Nov. 2, 1943. H. CAREW 2,333,090

PAPER CUP

Original Filed March 8, 1941

Fig. 1.

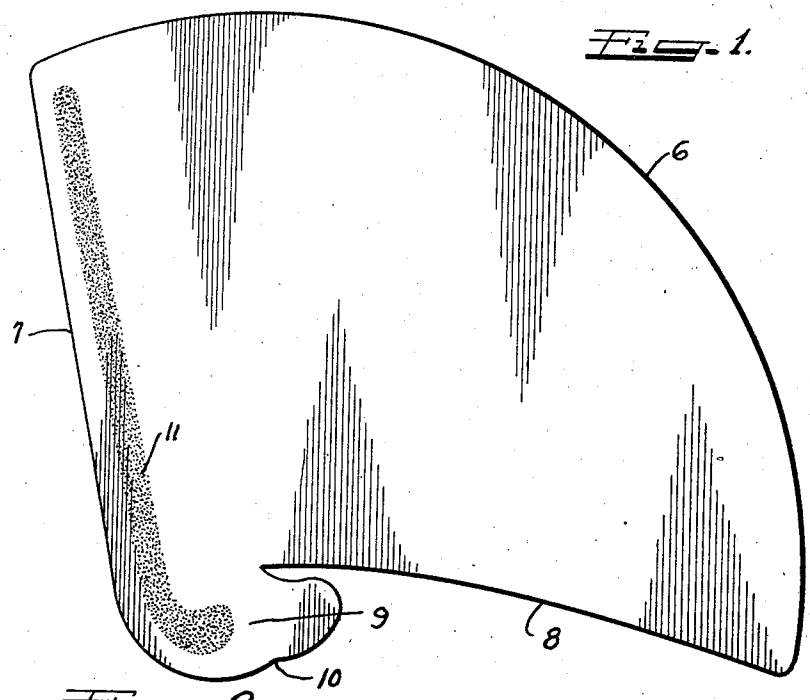


Fig. 2.

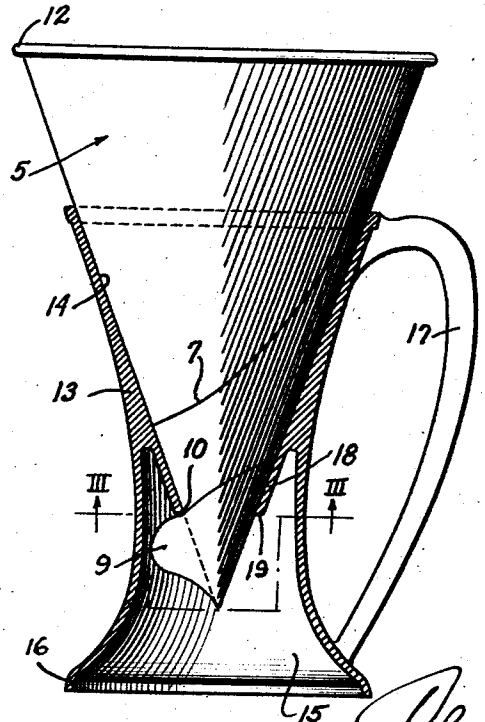
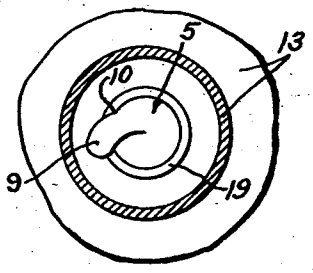


Fig. 3.



Inventor

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2,333,090

UNITED STATES PATENT OFFICE

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PAPER CUP

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Original application March 8, 1941, Serial No. 382,300. Divided and this application January 14, 1942, Serial No. 426,657

3 Claims. (Cl. 229—1.5)

This invention relates to improvements in a paper cup of a type highly desirable for use with a holder in drug, confectionary and similar stores for the dispensing of individual soft drinks, sodas, etc., although the invention may have other uses and purposes as will be apparent to one skilled in the art.

This application is a division of my copending application entitled "Paper cup and holder therefor," filed March 8, 1941, Serial No. 382,300.

In the past, many and various types of holders for paper drinking cups have been provided, and the cups have been temporarily locked in the holders in various ways, if there has been any securement whatsoever between the cup and holder. The form of securement heretofore known, insofar as I am aware, necessitated patient painstaking effort on the part of the operator to properly lock the cup in the holder against accidental falling out, requiring an objectionable amount of time on the part of the operator. In those types of holders where there is no attachment whatever between the cup and holder, the cup has a tendency to fall out of the holder when tipped. This is especially true when cups of the size for the serving of ice cream sodas, malted milks and the like are used, since such a cup projects out of the holder to a degree that renders the cup and its contents top-heavy. This condition is aggravated when a conical cup is used in a holder with no means of attachment therebetween. The conical cup flares so widely at the top that it is top-heavy and tends to fall out of the holder when the holder is tipped to drinking position. While stability is provided during the consuming of the major portion of the contents, when the cup is tipped sufficiently in drinking position to be entirely emptied, the cup has a tendency to fall out of the holder down over the apparel of the customer. In addition, in all cases of cups and holders heretofore known of which I am aware the cup, and frequently adjacent cups, was contacted by the naked hand of the server, to facilitate the placing of the cup in the holder.

With the foregoing in mind, it is an important object of the present invention to provide a paper drinking cup so constructed and arranged that the cup may be placed or tossed into a holder in even a very careless manner, with no attempt at positioning the cup in any degree of circular alignment with a holder, and the cup will automatically attach itself to the holder in a manner to prevent accidental dislodging.

Another object of the invention is the provision of a conical paper drinking cup so constructed and arranged that the cup may be carelessly tossed point end first into a holder and an automatic attachment between the cup and holder sufficient to prevent accidental dislodgement will result by virtue of the entrance of the cup into the holder.

Still another object of the invention is the provision of a paper cup having a substantially resilient or freely springing locking tab projecting therefrom in a manner to automatically engage a portion of the holder when the cup is placed in the holder, without any necessity of making any effort to align or register the cup relatively to the holder.

Still another feature of the invention resides in the provision of a conical paper cup having a tab freely projecting from the body of the cup in the apexial region thereof, which tab is shaped to automatically provide a locking or latching engagement with a shoulder in a holder or the like when the cup is placed therein.

Another object of the invention is the provision of a conical paper cup having a locking tab freely projecting therefrom, which cup may be manufactured or formed with no additional effort over that necessary to form a similarly shaped cup without a locking tab.

A further feature of the invention resides in the provision of a conical paper cup constructed so as to provide automatic engagement with a holder, and so arranged that such engagement may be provided with a holder in a readily and facile manner without any necessity for an attendant to contact the inside of the cup with his finger at any time.

While some of the more salient features, characteristics and advantages of the present invention have been above pointed out, others will become apparent from the following disclosures, taken in conjunction with the accompanying drawing, in which:

Figure 1 is a plan view of a blank from which a conical cup embodying principles of the present invention may be formed;

Figure 2 is a part sectional part elevational view illustrating a finished cup made from the blank of Figure 1, in operative position within a holder, to which holder the cup is locked or latched by virtue of novel construction features of the cup; and

Figure 3 is a fragmentary bottom plan sectional view taken substantially as indicated by the staggered section line III—III of Figure 2.

As shown on the drawing:

In the illustrated embodiment of the present invention, there is shown a conical paper drinking cup generally indicated by numeral 5, which may be made from a blank of the character seen in Figure 1. The blank is of any suitable material, such as paper of the character commonly used for making paper drinking cups, preferably of the so-called "dry wax" type, wherein the paper is impregnated with a wax to render the same waterproof, but the wax is not visible on the surface of the paper.

The blank is substantially sector-shaped and includes an arcuate edge 6 which ultimately defines the mouth end of the completed cup, and a pair of converging side edges 7 and 8. One of the side edges—in this instance the edge 7—is offset from the center of the arc 6 and the other side edge preferably leads from a point at or near the center of the arcuate edge 6, and is somewhat curvate to expedite forming of the resultant cup. Between the inner ends of the converging edges 7 and 8, a projection or tab 9 is provided which ultimately forms the locking tab on the completed cup. It will be noted that the locking tab 9 has a curved contour and that at one point the contour is such as to provide a notch 10 for a purpose which will later appear.

When the blank is shaped into the cup 5, the blank is rolled convolutely from the margin 8 toward the margin 7, and the marginal portions adjacent the edges 7 and 8 are secured together, as, for example, by a strip of adhesive 11 previously applied to the blank margin adjacent the edge 7. It will be noted that the adhesive 11 does not reach the outer projecting portion of the tab 9, but is spaced inwardly so that a large portion of this tab is left free from adhesive even after the adhesive may be somewhat spread by the application of pressure during the forming of the cup.

The blank may be rolled or otherwise formed into cup shape with any suitable mechanism, to produce the cup 5. Preferably, during the forming or thereafter, the cup is provided with a turned drinking rim 12, as seen in Figure 2. When the cup is formed, it will be noted from a showing in Figures 2 and 3 that the tab 9 projects freely from the body of the cup in the apexial region thereof. The tab will be somewhat resilient or outwardly springing by virtue of the rolling of the paper stock, and the elimination of adhesive from the projecting part of the tab. Thus, the tab will always tend to assume an outward position somewhat away from the body of the container.

A holder for the container generally indicated by numeral 13 is seen in Figure 2, which holder may be constructed of any suitable material such as a plastic. The body of the holder is given a somewhat hour glass shape with the upper interior portion 14 of the holder tapered in keeping with the taper on the wall of the cup to be received in the holder. The lower portion of the holder is hollow as indicated at 15 and the lower end of the holder is outwardly flared to provide a stable base 16. A handle 17 of desirable shape is provided so that the holder, the cup, and its contents may all be easily lifted by the handle. Inside the hollow 15 is a freely projecting portion 18 preferably of the same taper interiorly as the part 14 of the holder and the outer wall of the cup. The portion 18 terminates abruptly to provide a shoulder 19 extending freely into the space 15 away from the outer wall of the holder.

When the cup is placed in the holder, to the position seen in Figure 2, the locking tab 9 automatically springs outwardly beneath the shoulder 19 and thereby attaches the cup to the holder in a manner sufficient to prevent accidental dislodgement of the cup. In fact, the holder and cup may be completely inverted without the cup falling from the holder. Of course, when it is desired to remove or discard the empty cup, it is a simple expedient to pull the cup from the holder regardless of the resistance of the tab 9. When the cup is assembled with the holder, the notch 10 in the locking tab 9 is preferably engaged by an edge of the shoulder 19. It will be noted that on each side of the notch 10 the contour of the tab is in the formation of a pair of intersecting arcs so that any movement of the cup tending toward removal from the holder causes a camming action of the adjacent contour until the edge of the shoulder 19 is engaged within the notch, thereby amplifying the latching power of the tab 9.

In use, it is a simple expedient to take one of the cups 5 from a stack of cups or a dispenser, and place or toss it in a holder 13. In so placing the cup securely in the holder, neither any particular pains or degree of care, nor any registering of a particular part of the cup with a particular part of the holder is necessary. The cup may be easily and carelessly tossed or thrown into the holder, and the springing locking tab 9 automatically engages beneath the shoulder 19 and unites the cup with the holder against accidental dislodgement.

The present invention also lends itself to a somewhat different use than above described, but which use is extremely simple, highly sanitary, and may be performed with equal or greater facility.

For example, if the ultimate in sanitation is desired, so that the hands of an attendant need not touch the cup even on the outside, a holder may be taken and pushed over a cup, that is, the outermost cup in a stack of nested cups, sufficiently to cause latching engagement by the tab 9 with its notch 10 and then the cup may be removed from the stack merely by pulling away the holder carrying the cup therewith. Such method of engaging a cup within a holder solely by the actuation of the holder, is more fully described and claimed in my aforesaid copending application.

From the foregoing, it is apparent that I have provided a novel paper cup constructed and arranged for an automatic and highly simple locking of the cup within the holder even when the cup is introduced into the holder in the most careless manner. It will also be appreciated that the cup is of highly efficient yet extremely economical construction, the cup itself costing no more to manufacture than a similarly shaped cup not equipped with my novel locking tab. It should also be borne in mind that construction of the locking tab is such as to cause a camming action to insure a positive engagement between the tab and the holder sufficient to prevent accidental dislodgement of the cup.

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

I claim as my invention:

1. As an article of manufacture, a conical paper cup made from a substantially sector-shaped blank including an arcuate edge and a pair of converging side edges, a projecting tab between said side edges having a notch in its outer edge defined by a pair of converging edge portions, and adhesive on a margin adjacent one of said side edges for joining overlapping marginal portions in the completed cup, a portion of said tab including said notch being free from said adhesive so that said tab portion will spring outwardly away from the body of the formed cup.

2. As an article of manufacture, a paper cup having a locking tab projecting freely from the body of the cup near the apex of the cup, said tab having a notch therein defined by a pair of converging arcuate edge portions to provide a camming action toward said notch when the cup is seated in a holder behind a shoulder.

3. As an article of manufacture, a paper cup adapted to fit in a holder with its lower part projecting beyond the fit, comprising a cup body and a resilient latching tab at a lower part of the body projecting bodily and laterally from the outer cup surface, said tab being formed to provide an abutment shoulder on an upper edge thereof adjacent said outer surface of the cup, and said tab being deflectable as it passes through the holder for latching said shoulder in engagement with the holder to retain the cup against accidental displacement from the holder.

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