

Feb. 11, 1964

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3,120,974

CARRYING DEVICE

Filed Aug. 15, 1960

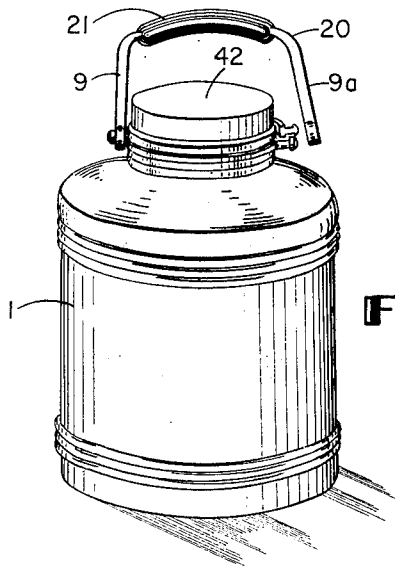


FIG. 1

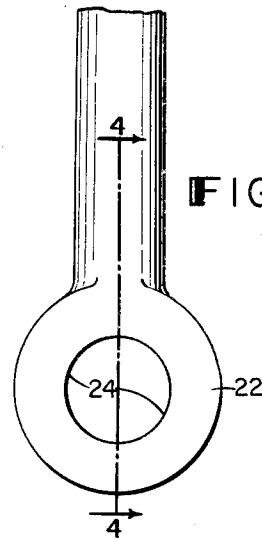


FIG. 3

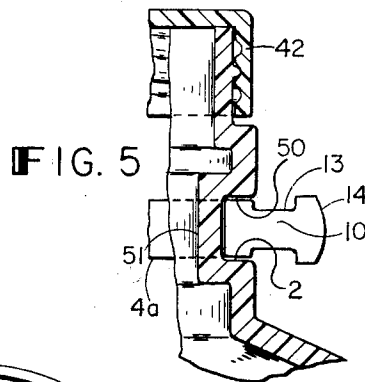


FIG. 5

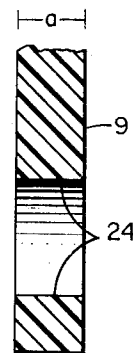


FIG. 4

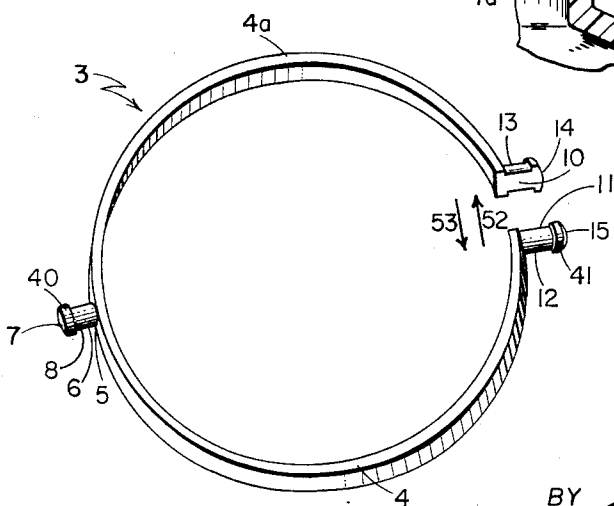


FIG. 2

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3,120,974

CARRYING DEVICE

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Filed Aug. 15, 1960, Ser. No. 49,771

4 Claims. (Cl. 294—31.2)

This application relates generally to a container for fluids and the like. More specifically, this invention relates to a two piece handle and jug especially adapted for hand carrying of liquids.

Plastic containers for carrying liquids are well known in the art. These containers are known to be especially useful because of their desirable mechanical and physical properties, viz., fracture resistance, chemical inertness, lightness of weight, ease and economy of manufacture. However, problems have arisen as to the handles employed with these containers.

The prior art has not, to my knowledge, been able to make a substantially successful carrying handle for a jug-like container which is light in weight, easy and economical to manufacture, durable, swingable and at the same time pleasing to the eye.

One object of this invention is to provide a handle for an article to be hand carried.

Another object of this invention is to provide a two piece handle for an article to be hand carried, said article having anchoring means incorporated thereon to cooperate with said handle.

A further object of this invention is to provide a two piece, swingable, replaceable plastic handle for a jug-like container which handle is durable, detachable, easy to manufacture and pleasing to the eye.

I accomplish these and other objects by providing an anchoring means on a container and detachably securing a split, substantially ring shaped yoke to said means with a hand grip portion swingably mounted on the yoke and aiding in the anchoring of the yoke.

My invention is illustrated in the accompanying drawings in which:

FIG. 1 is a front view of a jug-like container at a stage immediately prior to complete assembly, having a two piece handle comprising a yoke portion and a hand grip portion essentially embodying the invention.

FIG. 2 is a top view of the yoke portion of the two piece handle.

FIG. 3 is a fragmentary section of the attachment portion of the grip member of the handle.

FIG. 4 is a side section along line 4—4 of the grip portion shown in FIG. 3.

FIG. 5 is a side section cut through the upper neck portion of the jug of FIG. 1.

In the drawing and in the description in which like numerals indicate similar elements, the jug, normally made of a synthetic plastic, has a grooved portion 2 at the neck thereof and a one piece cover 42. While polyethylene is preferred, any well known thermoplastic or thermosetting materials such as nylon, polystyrene, phenolformaldehyde and urea formaldehyde can be employed to advantage.

The yoke or collar 3, FIG. 2, is a one piece plastic ring-shaped member having substantially semicircular portions, 4 and 4a. The semi-circular portions are joined at point 5 by integral shank 6 having a rounded boss head member thereon. Although the yoke is shown as a circular ring it should be understood that square, rectangular or other polygonal shapes conforming to a specific neck shape may be employed to advantage. As illustrated, shank 6 is a generally cylindrical pin and carries the boss or head 7 which provides an abutment surface 8. The yoke 3 is resilient and flexible at least in the direc-

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tions shown by the arrows 52, 53 (FIGURE 2). The flexibility of the yoke, along with other features employed, allows for universal use of the handle.

The flat abutment surface 8 provides a positive stop for hand grip leg 9 thus preventing unwanted detachment of the handle in use. The length of pin 6 is slightly greater than the width, a (see FIG. 4) of the grip leg portion 9. The opposite side from shank 6 of the yoke semi-circular portions 4a and 4 each terminate at portions which comprise a split member of the type shown at numerals 6, 7, 8 and 40. These split members have planar abutting faces 10 and 11 and semi-cylindrical portions 12 and 13. When the planar surfaces 10 and 11 are brought together, semi-cylindrical portions 12 and 13 forms a cylindrical shank portions identical to cylindrical shank 6 and a head portion 14, 15 which is identical to head portion 7. Yoke 3 is constructed of a resilient, strong thermoplastic or thermosetting material. Nylon has been found to be especially suitable for this purpose.

Grip portion 20 of the handle comprises leg portion 9 and 9a and a hand portion 21. The hand portion 21 is wider than legs 9, 9a in order to add to the mechanical strength as well as to provide a more comfortable hand grip.

The end of leg 9 may be any shape desired, however, leg portion 9 preferably ends in circular disc 22 having a generally circular bored portion 24 slightly larger in diameter than shank 6. Leg portion 9a is formed in the same manner as leg 9. Bore 24 on leg 9 is made slightly smaller in diameter than the diameter of rim 40. Likewise, leg 9a has a bore in a disc portion thereof so dimensioned as to be slightly smaller than the diameter of rim 41 when faces 10 and 11 are abutting. Grip portion 20 is preferably constructed of the same material as yoke portion 3. Thus, if both the yoke and grip are of the same material, for example, nylon, they will tend to wear at the same rate at portions 6, 12 and at the hole portion of legs 9, 9a, since little cutting tendency will be present. However, dissimilar materials can be used if desired.

I have found that nylons, i.e., the conventional synthetic polyamides are most advantageously employed in the handle of my invention since these materials exhibit strength, abrasion, chemical resistance, ease of molding and resiliency.

When plastic materials are employed in the manufacture of the handle, i.e., the hand grip and yoke, are each individually molded by conventional methods. The jug or container, if constructed of plastic material, can be produced by any known molding method such as compression or blow molding. The groove 2 is molded as an integral part of the container itself. It is obvious that cut back portion 50 is the only container configuration necessary for retaining the handle. Thus, wall 51 may be lengthened so as to have the yoke slidable vertically thereon. Any retaining projection or indentation on the container may be used as an anchor, viz., dimples, angled indentations, projections, etc.

In use the 2 piece handle is attached to the object to be carried by a simple manipulative procedure. Yoke 3 is placed in groove 2 while resiliently spreading ends 14 and 15 apart. Leg 9 of the hand grip portion 20 is then attached to the yoke by forcing the bore of the disc portion over resiliently yielding boss portion 7 onto shank 6. The yoke is then locked to the object of container by forcing the other leg 9a of the hand grip over ends 14 and 15 while they abut each other, and on to split shank 12, 13. Removal of the handle can be affected by merely inserting a flat object between yoke 3 and the disc on the end of hand grip leg 9a and then applying pressure outwardly so as to push the bored end of leg 9a back over

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split projection 14, 15. When a nylon is utilized as the handle material, both bosses 7 and 14, 15 as well as the holes in the hand grip legs co-operate in yielding to some degree as the leg members are forced on to the shank portions. Obviously other methods of assembly and disassembly may be employed.

In the assembled handle the hand grip portion will be freely rotatable around the axis formed by an imaginary line drawn through shanks or spindles 6 and 12, 13 on the yoke. This rotation allows the hand grip portion to be removed from the space above cover portion 42 thus permitting clear access to the cover and underlying mouth of the container.

As seen from the ease with which the handle can be assembled and disassembled, a single handle of the type employed in this invention can be used for many different containers. It is only necessary that the outer diameter of the wall 50 be greater than the diameter of yoke 3 when yoke 3 is in a closed position. Alternatively the handle can be used continuously on a single container.

While I have disclosed and shown in the specification only the preferred embodiment of the invention, many variations in the structure and materials employed are possible without departing from the spirit and scope of the invention I therefore claim all forms of the invention which come within the spirit and scope of any one claim.

I claim:

1. A handle suitable for carrying assorted objects, said handle comprising a yoke member, and an inverted generally U-shaped hand grip portion, said yoke being a split one-piece generally ring-shaped member having two mating end portions, each of which has an outwardly extending split shank portion, having an integral enlarged split boss member at the outer portion thereof, and an integral outwardly extending second shank portion substantially opposite said first shank portion on the yoke and having an integral boss member thereon which is of greater width than said second shank, said hand grip portion having two leg portions, each of which has a bored end, each of the bores being smaller in width than

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the width of each of said boss members, the bored end of one leg being removably mounted on the yoke with said second shank passing therethrough, and the other leg being removably mounted on the yoke with the first shank passing therethrough, said legs being positively retained on said shanks by said boss members, thereby substantially closing said yoke whereby said yoke may be engaged with a grooved anchoring portion of an object.

2. A two piece handle as claimed in claim 1 wherein the yoke portion and the hand grip portion are plastic.

3. A two piece handle as claimed in claim 1 wherein the yoke portion and the hand grip portion are nylon.

4. An object carrying handle adapted to be easily positioned on and to be easily removed from the object to be carried, consisting of (1) a resilient, substantially ring-shaped yoke member having a discontinuity, said discontinuity forming two end portions, each of said end portions comprising half of an outwardly extending integral, resilient means for retaining a hand grip portion, said means including an integral split stop, said yoke member also having at least one other means for retaining another hand grip portion, said other means including an integral stop, and (2) a resilient hand grip portion including depending legs, each of said legs having an opening therethrough, the width of each stop being greater than the width of each of said openings, each of said legs being detachably mounted on the respective retaining means and being positively retained on the respective retaining means by the respective stop.

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