Aug. 9, 1932. C. BARBIERI 1,870,223

CUP AND BLANK THEREFOR

Filed Dec. 9, 1929

Fig. 1

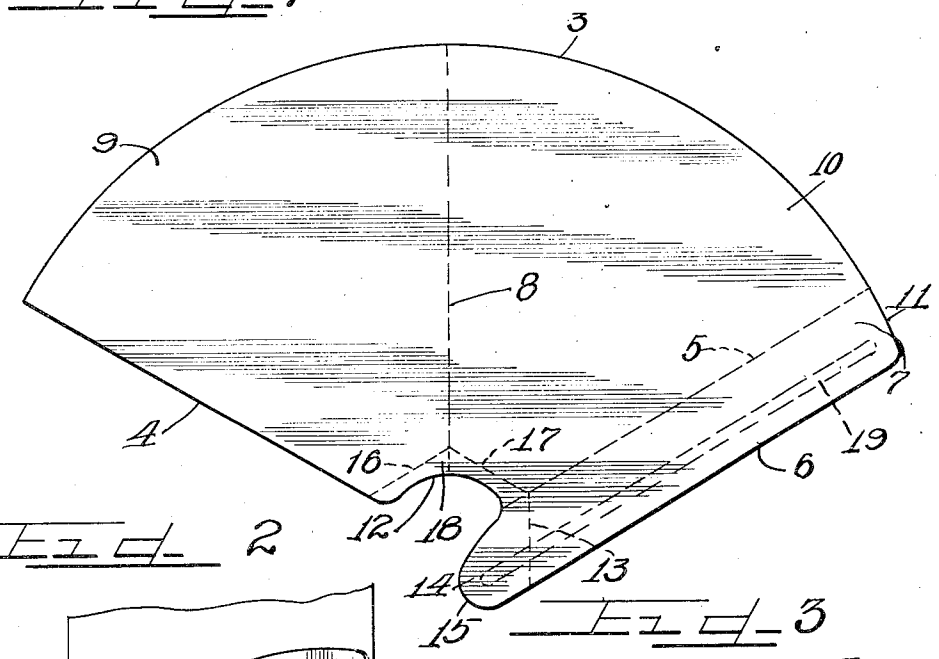


Fig. 2

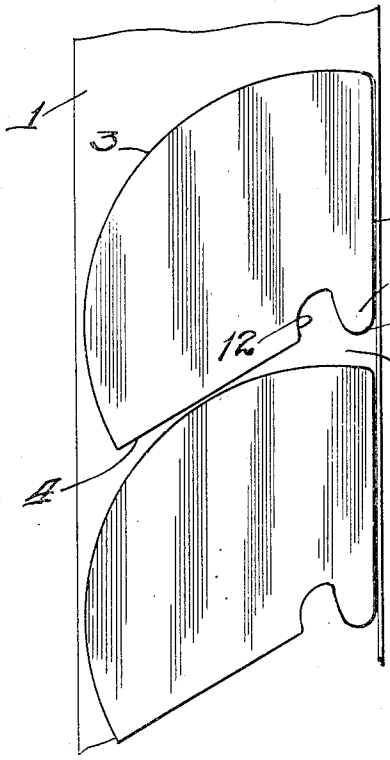


Fig. 3

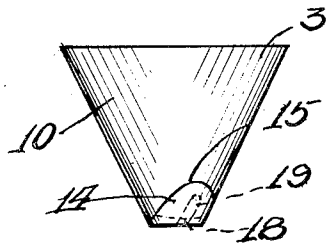
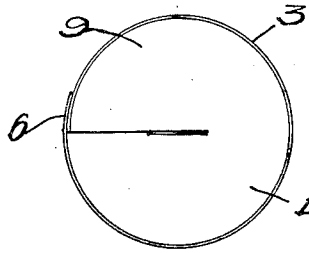


Fig. 4



Inventor

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By Charles D. Wells Attys.

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1,870,223

UNITED STATES PATENT OFFICE

CESARE BARBIERI, OF NEW YORK, N. Y., ASSIGNOR TO VORTEX CUP COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF DELAWARE

CUP AND BLANK THEREFOR

Application filed December 9, 1929. Serial No. 412,695.

This invention relates to an improved type of blank for making an ovalcone paper cup, said blank being of unitary construction having an integral strip to the outside of a radial line, with said strip being of a length extending beyond a continuation of a marginal radial line of the blank, with said strip having applied thereto a strip of adhesive material which extends to within a short distance of the end of the extension thereof to afford an arrangement permitting the blank to be folded to form an ovalcone cup, with the marginal extension adapted to be bent over the lower end of the side walls of the cup permitting the adhesive engaged thereon to be pressed into engagement with one of the side walls of the cup to hold the parts secured together to form an ovalcone cup.

It is an object of this invention to provide an ovalcone cup paper blank of unitary construction having a marginal strip with an extension end, with said strip and extension end having a strip of adhesive on one surface thereof permitting the blank, when folded, to be secured together with the extension strip adapted to be bent over to permit the adhesived side thereof to be pressed into engagement with one of the walls of the cup.

It is also an object of this invention to provide an ovalcone paper cup blank of unitary construction provided with an integral marginal strip, one end of which forms an extension tab which extends beyond a continuation of a radial edge of the blank to afford a strip piece which is adapted to have adhesive applied thereto in a continuous line projecting onto the extension tab, so that, when the blank is folded and the lower ends of the side walls of the cup overlap, said overlapped ends are adapted to be bent over and be enclosed behind the extension tab which is bent to permit the adhesived side thereof to be pressed into contact with one of the outer walls of the cup above the folded enclosed portion of said side walls.

It is a further object of this invention to provide a notched segment shaped paper blank of unitary construction adapted to be stamped out of a strip of material and having an extension tab integrally formed at one end of an overlapping marginal strip, with said tab adapted to be increased in length by using up part of the material of the strip which is ordinarily scrapped.

It is furthermore an object of this invention to provide an improved notched segment shaped blank for an oval cone cup, said blank adapted to be stamped out of a strip of paper and being provided with an extension tab adapted to utilize part of the strip of paper which is ordinarily wasted, to afford an arrangement whereby the strip is sufficiently long and is adhesived so that, when the blank is folded, the extension tab is adapted to be bent over the bent-over portions of the side walls of the cup and extend beyond said bent-over portions to be secured to one of the walls of the cup without requiring two applications of glue to be applied to the blank before folding the same.

It is an important object of this invention to provide an improved ovalcone cup blank of unitary construction having a notch at the end of a radial margin thereof and having a marginal strip integrally formed to the outside of a radial line of the blank with one end of the marginal strip extended to provide an elongated tip adapted to have glue applied thereto at the same time a strip of glue is applied to the marginal strip to afford an arrangement whereby, when the body portion of the blank is folded to provide side walls, the marginal strip is adapted to be bent over and glued to one of the walls, while the elongated extension is adapted to be bent over the bent-over tapered lower ends of the side walls of the cup and extend therebeyond to permit the adhesived side of the elongated tip to be pressed against the outer surface of one of the walls of the cup to provide a non-leakable tip for the ovalcone cup without abnormally increasing the thickness of the tip.

Other and further important objects of this invention will be apparent from the disclosures in the specification and the accompanying drawing.

The invention (in a preferred form) is illustrated in the drawing and hereinafter more fully described.

On the drawing:

Figure 1 is a developed plan view of an improved ovalcone cup blank embodying the principles of this invention.

Figure 2 is a fragmentary plan view of a strip of material illustrating the method of stamping out cup blanks with a minimum of waste and furthermore illustrating the possibility of providing elongated tabs by using part of the material which is ordinarily considered as waste.

Figure 3 is a side elevation of an ovalcone cup constructed from the blank of the type illustrated in Figure 1.

Figure 4 is a top plan view of the ovalcone cup.

As shown on the drawing:

The reference numeral 1 indicates a strip of waterproof paper or similar material which is adapted to be fed through a punch machine for the purpose of permitting a plurality of improved ovalcone cup blanks stamped therefrom with the minimum of waste. Figure 2 illustrates the arrangement of the blanks as they are stamped from the strip of material 1 illustrating a waste area 2 between two adjacent positioned blanks, part of which is adapted to be utilized for producing an extension tab or flap of increased length, thereby furthermore reducing the amount of waste actually encountered in the stamping out of cup blanks from a strip of paper according to the arrangement illustrated in Figure 2.

The improved blank as clearly illustrated in Figure 1 comprises a body section having an arcuate or curved edge 3 adapted eventually to afford the drinking margin or rim of the cup when completed. The main body of the blank is approximately a sector, one radius of which is the radial edge 4; the other radial edge of the main body section is indicated by the dotted line 5 which is not the edge of the blank but from which the blank continues to a boundary edge 6 of an integral flap 7. The line 5 represents a body fold or crease, or merely the location of a fold, so that, in the blank before it is actually folded to make the cup, there is no physical structure corresponding to the line 5. An imaginary bisecting line 8 divides the main body of the blank into two cup wall sections 9 and 10, and said line 8 has no actual physical structure before the blank is actually folded.

One edge 11 of the flap 7 is a continuation of the arcuate or curved edge 3. At the center of curvature of the arcuate edge 3, a curved notch 12 is cut inwardly from the radial edge 4 and to the inside of the flap 7 which continues downwardly beyond an imaginary line or fold line 13 to provide a tongue or extension tab 14 which extends to a length beyond the continuation of the radial edge 4 and is provided with a curved boundary edge 15 having the inner end thereof connecting up with the curved edge forming the notch 12. The imaginary line 5 continues downwardly from the arcuate edge 3 to the point where the curved edge 15 of the tab or extension 14 joins the curved edge of the notch 12. An imaginary fold line 16 extends from the radial margin or edge 4 inwardly to the lower end of the imaginary line 8 and eventually forms the lower boundary edge of the side wall 9 of the cup when completed. An imaginary line 17 extends from the inner end of the fold line 16 to the inner end of the imaginary line 13 which separates the tab or extension 14 from the lower end of the flap 7. The imaginary line 17 is adapted eventually to form the lower edge of the side wall 10 of the cup when the same has been completed. The provision of the imaginary lines 16 and 17 provides a marginal strip 18 bordering the curved notch 12 and extending from the lower end of the radial edge 4 to the lower end of the imaginary line 5 which at that section separates the strip 18 from the tab or extension 14.

The improved blank is so constructed that the tab or extension 14 is a continuation of the flap 7 and is of sufficient length to extend beyond one of the continued edges of the normal boundry of the blank. The flap 7 has applied to the inner face thereof a strip of adhesive material 19 which is spaced inwardly away from the marginal edge 6 and starts at a point below the outer edge 11 of said flap. The strip of adhesive material 19 continues downwardly throughout the remainder of the flap 7, crossing the imaginary fold line 13 and extending along the length of the tab or extension 14 to within a short distance of the curved margin 15 thereof. The imaginary line 8 which divides the main body section of the blank is adapted to be continued across the strip 18 to divide the same into two sections which are adapted to be superimposed on one another when the blank is folded.

The arrangement of providing a tab or extension 14 of increased length to receive the continuation of the strip of adhesive material applied to the flap 7 affords an arrangement whereby it is only necessary to apply adhesive or glue along one margin of the blank with a single operation, thereby eliminating the necessity of providing two glue applying mechanisms which ordinarily have been used for applying glue to two separate areas of the blank, one area being required for securing the flap in place, while the other area was required for the purpose of securing the tab or extension against one of the surfaces of the body of the cup when completed.

To form a cup from the improved blank, the blank is first folded along the line 8 to

position the side section 9 over the side section 10 and bringing the radial marginal edge 4 to coincide or lie adjacent the line 5. The flap 7 is next folded along the line 5 to bring the adhesived strip 19 against the outer surface of the marginal edge of the body section 9 to overlap the radial marginal edge 4. The adhesived flap 7 is pressed against the body of the cup and is permitted to drp to hold the body section properly assembled to provide a cup. The next operation in the forming of the ovalcone cup is to bend the tab or extension 14 along the line 13 and at the same time bend the two sections of the marginal strip 18 along the lines 16 and 17, said lines 13, 16 and 17 being positioned in substantially a superimposed arrangement, thereby permitting the two sections of the marginal strip 18 to be folded over against the lower end of the wall 10 of the cup behind the tab or extension 14, the glued strip of which projects beyond the overlapped sections 18, thereby permitting the tab or extension to have the glued side thereof pressed against the outer surface of the lower portion of the wall 10 to close the lower end of the cup and thereby complete the construction. By providing the narrow marginal strip 18 at the lower ends of the wall sections 9 and 10, less folded material is required at the lower end of the cup, and the tab or extension having one side thereof adhesived is permitted to overlap the sections 18 and be conveniently pressed into position against one of the walls of the cup.

It will, of course, be understood that numerous details of construction may be varied through a wide range without departing from the principles of this invention, and it is, therefore, not purposed to limit the patent granted hereon otherwise than necessitated by the scope of the appended claims.

I claim as my invention:

1. A paper cup blank having a generally sector shaped body, a flap along one radial side of the body, an extension tab integral with one end of said flap and extending beyond the line of continuation of the radial edge of the blank, said tab being separated from the inner end of the radial edge of the blank by a curved notch.

2. A paper cup blank having a generally sector shaped body, a flap integrally formed along one radial side of the body, said flap having a tab integrally formed one one end thereof and extending beyond the point of intersection of the outer edge of the flap and a second radial edge of the blank, said body having a curved notch cut therein at the point of intersection of the two radial edges forming the body of the blank, and a strip of adhesive material on one surface of the flap and extending over one surface of the tab beyond the line of intersection of the radial edge of the blank.

3. A paper cup blank having a sector shaped body, a flap integrally formed along one radial side of the body, an extension tab integrally formed on one end of the flap and projecting beyond the line of continuation of the other radial edge of the blank, a curved notch in said other radial edge of the blank adjacent the inner side of said tab, and a strip of adhesive applied to one surface of the flap and extending over one surface of the extension tab to within a short distance of the outer end of the tab.

4. A paper cup blank comprising a sector shaped body having a radial edge and an arcuate edge, said body having a flap integrally formed along one end thereof to the outside of a radial line limiting the body portion of the blank, said body portion having a curved notch formed therein at the point of intersection of the radial lines bounding the end of the body portion of the blank, and an extension tab integrally formed at one end of the flap and extending beyond the line of continuation of the radial edge of the blank.

5. In a blank for paper cups a generally sector shaped body, a flap along one radial side of said body, an extension tab integrally formed at one end of said flap and extending outwardly beyond the other radial edge of the blank, said body having a notch therein adjacent the inner edge of the extension tab, with said notch formed with a continuous curved edge one end of which connects up with the inner end of the extension tab while the other end terminates at the point of intersection with the radial straight edge of the blank.

6. A paper cup blank, adapted to be formed into a cup of elliptical cross section, comprising a sector shaped body portion having an arcuate edge and a radial straight edge, and a flap integrally formed to the outside of a radial line of the body portion and arranged to define a straight edge transverse bottom closure in the cup, with said flap extending to a length beyond the line of intersection of the radial edge with said flap, and a strip of adhesive on one surface of the flap, said flap being of sufficient length to permit the same to have a portion thereof folded over against the outer surface of one side of the cup and another portion thereof folded over and pasted against the opposite side of the cup.

7. A sector shaped cup of elliptical cross section constructed of a blank comprising a sector shaped body portion having an adhesived flap integrally formed beyond one radial edge thereof and arranged to define a straight edge transverse bottom closure in the cup, said flap being of sufficient length to permit the same to be bent over and folded so that the adhesived side of the flap is adapted to be pressed into adhering engagement

with the two opposite walls of the cup when the blank is folded.

8. A cup made from a paper blank and having a body portion adapted when in use to present a substantially rounded mouth and being of open form tapering from its mouth in wedge-like form to a water-tight bottom closure made by a straight edge transverse fold-up of the cup material secured to the body portion, the line of fold of said fold-up being of sufficient length to enable substantially the entire body portion to assume an elliptical shape and said body portion having one side provided with an adhesive flap for securing the cup blank in the form of a cup, said fold-up including an extension tab on said flap having adhesive applied thereto at the same time the adhesive is applied to the flap, the adhesive on said extension constituting a part of a single line and strip of adhesive applied to said flap.

9. A cup having a body portion adapted when in use to present a substantially rounded mouth and being of open form tapering from its mouth in wedge-like form to a water-tight bottom closure made by a straight edge transverse fold-up of the cup material secured to the body portion, the line of fold of said fold-up being of sufficient length to enable substantially the entire body portion to assume an elliptical shape and said fold-up comprising a plurality of superimposed layers of material of substantially equal area and an exterior layer slightly longer than the others so as to project beyond the underlying layers, said exterior layer having adhesive applied thereto constituting part of a single substantially straight line like strip of adhesive applied to the body portion in the fabrication of the cup.

10. A cup comprising a body having a fold-up portion at the lower end thereof, said end including a plurality of superimposed plies of material disposed on a side of substantially the entire length of a line of fold, and said fold-up portion embodying in addition to the plurality of plies on said side of said line of fold an exterior ply slightly longer than the others so as to project beyond the underlying plies of the fold-up portion, said body having an adhesive flap for holding the body together and of which said exterior ply comprises an extension and having a single substantially continuous strip of glue applied thereto in one operation to both the flap and said exterior ply during the fabrication of the cup.

11. A paper blank for a cup comprising a sector-like body having two substantially straight diverging edges and a curvilinear edge joining the outer ends thereof, the other and adjacent ends of said edges being separated by an extension tab provided beyond the line of continuation of one of the straight edges of the blank and having adhesive applied thereto comprising part of a single substantially straight line like strip of adhesive applied to the blank along the other straight edge, said body having a transverse line of fold adjacent said tab about which the tab and adjacent portion of the cup body are adapted to be folded to form a transverse fold-up constituting a water-tight bottom closure for the cup fabricated from the blank.

In testimony whereof I have hereunto subscribed my name at New York, New York County, New York.

CESARE BARBIERI.