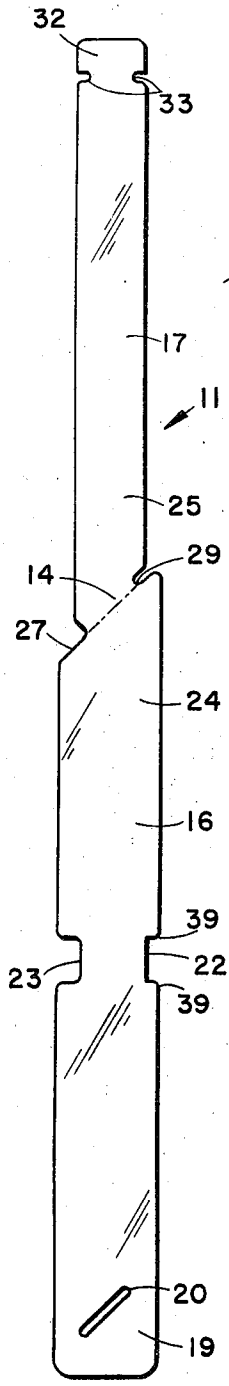
Sept. 24, 1968 J. A. PURVIS 3,402,910

DISPOSABLE BOTTLE HOLDER

Filed Sept. 29, 1966

Fig. 1



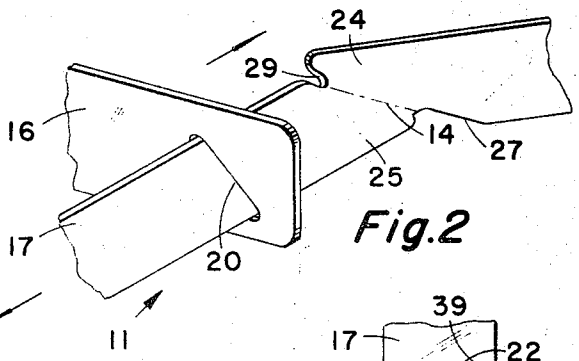


Fig.2

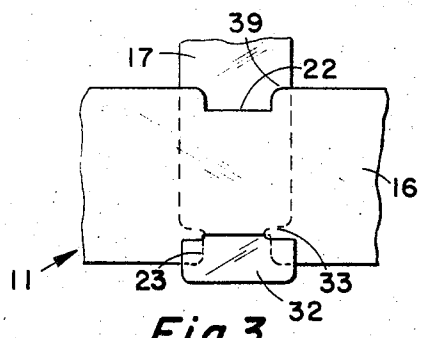


Fig.3

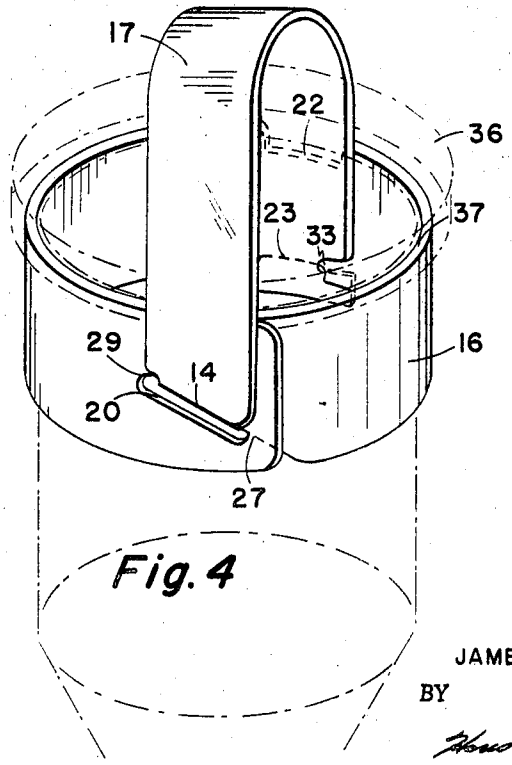


Fig. 4

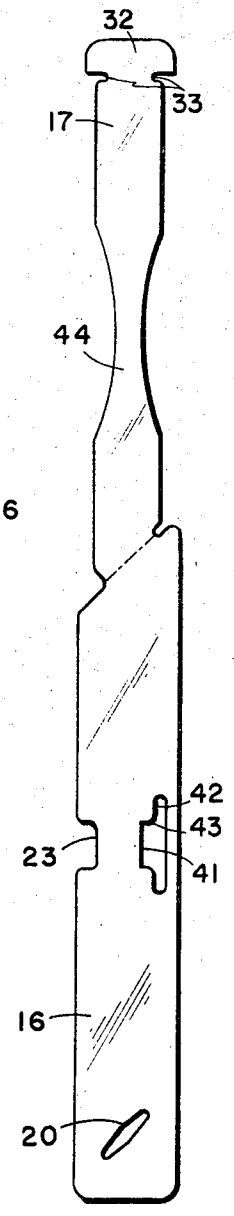


Fig.5

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3,402,910

DISPOSABLE BOTTLE HOLDER

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4 Claims. (Cl. 248—318)

ABSTRACT OF THE DISCLOSURE

A disposable and integral bail and collar for a bottle formed from a strip of sheet material in which the strip is divided into two segments by a crease line, the first segment forming a collar and the second segment extending through said collar and connecting its free end to an opposite point on the collar to form a bail.

This invention relates to a support for bottles and in particular to an integral bail and strap for pharmaceutical bottles such as those used in intravenous feeding.

Certain types of phaarmaceutical bottles including intravenous bottles employ a circumferentital ridge near their base. This ridge is used to support a bail arrangement needed to suspend the bottle upside down from a hook. Bails of the prior art have usually been formed from metal. Such bails have comprised a snug-fitting collar which abuts the ridge of the bottle and a wire bail connected to the collar. The assembly of such metal collars and bails appears to be relatively simple but, in fact, has encountered some difficulties. The main difficulty is that the collar, being made out of lightweight sheet metal, and the bail, being made from thin wire, necessarily have sharp edges which can cut the fingers of the person assembling the collar and bail on a bottle. In addition, if the rigid collar and bail are mounted on a bottle prior to packing a number of the bottles in a carton, the bail will not always collapse sufficiently to provide a compact and tight carton. Another disadvantage of a metal collar and bail pertains to their cost.

Attempts have been made to form collars and bails for intravenous bottles from a plastic material. In particular, polyethylene has been used to form an integral collar and bail. However, the excessive mold costs in forming supports of this type have prevented them from being widely used.

The collar and bail of my invention is formed from a sheet material of a plastic compositttion such as vinyl or some other polymeric compound. By forming the collar and bail from a sheet material the cost of expensive molds is eliminated since the collar and bail may be cut out by a conventional die. Furthermore, the collar and bail may be formed from a single strip of material which eliminates unnecessary expense in throwing away excess stock material. In general, the bail and collar of my invention comprise a single strip having a crease which divides it into a first segment forming the collar and a second segment forming the bail. The bail segment is formed by passing it through a slot in the collar and locking it therewith. The free end of the bail is connected to an opposite point on the collar segment which is now in a loop form.

It is therefore one object of this invention to provide a new and improved bail and collar for the suspension of bottles.

Another object of this invention is to provide a new and improved bail and collar formed from sheet material.

Another object of this invention is to provide a new and improved bail and collar formed from a single strip of resilient tear-resistant sheet material.

Another object of this invention is to provide a new

and improved integral bail and collar of low cost which may be assembled on a bottle without causing injury to the assembler.

Other objects and advantages of this invention will be apparent upon reading the following description in connection with the drawing in which:

FIG. 1 is a plan view of a blank cut in a particular form to provide an integral bail and collar;

FIG. 2 is a partial plan view of the bail and collar illustrating one means for connecting the free end of the bail to the collar;

FIG. 3 is a partial perspective view of the bail and collar illustrating their interlocking feature.

FIG. 4 is a perspective view of the bail and collar of this invention mounted on an intravenous bottle;

FIG. 5 is a plan view of a blank modified to form another embodiment of the bail and collar.

Referring to FIG. 1, a strip **11** is shown comprising a blank adapted to form my invention. Strip **11** may be die cut from a resilient tear-resistant sheet material of thin cellulose, vinyl, or other similar material. The thickness of the sheet material is not critical and with respect to vinyl material, a thickness of 0.010 inch has been found to be quite satisfactory. An imaginary dotted line on strip **11** illustrates where a crease **14** is formed in the strap. Thus, crease **14** forms strip **11** into two segments—one of which comprises collar **16**, the other segment comprising bail **17**.

The length of collar **16** exceeds the circumference of the bottle by a small amount such as one inch in order to provide for free end **19** and slot **20**. Slot **20** is shown to be at an angle of 45° to the longitudinal axis of collar **16** which coincides with the longitudinal axis of bail **17**. Other slot angles are also suitable but will necessitate having the longitudinal axes of the collar and bail set at an angle in order to keep the assembled bail perpendicular to the collar. However, if the strip **11** is cut with these two axes at an angle there will be additional scrap material wasted. At an intermediate point approximately midway in the collar a pair of oppositely positioned cutouts **22** and **23** are provided, the depth of these cutouts being such that the strength of collar **16** is not significantly weakened.

It is to be noted that at crease **14** the width of the strip decreases to a width that is slightly less than the length of slot **20**. For purposes of explanation crease **14** may be considered to divide strip **11** into the collar and bail's two connected ends **24** and **25**. Thus, end **24** has a diagonal edge **27** cut at 45° and which is parallel to slot **20**. A thin cutout portion **29** is provided between the division of collar **16** and bail **17** and on a line extending from edge **27**.

Bail **17** has a free end serving as a connecting tab **32** formed by a pair of recesses **33**. The length of recesses **33** is such that the width of the material therebetween approximates the width of cutout **23**. It is desirable that the width of bail **17** does not exceed the length of diagonal slot **20** in order for it to pass therethrough without being permanently crimped or doubled. However, connecting tab **32** may be larger than slot **20** in order to increase the tab's strength.

The bail and collar of FIG. 1 are assembled on a bottle **36** by positioning the collar about the perimeter of the bottle adjacent its ridge **37** (see FIG. 4). This is accomplished by first inserting bail **17**, with its connecting tab **32** leading, through diagonal slot **20** adjacent the free end of collar **16**. Bail **17** is passed through slot **20** until the cutout portion **29** engages or interlocks with slot **20** (FIGS. 2 and 4). A crease is formed along line **14** and the bail **17** is now perpendicular to collar **16**. At this point collar **16** is formed into a loop and may be placed around the intravenous bottle against ridge **37**.

Bail **17** is then connected to collar **16** by passing the connecting tab **32** underneath collar **16** adjacent the two cutouts **22** and **23**. Since collar **16** is dimensioned to provide a snug fit about bottle **36**, an inexperienced assembler might initially have some slight difficulty in inserting the connecting tab **32** of the bail underneath collar **16**. However, cutout **22** on the collar provides an easy entry since corners **39** will be flexed slightly outward. Insertion of connecting tab **32** is achieved by starting its entry underneath one of the extending corners **39**. Cutout **23** is used to interlock with the two recesses **33** forming the connecting tab **32** of the bail (FIG. 3).

With the bail and collar now assembled on the bottle the unit can be suspended from a hook by the bail **17**. The unit can be shipped in its assembled condition by simply sliding collar **16** toward the neck of bottle **36** until bail **17** is against the bottom of the bottle. Due to the flexibility of the sheet material used the bail can be maintained in a snug condition along the sides of the bottle to provide a compact arrangement for packing.

The modified embodiment of my invention shown in FIG. 5 differs largely in the manner in which connecting tab **32** of bail **17** is connected to collar **16**. Similarly to the first embodiment of my invention a cutout **23** is formed on one edge of collar **16**. A second cutout **41** is formed within the confines of collar **16** and has an enlarged position **42**. To fasten bail **17** to collar **16** connecting tab **32** is inserted through the enlarged position of **42** of cutout **41** with corners **39** again facilitating entry of the tab. In a manner similar to the first embodiment, recesses **33** of connecting tab **32** are interlocked with cutout **23** on the collar. Inasmuch as the cutout **41** is formed within the confines of collar **16**, bail **17** when assembled will be restricted in its lateral movement by the enlarged portion **42**. A restricted portion **44** may be formed in bail **17** in order for it to hang more securely on a small hook.

Although only two embodiments of this invention have been illustrated and described, it will be apparent to those with skill in the art that other modifications can be made

without departing from the spirit of this invention and the scope of the appended claims.

I claim:

1. An integral bail and collar for bottles formed from resilient tear-resistant sheet material comprising: a flat strip having a diagonally transverse crease dividing said strip into first and second joined segments, said first segment having a slot substantially equal to the length of said crease adjacent its free end diagonally positioned with respect to said strip's longitudinal axis adapted to receive said second segment therethrough, said slot being interlocked with said crease and forming said first segment into a loop collar, said second segment extending from said slot perpendicular to said loop collar and having its free end connected to said first segment opposite said slot for forming a bail.

2. An integral bail and collar for bottles according to claim **1** in which the free end of said second segment is removably connected to said first segment by a connecting tab having a recessed portion interlocked with a cutout portion on said first segment.

3. An integral bail and collar for bottles according to claim **2** in which said second segment is maintained between said first segment and the enveloped bottle adjacent its removably connected end.

4. An integral bail and collar for bottles according to claim **3** in which said first segment has an aperture adjacent said cutout portion adapted for receiving said second segment therethrough perpendicularly to said first segment.

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