Jan. 16, 1945. C. D. PAINTER 2,367,371

BOTTLE COLLAR

Filed June 13, 1940 2 Sheets-Sheet 1

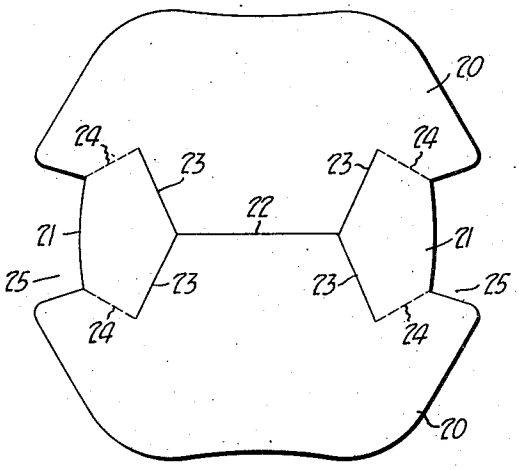


FIG. 1.

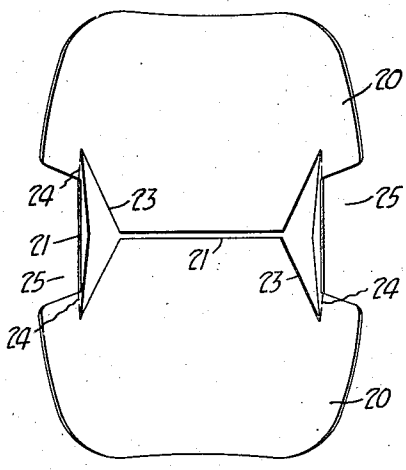


FIG. 3.

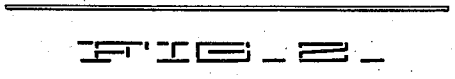


FIG. 2.

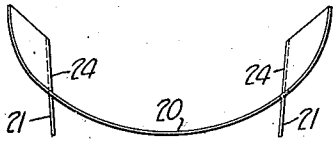


FIG. 4.

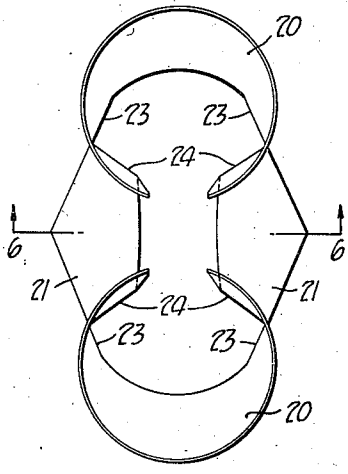


FIG. 5.

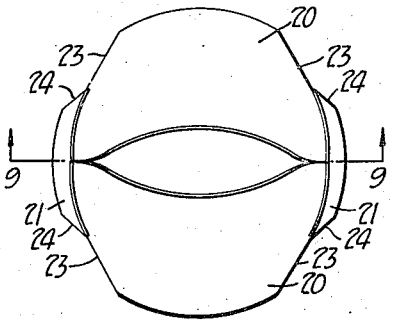


FIG. 7.

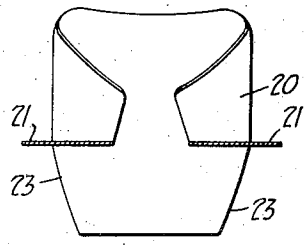


FIG. 6.

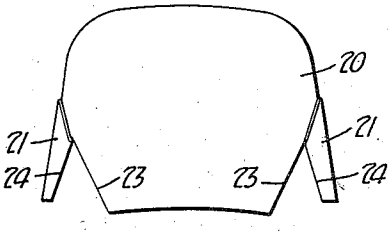


FIG. 8.

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BOTTLE COLLAR

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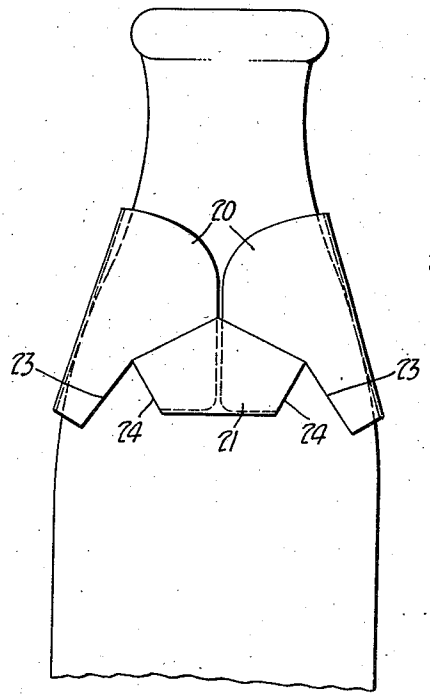


FIG. 10.

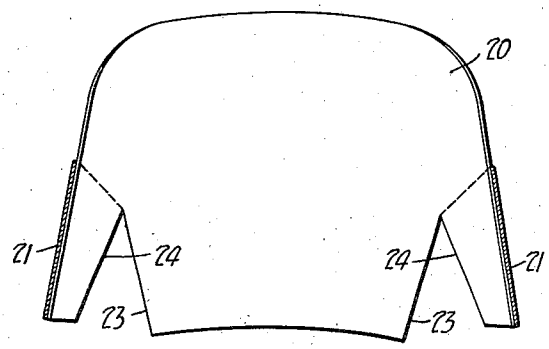


FIG. 9.

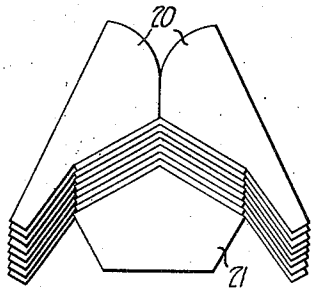


FIG. 11.

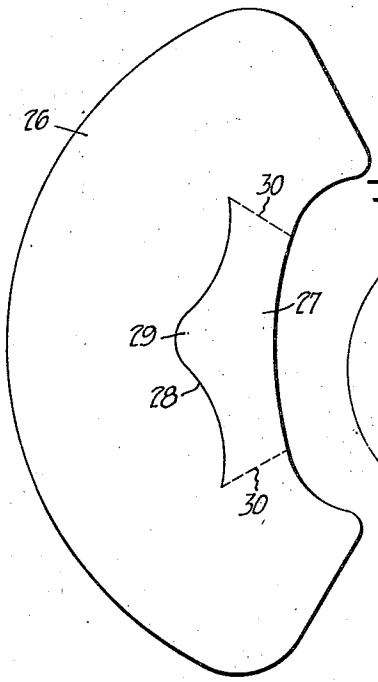


FIG. 12.

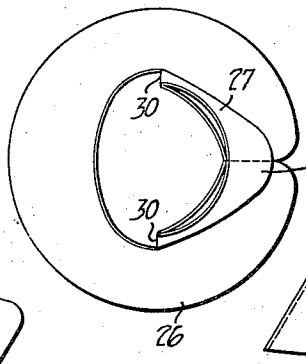


FIG. 13.

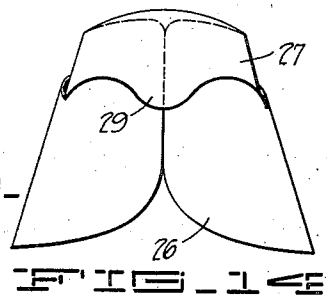


FIG. 14.

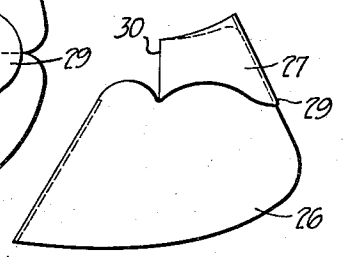


FIG. 15.

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UNITED STATES PATENT OFFICE

2,367,371

BOTTLE COLLAR

Claude D. Painter, San Francisco, Calif.

Application June 13, 1940, Serial No. 340,339

5 Claims. (Cl. 40—4)

This invention relates to so-called bottle collars or loose labels, usually of paper, bearing advertising matter, et cetera, adapted to surround and rest upon the upper constricted portion of an ordinary milk bottle, or the like.

The principal objects of the invention are to produce a one-piece bottle collar or loose label of pleasing appearance, simple, and economical to manufacture, consisting of a single flat sheet of material in its initial form, but readily deformable to produce a one-piece collar capable of being placed over a bottle neck or to surround the body of a container and adapting itself to various sizes of bottles and similar containers.

These objects, as well as other advantages which will become apparent in the following specification, are attained by making inter-related cuts and scores in a shaped sheet of paper, or blank, to produce loosely connected sections arranged in such manner as to permit the flat blank to be readily altered, by everting certain of its connected sections to produce a collar preferably having the general form of a truncated cone adapted to be placed over the neck of a bottle or to surround the body of a container so as to constitute a loose label therefor.

A clear understanding of some preferred structural forms embodying the invention will be had from the following detailed description and accompanying drawings, where

Figure 1 is a plan view of the prepared collar blank;

Figure 2 is an edge view of same;

Figure 3 is a plan view showing the first step in the alteration or conversion of the blank;

Figure 4 is a lower edge view of Figure 3;

Figure 5 is a plan view showing a further or intermediate step in the conversion;

Figure 6 is a sectional view taken on the line 6—6 of Figure 5;

Figure 7 is a top, or plan view of the converted blank constituting it a bottle collar;

Figure 8 is a side view of the converted blank, or collar, seen in Figure 7;

Figure 9 is an enlarged sectional view of the collar taken on line 9—9 of Figure 7;

Figure 10 is a side view of the collar as in position on a milk bottle;

Figure 11 is a side view showing a plurality of the collars as they appear in nested relation;

Figure 12 is a plan view of a modified form of collar blank;

Figure 13 is a plan view of a collar formed by alteration, or conversion, of the blank of Figure 12;

Figure 14 is a side view of the collar seen in Figure 13 viewed from the right hand side; and

Figure 15 is a similar view as seen from the lower side of Figure 13.

In the practice of the invention the blanks are preferably struck, or die cut, from a sheet of suitable material, usually heavy paper, and the required cuts and scores in the blank all made in one operation.

In the blank form of Figure 1 there are two opposite main skirts or flaps 20 loosely connected by two opposite side tabs 21. The skirts 20 are separated by a central cut 22 merging at each end with short divergent cuts 23 which in turn merge with perforated lines or scores 24 which converge towards cutout notches or bays 25 at opposite sides of the blank. This produces a blank comprising relatively movable sections consisting of skirts 20 and tabs 21 connected on the converging lines 24 which are preferably scored or cut-scored to facilitate their function as hinges or pivots between said sections. The convergence of lines 24 is a factor in producing the collars' shape.

To convert the blank into a collar, the tabs 21 are held between the thumbs and fingers and everted or turned completely over with respect to the faces of the skirts 20 shown in Figure 1. The first movement, resulting from turning the tabs through an angle of 45% is illustrated by Figures 3 and 4. Further movement, caused by turning the tabs through 90% is illustrated by Figures 5 and 6. Final, or complete movement, resulting in formation of the frusto-conical collar, is illustrated by Figures 7, 8, and 9. It should be noted, as an important phase of the invention, that a dozen or more blanks may be converted at one time as easily as one, with the resulting stacked or nested arrangement of the collars seen in Figure 11, from which stack the collars may be picked off one by one.

The term "evert," as used in this specification and in the appended claims, means to turn over a portion of the collar blank so as to bring into face-to-face relation, two surfaces on the same side of the original blank.

In practice, stacks of a dozen or more of the collars are converted at once and a plurality of such stacks of nested collars are nested within each other, each successive stack preferably being rotationally offset about 90° with respect to the underlying nested stack so that the resiliency of the paper tends to form all of the collars into a more perfect frusto-conical form having an upper opening which will drop freely over

a bottle neck. The collar is also adapted for machine conversion instead of manual conversion, either individually or in groups as above described.

In the modified form of Figures 12 to 15, the blank comprises an arcuate skirt or flap **26** formed with a centrally disposed tab **27** in its upper edge. The tab **27** is formed by cutting through the material on the line **28**, the central widened portion or projection **29** of the tab being preferably provided to facilitate eversion or turning over. The opposite ends of the tab **27** are connected to the skirt by the convergent scored lines **30**. The principle governing conversion of this form is essentially the same as that already described. Turning over or eversion of tab **27** on the lines **30**, causes the opposite ends of skirt **26** to approach each other and assume a conical form and to be there held in position, as illustrated, by the everted tab.

While the invention has been illustrated and described as embodied in a bottle collar or loose label, it will be evident to those skilled in the art of paper forming that with but slight adaptation the invention may be applied to other uses. For instance, the device of Figures 12 to 15 may readily be adapted to use as an eye-shade.

It has been deemed unnecessary to illustrate other possible forms of the invention, the principle of which has been clearly set forth and the scope of which is defined in the following claims.

What is claimed is:

1. An evertible collar blank comprising two skirt portions partially separated by an intermediate cut line and connected by a tab at each end of said cut line; each of said tabs being defined by diverging cut lines extending from each end of the intermediate cut line and by score lines converging from the ends of said diverging cut lines to spaced points at an edge of the blank to form hinge connections between each tab and the adjacent skirt portions.

2. An evertible collar blank comprising two skirt portions partially separated by an intermediate cut line and connected by a tab at each end of said cut line; each of said tabs being defined by diverging cut lines extending from each end of the intermediate cut line and by score lines converging from the ends of said diverging cut lines to spaced points at an edge of the blank to form hinge connections between each tab and the adjacent skirt portions; the angle of convergence of said score lines being such as to cause movement of the outer marginal edges of the skirt portions in the direction of the center of the blank at least equal to the movement of the inner marginal edges of the skirt portions in the opposite direction as eversion of the blank to collar form is effected.

3. An evertible collar blank comprising two skirt portions partially separated by an intermediate cut line and connected by a tab at each end of said cut line; each of said tabs being defined by diverging cut lines extending from each end of the intermediate cut line and by score lines converging from the ends of said diverging cut lines to spaced points at an edge of the blank to form hinge connections between each tab and the adjacent skirt portions; the angle of convergence of said score lines being such as to bring the outer marginal edges of the skirt portions at least as near a vertical line normal to the plane of the blank at its center as the inner marginal edges of said skirt portions are brought to said line upon eversion of the blank to collar form.

4. An evertible collar blank comprising one or more skirt portions connected by an equal number of tabs each defined by a separating cut from each such skirt portion and by score lines converging from the ends of each such separating cut toward spaced points at an edge of the blank; each of said score lines constituting a hinged connection between a tab and a connected skirt portion.

5. An evertible collar blank comprising a single skirt portion and a separated tab portion having opposite ends connected to said skirt portion by score lines converging toward two spaced points at an edge of the blank; said score lines constituting hinged connections between the tab and said skirt portion.

CLAUDE D. PAINTER.