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(54) **A method of producing a frustoconical container for food products.**

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A method of producing a frustoconical container for food products

The invention relates to a method of producing a frustoconical container for food products, having at its upper edge a scoop-like edge portion and an opposite recessed edge portion, wherein the interior surface of the container being printed with a line pattern extending along the generatix of the container at a central part of the scoop-like edge portion, comprising the steps of printing an elongated strip of stock, cutting out a sidewall blank, connecting the side edges of the blank with each other, and affixing a bottom disc.

From British patent 271 017 a molded drinking cup is known which has a frustoconical sidewall structure. One part of the circumference of the sidewall edge is nearer to the bottom of the cup than another part thus defining an open scoop. French patent 1 402 124 discloses a frustoconical cup made of a sidewall blank, the side edges of which are connected with each other and thereafter a bottom disc is affixed to the sidewall.

For serving french fried potatoes there are also known collapsible scoop and serving containers which must be assembled from a collapsed position into an upstanding or modified condition prior to ingesting substantially measured quantities of french fried potatoes therein for the purpose of dispensing these measured quantities of potatoes to retail customers and the like. Also, such prior art containers are not basically capable of standing upright but require sloping supports or other ancillary equipment at the point of purchase in order to properly present them to retail customers in fast-food establishments and the like.

The scooped out center portion of the sidewall blank forms the lowermost edge portion of the mouth of the scoop or skuttle configuration. The position of this lowermost edge portion defines the front of the container, thereby rendering the interior surface of the high back portion of the scoop, including the lapped side seam, the apparent obverse surface of the interior of the container.

For aesthetic reasons, when the supply of french fries or other food products in a container are substantially depleted by customer consumption, a vertical parallel line pattern printed or otherwise applied to the interior obverse surface of the container, with the pattern lines parallel to the side seam, is desirable. This pattern is oriented in a substantially similar manner to the elongated french fries and the lines are suggestively similar in configuration to the french fries. Thus, the container appears less empty to the consumer of the contents thereof at any given stage of consumption.

However, in forming such a pattern on the obverse interior surface of a frustoconical container hitherto on spaced apart portions of a strip stock discrete line patterns were printed. This requires that the cutting tool for cutting out the arcuate sidewall blank be in full registry to the printed portions of the strip stock. A slight deviation from the fully registered position of the cutting tool relative to the printed portions of the strip stock will result in a sidewall the interior surface of which is not continuously covered with the desired line pattern. Moreover for advertising purposes and the like another printing often has to be applied on the surface of the strip stock opposite the one intended to carry the line pattern, and this likewise requires that the printing on the two surfaces of the strip stock be in full registry. This presents undesirable costs and quality control factors.

The invention provides for a method of producing a frustoconical scoop and serving container capable of standing upright, in which the difficulties hitherto involved with the provision of a line pattern on its obverse interior surface are overcome.

The method according to the invention of producing a frustoconical container for food products having at its upper edge a scoop-like edge portion and an opposite recessed edge portion, wherein the interior surface of the container being printed with a line pattern extending along the generatix of the container at a central part of the scoop-like edge portion, by printing an elongated strip of stock, cutting out a sidewall blank, connecting the side edges of the blank with each other, and affixing a bottom disc is characterized in that a shape is given to the blank such that, after having connected the said side edges, the connection seam extends in the central part of the said scoop-like edge portion along the generatix, and that a pattern of chevrons, in a consecutive manner, is printed on said strip of stock in the longitudinal direction thereof, with each said chevrons including an apex and two legs defining an angle substantially equal to the angle included by said side edges of the blank, the apices of said chevrons being substantially on the longitudinal center line of said strip and the legs of said chevrons being substantially parallel to respective ones of the said side edges of said blank.

If desired when printing said chevron pattern a central portion thereof can be omitted.

The combined scoop and serving container of the invention is constructed in the manner of a two-piece frustoconical paper cup or the like having a sidewall blank with a lapped side seam, a bottom disc having a downturned flange thereon and a bottom curl formed on the sidewall portion of the cup which engages the skirt portion to form a bottom curl and seam configuration at the lower closed end of the container upon which the container will be self-

supporting and stand upright.

The sidewall blank is cut with a substantially symmetrical curvature which is caused to dip towards the lowermost extremity thereof at its center such that the resulting two-piece frustoconical cup structure has a scoop or skuttle configuration at the upper periphery thereof. Also, the side seam acts to stiffen the uppermost portion of the top edge of the scoop. This is the portion of the scoop that first engages bulk quantities of the foods to be scooped up thereby.

The resulting structure will nest one within the other as in the case of paper and plastic two-piece frustoconical cups and the like and at the same time provide a scoop configuration whereby french fries or other similar food products may be scooped up and subsequently served in the same container.

In providing the interior parallel line pattern in the present invention, instead of printing two discrete patterns, in registry on each surface of a given sidewall blank in a sequence of such blanks on stock strip, the external blank surface pattern is printed centered across the stock strip and on the opposite surface of the stock is printed a chevron pattern of parallel chevrons having their apices located along the longitudinal center line of the stock strip, their legs extruding to the outboard edges of the stock strip, and the included angle of the legs being equal to the included angle of the side edges of the sidewall blank which are to form the side seam in the finished container.

In this manner, the lapping of the side edges of the sidewall blank will result in a pattern of apparently vertical and parallel lines on the obverse interior surface of the container. The chevron apices and the convergences of the legs of the chevrons will be concealed from view behind the lowermost portion of the container sidewall.

This precludes the need for printing two patterns in registry on both sides of a stock strip while providing the particular aesthetic pattern required on the obverse portion of the frustoconical interior surface of the combined scoop and serving container.

The preassembled nature of the frustoconical two-piece cup-like container and its stackability provide a much more facile and efficient means by which sanitary scooping and serving containers can be made available to personnel in fast food establishments and the like.

Also, scrap is minimized and the blanked-out shapes required to produce the containers are very simplistic thereby eliminating the complexity of the folded blanks of present-day devices.

One way of carrying out the invention is described in detail below with reference to the drawings in which:

Figure 1 is a perspective of combined scoop and serving container of the present invention which is filled with food product;

Figure 2 is a plan view of a sidewall blank;

Figure 3 is cross-section of the bottom curl of the scoop and container taken along line 3—3 of Figure 1;

Figures 4A and 4B are side-by-side presentations, respectively, of the exterior and interior surface patterns of cup blanks as seen from opposite faces of the same segment of a stock strip; and

Figure 5 is a front elevation of a finished container illustrating the desired parallel and vertical line pattern on the obverse portion of the interior surface of the container.

Detailed Description of the Drawings

Referring jointly to Figures 1, 2 and 3 of the drawings, the combined scoop and serving container 10 is shown as including a sidewall portion 12, a bottom disc or closure 14 having a dependent skirt portion 14A which when joined with a U-shaped reentrant bend 12A on the sidewall forms a bottom curl configuration 16.

As shown in Figure 2, a side seam glue line 18 defines an area of overlap between a first edge 12C and the opposite edge 12D of the sidewall blank 12 illustrated in Figure 2 and another glue-containing area 20 is provided to define the area of the bottom curl in which the reentrant bend 12A is effected.

The uppermost edge 12E of the sidewall blank 12 is provided with a central dip portion or arcuate depression 12F from which the remainder of the upper edge 12E proceeds in a series of substantially symmetrical stepped curves to the upper apices of the side edges 12C and 12D. This series of stepped curves from the low point or arcuate depression 12F in the upper edge 12E provides the scooped or skuttle shape illustrated in Figure 1.

The uppermost reach of the top edge 12E of the container 10 comprises that portion of the container 10 which first engages the food product when the container 10 is utilized as a scoop. In the scoop mode of operation, the thumb of a user, for example, is reposed in the arcuate depression 12F illustrated in the finished scoop and container 10 of Figure 1 with the forefinger and other fingers placed beneath the bottom curl 16 such that french fries or the like are ingested into the container in a substantially measured quantity for subsequent dispensing to customers.

Accordingly, in order to provide increased rigidity at the uppermost point of the top edge 12E, a lapped side seam along the glue line or area 18 consisting of the overlapped edges 12C and 12D of the sidewall 12 provides a two-ply stiffened reinforcement from the bottom curl 16 all the way up sidewall 12 to the uppermost portion of the scalloped edge 12E to provide additional strength and stiffness to this food contacting portion of the scoop-shaped receptacle 10.

Once filled with food products such as the french fries FF, the container 10 will stand ver-

tically on its own as clearly illustrated in Figure 1. This presents a stable and highly attractive display to the potential customer about to purchase a given portion of contained french fries and the like.

Referring now to Figures 4A and 4B, a plurality of sidewall blanks 12 are illustrated in Figure 4A on the surface 22A of a strip of blank stock 22 in which the blanks 12 extend substantially from one side edge of the strip stock 22 to the other and the side edges 12C and 12D of the sidewall blanks 12 define an included angle A as illustrated in Figure 4A.

The reverse or opposite surface 22B of the same length of strip stock 22 is provided with a chevron pattern 24 with each individual chevron including an apex 24A positioned along the longitudinal center line 22CL of the strip of stock 22 indicated in dotted lines in Figure 4B and having left and right legs 24B and 24C, respectively, defining an included angle B substantially identical to the included angle A on the surface 22A as defined by the side edges 12C and 12D of the cup blank.

If desired, the apices 24A of the chevron pattern 24 can be omitted such as in the area 24D defined by the dotted rectangle at the lowermost portion of the surface 22B in Figure 4B.

Referring next to Figure 5, the container 10 of the present invention is illustrated in a front elevation with the vertical stripes to the left of the side seam 18 being comprised of parallel chevron arms 24C and those to the right of the side seam 18 being comprised of the chevron arms 24B, the illustration of Figure 4B being rotated 180° from its illustrated position when in its printed position on the back of the strip stock 22 in Figure 4A.

As seen from Figures 4A and 4B, the arm 24C will be parallel to the side edges 12C and the arms 24D will be parallel to the side edges 12D of the cup blanks 12 on the strip of stock 22. This fact of relative orientation with respect to the dimensions of the strip of stock 22 of the cup blanks 12 and the chevron pattern 24 provides the necessary geometric relationship to achieve the desired substantially vertical and parallel line pattern on the interior obverse surface of the container 10 while simultaneously obviating the need to place individual printing plates in registry front to back with respect to the surfaces 22A and 22B of the strip of stock 22.

As further illustrated in Figure 4B, a sidewall blank is illustrated in dotted lines centrally of the surface 22B to show how the pattern of chevrons 24 is superimposed upon the sidewall blank 12.

Claims

1. A method of producing a frustoconical container for food products, having at its upper edge a scooplike edge portion and an opposite recessed edge portion, wherein the interior surface of the container being printed with a line pattern extending along the generatix of the container at a central part of the scoop-like edge portion,

comprising the steps of printing an elongated strip of stock, cutting out a sidewall blank, connecting the side edges of the blank with each other, and affixing a bottom disc characterized in that

a shape is given to the blank such that, after having connected the said side edges, the connection seam extends in the central part of the said scoop-like edge portion along the generatrix, and that

a pattern of chevrons, in a consecutive manner, is printed on said strip of stock in the longitudinal direction thereof, with each said chevrons including an apex and two legs defining an angle substantially equal to the angle included by said side edges of the blank, the apices of said chevrons being substantially on the longitudinal center line of said strip and the legs of said chevrons being substantially parallel to respective ones of the said side edges of said blank.

2. The method according to claim 1 characterized in that when printing said chevron pattern a central portion thereof is omitted.

Revendications

1. Procédé de réalisation d'un conteneur tronconique pour des produits alimentaires comportant à son bord supérieur une partie de bord en forme d'écope et une partie de bord opposée en creux tandis que la surface intérieure du conteneur est dotée d'impressions selon un réseau s'étendant le long de la génératrice du conteneur dans une partie centrale de la partie de bord en forme d'écope, ledit procédé comportant des phases d'impression d'une bande allongée de matériau, de coupure d'une ébauche de paroi latérale, de fixation des bords latéraux de l'ébauche l'un à l'autre et de fixation d'un disque de fond, caractérisé en ce que l'on donne à l'ébauche, après avoir fixé lesdits bords latéraux, une forme telle que le joint ou la couture de fixation s'étend dans la partie centrale de ladite partie de bord en forme d'écope le long de la génératrice et que l'on imprime un réseau de chevrons, de façon subséquente sur ladite bande de matériau dans la direction longitudinale, chacun desdits chevrons comportant une pointe et deux bras définissant un angle sensiblement égal à l'angle inclus dans lesdits bords de l'ébauche, les pointes desdits chevrons étant sensiblement sur l'axe de ladite bande et les bras desdits chevrons étant sensiblement parallèles aux bords respectifs desdits côtés de ladite ébauche.

2. Procédé selon la revendication 1, caractérisé en ce qu'à l'impression dudit réseau de chevrons, une partie centrale de ce réseau est omise.

Patentansprüche

1. Verfahren zum Herstellen eines kegelstumpfförmigen Behälters für Nahrungsmittel, der an seiner oberen Kante einen schaufelartigen Kantenbereich und einen gegenüberliegenden zurückversetzten Kantenbereich aufweist, wobei auf die innere Oberfläche des Behälters ein Linienmuster aufgedruckt ist, das sich am mittleren Teil des schaufelartigen Kantenbereiches längs der Behältermantellinie erstreckt,

indem man einen länglichen Materialstreifen bedruckt, einen Seitenwandrohling, ausschneidet, die Seitenkanten des Rohlings miteinander verbindet und eine Bodenscheibe befestigt,

dadurch gekennzeichnet, dass dem Rohling eine solche Gestalt gegeben wird, dass sich nach dem Verbinden der Seitenkanten die Verbindungsnaht am mittleren Teil des schaufelartigen Kantenbereiches längs der Mantellinie erstreckt, und dass

auf den Materialstreifen in dessen Längsrichtung fortlaufend ein Muster aus Winkellinien aufgedruckt wird, wobei jede Winkellinie eine Spitze und zwei Schenkel umfasst, die einen Winkel definieren, der im wesentlichen gleich dem durch die Seitenkanten des Rohlings eingeschlossenen Winkel ist, und wobei die Spitzen der Winkellinien im wesentlichen auf der Mittellängslinie des Streifens und die Schenkel der Winkellinien im wesentlichen parallel zu den betreffenden Seitenkanten des Rohlings liegen.

2. Verfahren nach Anspruch 1, dadurch gekennzeichnet, dass beim Aufdrucken des Winkellinienmusters ein zentraler Bereich des Musters weggelassen wird.

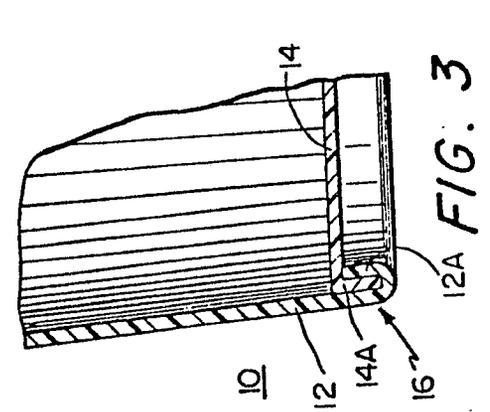

FIG. 3

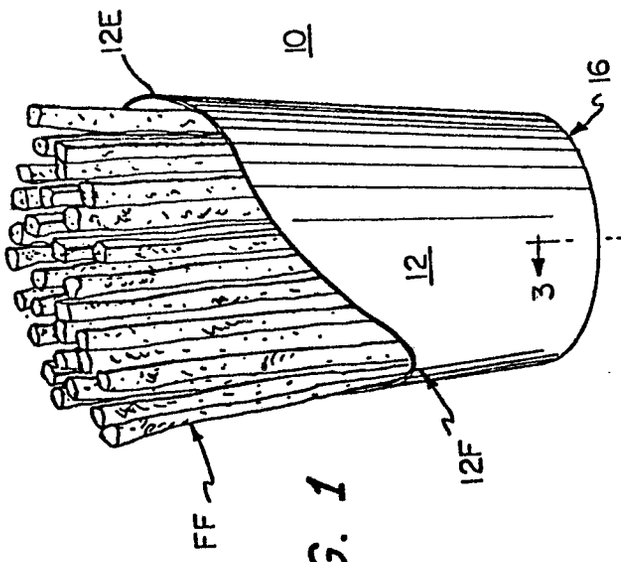

FIG. 1

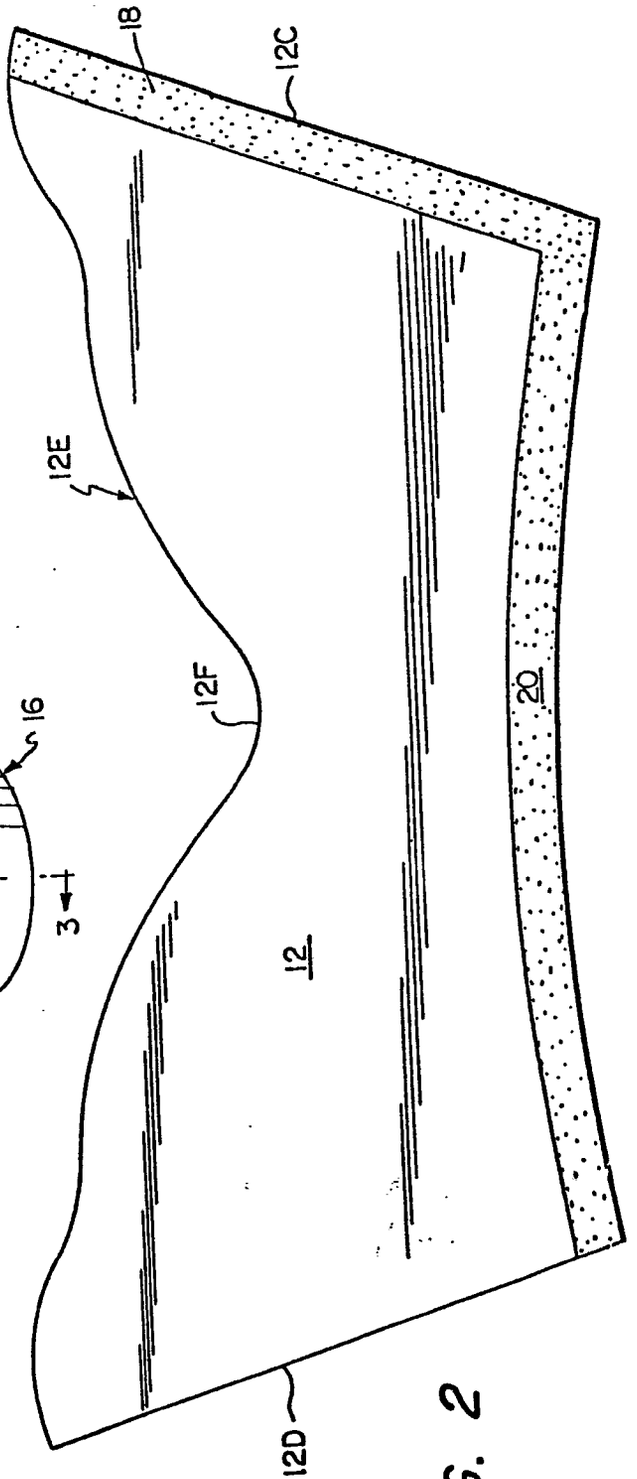

FIG. 2

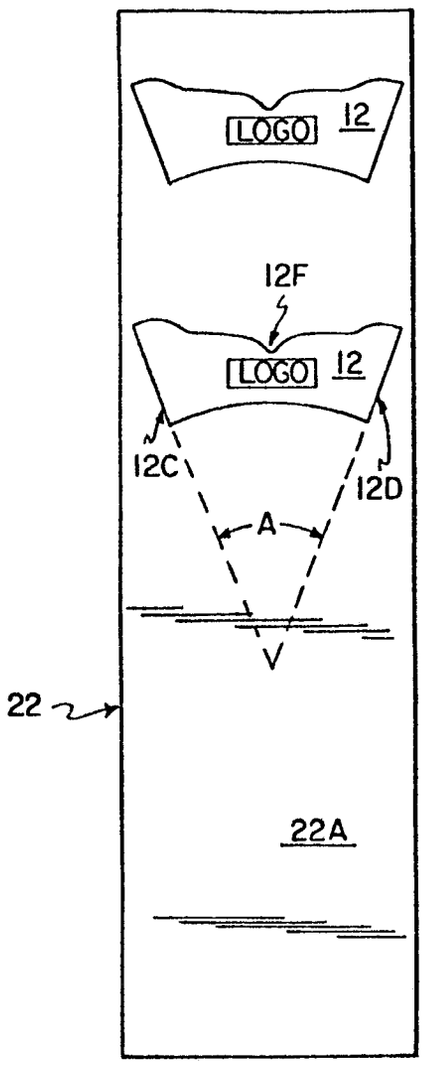

FIG. 4A

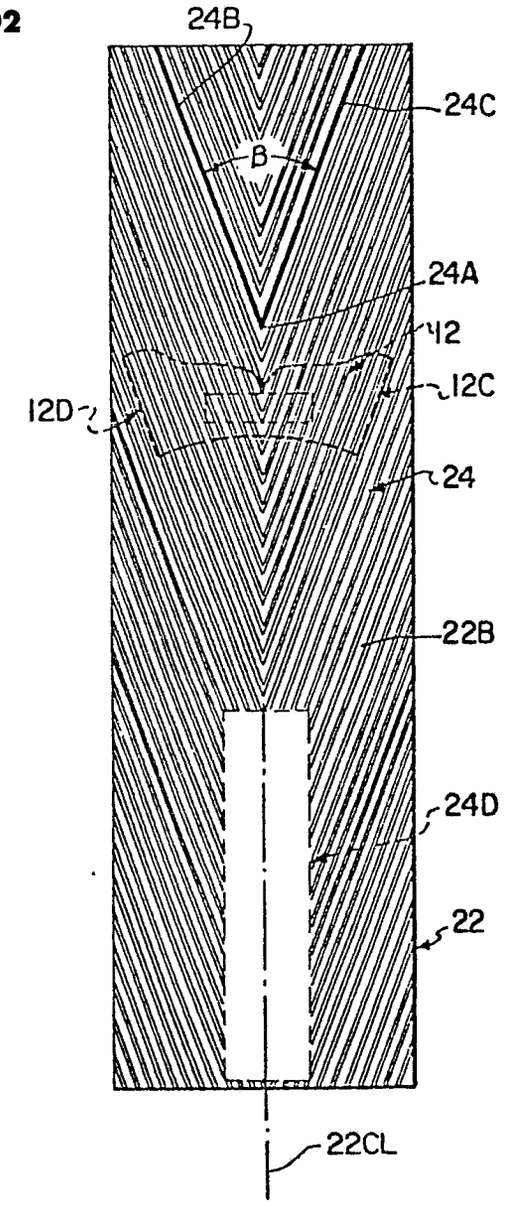

FIG. 4B

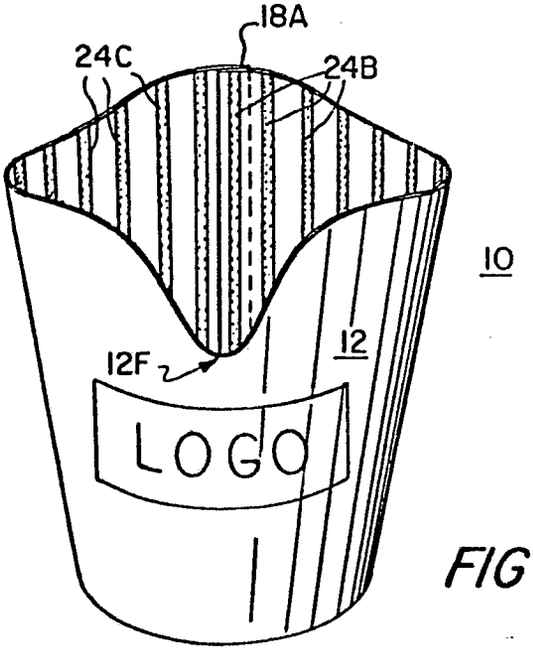

FIG. 5