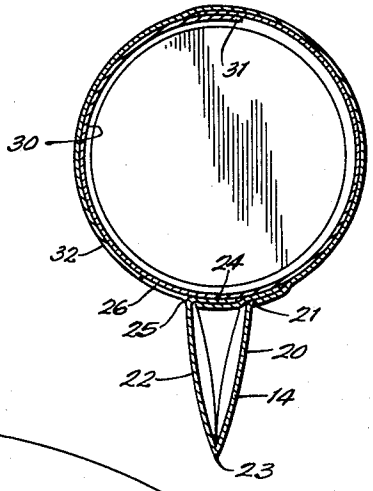


Fig. 5

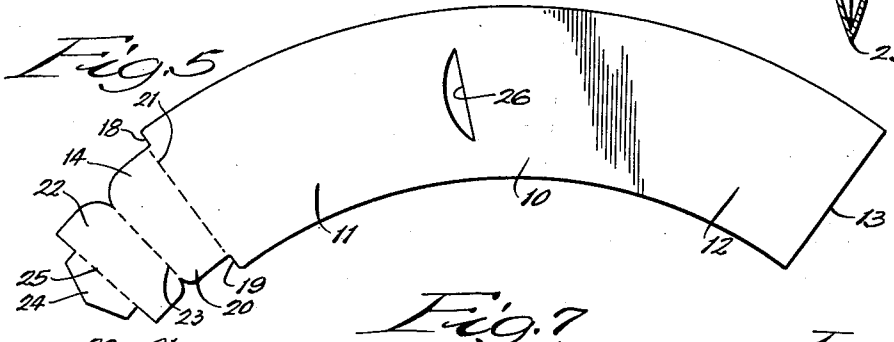
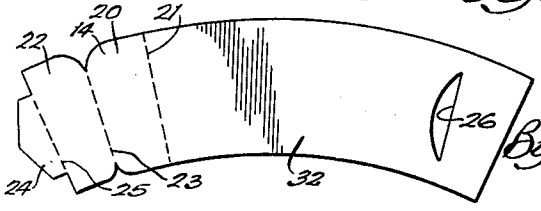


Fig. 7



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Fig. 8

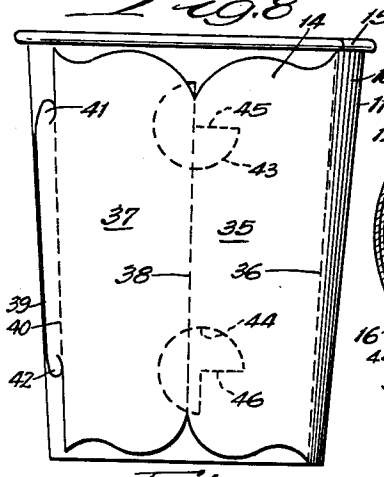


Fig. 11

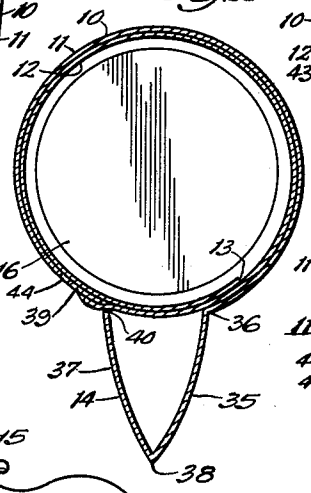


Fig. 9

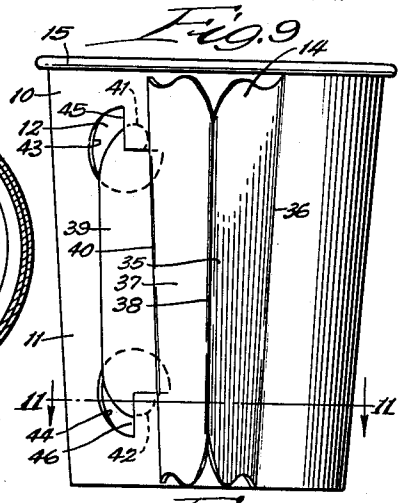


Fig. 10

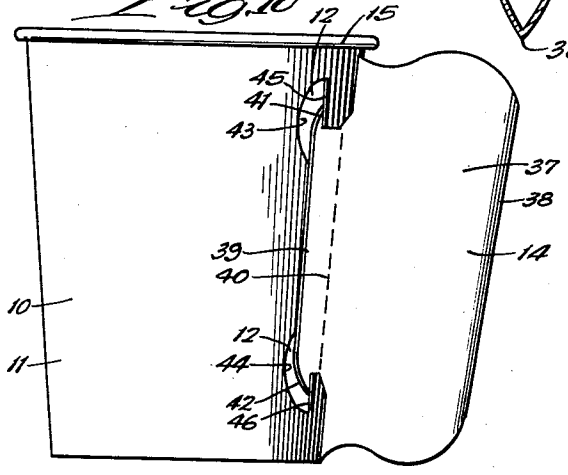


Fig. 13

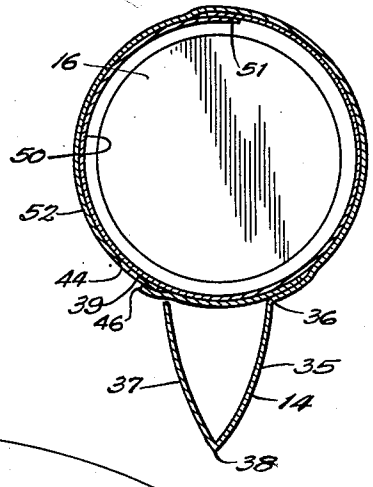


Fig. 12

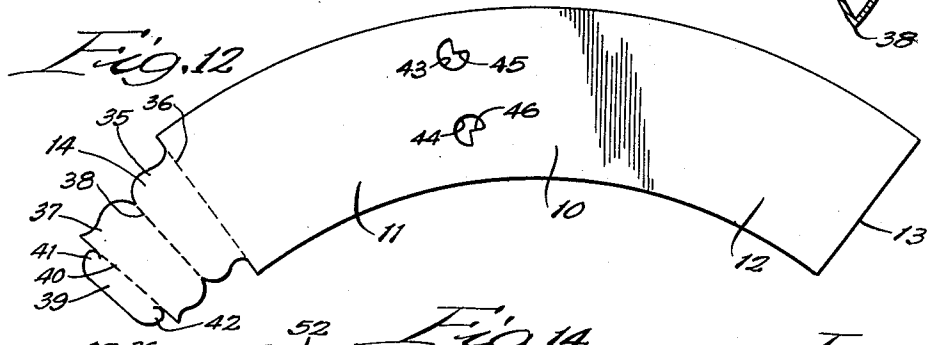
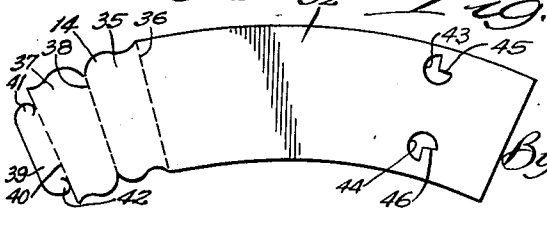


Fig. 14



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PAPER CUP AND HANDLE THEREFOR

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Application November 19, 1945, Serial No. 629,448

5 Claims. (Cl. 229—52)

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This invention relates to improvements in paper cups and more particularly to paper cups for holding hot liquids such as hot coffee and the like.

When paper cups are utilized for holding hot liquids the outside of the cup also becomes hot by reason of transfer of heat through the walls of the cup much to the discomfort of the person holding the hot paper cup. In the past paper cups have been provided with paper handles whereby discomfort of the person holding the hot paper cup has been considerably decreased. However, such paper handles have been rather flimsy in construction and when grasped the paper cup has a tendency to shift and wobble which often results in spilling the hot contents of the cup. This, of course, is also discomforting to the person holding the hot paper cup.

The principal object of this invention is to provide an improved handle for paper cups, which may be readily folded into place and which is of firm construction and which does not permit shifting and wobbling of the cup with consequent spilling of the hot contents thereof.

In carrying out this object of the invention the side wall of the paper cup is provided with an opening and a flap extending from a point adjacent the opening. The flap is provided with a portion which is adapted to be folded away from the cup, a portion which is adapted to be folded toward the cup, and a portion which is adapted to be inserted in the opening to form a one piece handle which is rigidly secured at spaced apart points on the side wall of the cup. In cross section, therefore, the handle is a single piece triangle which is extremely rigid and strong and which effectively prevents any shifting or wobbling of the cup with respect to the handle.

The handle, before being folded into place, lies closely to the side of the cup in the form of a flap which permits ready nesting of a plurality of cups. The flap and opening cooperating to form the handle may be readily formed on a piece of paper adhesively secured to the side wall of the cup or they may be formed on the outer wrapping portion of a double wrapped cup.

Further objects of this invention reside in the details of construction of the improved paper cup and handle therefor.

Other objects and advantages will become apparent to those skilled in the art upon reference to the accompanying specification, claims, and drawings, in which:

Fig. 1 is a side elevational view of one form of the cup with the handle flap lying close to the side wall of the cup;

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Fig. 2 is a side elevational view taken from the right of Fig. 1 with the handle flap folded into position;

Fig. 3 is a side elevational view taken from the left of Fig. 2;

Fig. 4 is a sectional view taken substantially along the line 4—4 of Fig. 2;

Fig. 5 is a plan view of the blank forming the side walls and handle of the cup of Fig. 1;

Fig. 6 is a sectional view showing a modified form of the cup of Fig. 1;

Fig. 7 is a plan view of a blank utilized in the modification of Fig. 6;

Figs. 8, 9, 10, 11 and 12 are similar to Figs. 1, 2, 3, 4 and 5 respectively but showing a modified arrangement;

Figs. 13 and 14 are views similar to Figs. 6 and 7 showing a modification of the cup illustrated in Figs. 8 to 12.

Referring first to Figs. 1 to 5, the side wall of the cup is designated at 10 and, as shown, the side wall is a double wrapped side wall having an outer wrapping 11 and an inner wrapping 12. The edge of the inner wrapping 12 terminates at 13 and the outer wrapping 11 terminates in a flap 14. The top of the side wall of the cup may be suitably rolled into a flange 15 and the bottom of the side wall may be secured to or formed with a bottom 16 for the cup.

The flap 14 is narrower than the side wall 10, as indicated at 18 and 19. The extra width on the side walls 13 is utilized for forming the flange 15 and for securing the side wall to the bottom 16 of the cup. Of course, the flap 14 should not be included in the flange or in the securing flange at the bottom of the cup. As shown in Fig. 1 the flap 14 lies close to the side wall of the cup so that a plurality of cups may be readily nested.

The handle flap 14 includes a portion 20 adapted to be folded outwardly along a line 21 and also a portion 22 adapted to be folded inwardly along a line 23. The flap also includes a tongue 24 adapted to be folded inwardly along a line 25 and the tongue 24 is adapted to be inserted in an opening 26 located in the outer wrapping 11 of the side wall of the cup. As shown, the opening 26 is underneath the handle flap 14 and is circumferentially spaced from the fold line 21.

When the handle flap 14 is folded into position with the tongue 24 inserted in the opening 26, as shown in Figs. 2, 3 and 4, the handle is substantially triangular in cross section and is of one piece construction, the one piece handle being secured to the side wall of the cup at circum-

ferentially spaced apart points. This provides an extremely rigid and strong construction which effectively prevents any shifting or wobbling of the cup with respect to the handle and, therefore, when the handle 14 is grasped there is no danger of spilling the contents of the cup.

Fig. 5 illustrates the blank which forms the side wall 10 and the handle flap 14 of the cup. The outer and inner wrappings 11 and 12 of the side wall of the cup are adhesively secured together, the flap being free and no adhesive being applied adjacent the opening 26 whereby the tongue 24 may be readily inserted in the opening 26.

Figs. 6 and 7 illustrate a modification of the cup of Figs. 1 to 5. In this modified form a conventional cup having a side wall 30 provided with the usual seam 31 is utilized. A blank 32 forming a wrapper for the side wall of the cup may be adhesively secured to the side wall of the cup for accomplishing substantially the same results which are accomplished by the cup of Figs. 1 to 5. The blank or wrapper 32 includes the same handle flap 14 and the same opening 26 as is utilized in the cup of Figs. 1 to 5. When the wrapper or blank 32 is adhesively secured to the side wall 30 of the cup, the flap 14 remains free and no adhesive material is placed around the opening 26 so that when the handle flap 14 is folded in position, the tongue 24 thereof may be readily inserted in the opening 26.

A further modified arrangement is illustrated in Figs. 8 to 12. Essentially this modified arrangement is the same as the cup of Figs. 1 to 5 with the exception of the construction of the handle flap 14 and the type of opening in the outer wrapping of the double wrapped cup. Because of the close similarity between the two cups, like reference characters for like parts have been utilized.

In the modified cup of Figs. 8 to 12, the handle flap 14 includes a portion 35 adapted to be bent outwardly along a fold line 36, a portion 37 adapted to be folded inwardly along a fold line 38 and a portion 39 adapted to be folded outwardly along the fold line 40. The portion 39 of the flap 14 is provided with ears 41 and 42.

Openings 43 and 44 are formed in the outer wrapping 11 of the side wall of the cup and these openings are provided with sectors 45 and 46 respectively.

The inner and outer wrappings of the side walls of the cup are adhesively secured together, the flap 14 being free and no adhesive material being placed adjacent the openings 43 and 44. As shown in Fig. 8, the flap 14 lies close to the side wall of the cup so that a plurality of cups may be readily nested. When the handle flap 14 is folded into position as shown in Figs. 9, 10 and 11, the ears 41 and 42 of the handle flap 14 enter the openings 43 and 44 respectively and catch under the sectors 45 and 46 respectively to form a firm and rigid joint between the handle flap 14 and the side wall 10 of the cup.

In this modification as in the previous modifications explained, a one piece handle is provided which is rigidly secured to the side wall of the cup at points circumferentially spaced apart to form a handle of rigid construction which effectively prevents wobbling or shifting of the cup when the handle is grasped.

Figs. 13 and 14 illustrate a modification of the cup shown in Figs. 8 to 12. Instead of utilizing a double wrapped cup with the handle flap formed on the side wall of the cup, this latter arrangement utilizes a conventional cup having a side wall 50 provided with the usual seam 51. The handle flap 14 and the openings 43 and 44 are provided on a blank or wrapper 52 which in turn may be adhesively secured to the side wall 50 of the cup. When the blank or wrapper 52 is adhesively secured to the side wall of the cup, the flap 14 is left free and no adhesive material is applied adjacent the openings 43 and 44 whereby the flap 14 may be folded into the handle and the ears 41 and 42 suitably caught under the sectors 45 and 46.

Accordingly, in the several modifications described above, the side wall of the cup is provided with an opening in the outer surface thereof and a flap extending from the side wall adjacent the opening. The flap is adapted to lie close to the side wall of the cup to permit nesting of a plurality of cups. The flap also has a portion adapted to be folded away from the side wall, a portion adapted to be folded toward the side wall, and a portion adapted to be inserted in the opening to provide a one piece handle which is secured at circumferentially spaced apart points on the side wall of the cup. This provides a rigid construction which prevents shifting or wobbling of the cup and consequent spilling of the contents thereof.

While for purposes of illustration several forms of this invention have been disclosed, other forms thereof may become apparent to those skilled in the art upon reference to this disclosure, and therefore this invention is to be limited only by the scope of the appended claims and the prior art.

I claim as my invention:

1. A paper cup comprising a side wall having an outer wrapping, said outer wrapping having an opening therein and a free flap extending therefrom adjacent to the opening and lying close to the side wall of the cup to permit nesting of a plurality of cups, said free flap having a portion foldable outwardly along a line substantially vertical with respect to the cup and spaced from the opening, a portion foldable inwardly along a line substantially vertical with respect to the cup and a portion insertable through the opening underneath the outer wrapping to provide a one-piece vertically arranged handle secured at circumferentially spaced apart points on the side wall of the cup.

2. A paper cup comprising a double wrapped side wall having an inner wrapping and an outer wrapping, said outer wrapping having an opening therein and a free flap extending therefrom adjacent to the opening and lying close to the side wall of the cup to permit nesting of a plurality of cups, said free flap having a portion foldable outwardly along a line substantially vertical with respect to the cup and spaced from the opening, a portion foldable inwardly along a line substantionally vertical with respect to the cup and a portion insertable through the opening underneath the outer wrapping to provide a one-piece vertically arranged handle secured at circumferentially spaced apart points on the side wall of the cup.

3. A paper cup comprising a side wall, a paper part adhesively secured to the side wall of the cup and having an opening therein and a free flap extending therefrom adjacent to the opening and lying close to the side wall of the cup to permit nesting of a plurality of cups, said free flap having a portion foldable outwardly along a line substantially vertical with respect to the cup and spaced from the opening, a portion foldable in-

wardly along a line substantially vertical with respect to the cup and a portion insertable through the opening underneath the paper part to provide a one-piece vertically arranged handle secured at circumferentially spaced apart points on the side wall of the cup.

4. A paper cup comprising a side wall having an outer wrapping, said outer wrapping having an elongated substantially vertically arranged opening therein and a free flap extending therefrom adjacent to the opening and lying close to the side wall of the cup to permit nesting of a plurality of cups, said free flaps having a portion foldable outwardly along a line substantially vertical with respect to the cup and spaced from the opening, a portion foldable inwardly along a line substantially vertical with respect to the cup and a tongue insertable through the elongated opening underneath the outer wrapping to provide a one-piece vertically arranged handle secured at circumferentially spaced apart points on the side wall of the cup.

5. A paper cup comprising a side wall having an outer wrapping, said outer wrapping having a pair of substantially vertically arranged openings therein and a free flap extending therefrom adjacent to the pair of openings and lying

close to the side wall of the cup to permit nesting of a plurality of cups, said free flap having a portion foldable outwardly along a line substantially vertical with respect to the cups and spaced from the opening, a portion foldable inwardly along a line substantially vertical with respect to the cup and a portion having substantially vertically arranged ears insertable through the substantially vertically arranged openings underneath the outer wrapping to provide a one-piece vertically arranged handle secured at circumferentially spaced apart points on the side wall of the cup.

WALTER E. AMBERG.

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