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FLEXIBLE CARRYING HANDLE

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Fig. 1

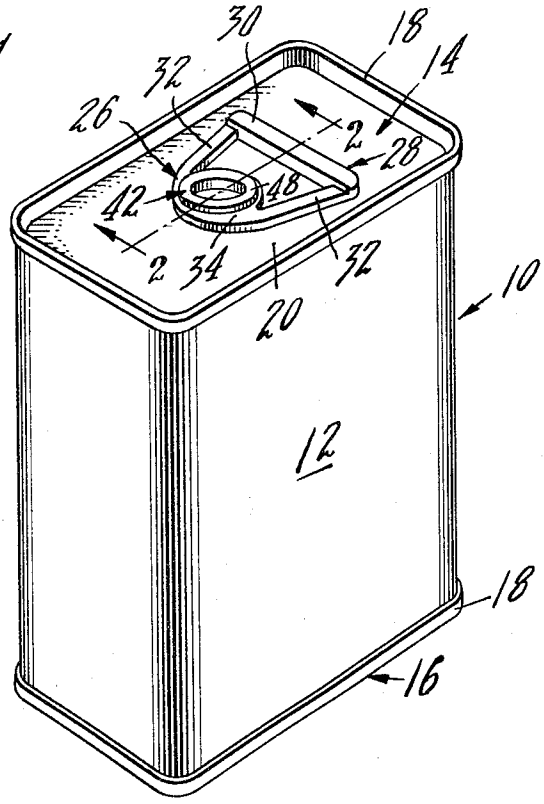


Fig. 2

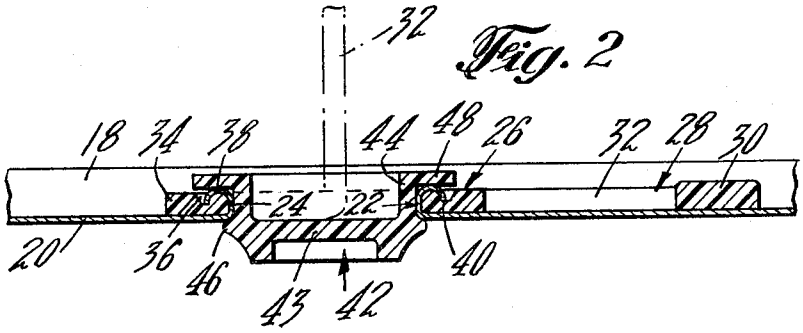
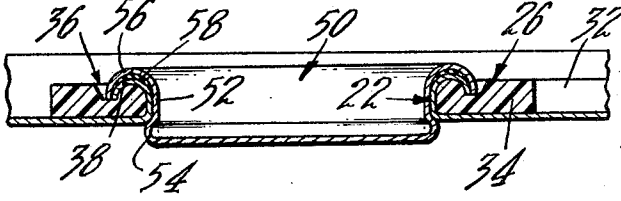


Fig. 3



INVENTOR.
LEONARD THOMAS LaCROCE
BY
George D. Liebmer
ATTORNEY

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FLEXIBLE CARRYING HANDLE

Leonard Thomas La Croce, Dumont, N.J., assignor to American Can Company, New York, N.Y., a corporation of New Jersey

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The present invention relates to containers, and more particularly to a container which is provided with a flexible carrying handle which is firmly anchored in place on the top end of the container by an outwardly bent curl which surrounds the filling opening of the container.

In many instances, it is very desirable to provide a metal can with a convenient and attractive carrying handle, particularly when the container is of large size and is to be filled with a heavy product, such as liquid antifreeze or the like.

The present invention contemplates such a can wherein a plastic carrying handle is utilized which is attractive in appearance and which lies flatly against the top end of the can when not in use and thus does not interfere with stacking of the cans, or add substantially, if at all, to their height, thus obviating the need for higher shipping cases.

The handle is provided at one end with an anchor ring over which is crimped the outwardly curled edge of an upstanding throat which defines a filling and/or dispensing opening which is formed in the top end of the can to thereby securely hold the handle in place. A sealing plug is provided which extends into the filling opening to seal it and prevent leakage of the contents of the can therethrough. In addition to its sealing function, the plug may reinforce the throat curl to thereby assist in holding the handle in place. As a result, there is thus provided a container which is neat and attractive in appearance, relatively inexpensive, and extremely useful as a carrying container for heavy products.

An object of the invention therefore, is the provision of a container which embodies the above described advantages.

Another object is the provision of such a container wherein the carrying handle lies flatly against the can top below the level of the top edge of the top seam of the can when not in use but which may be readily grasped and lifted to vertical, operative position when it is desired to carry the container.

Numerous other objects and advantages of the invention will be apparent as it is better understood from the following description, which, taken in connection with the accompanying drawings, discloses a preferred embodiment thereof.

Referring to the drawings:

FIGURE 1 is a perspective view of a container embodying the principles of the instant invention.

FIG. 2 is a fragmentary vertical section taken substantially along the line 2—2 on FIG. 1, parts being broken away; and

FIG. 3 is a fragmentary vertical section, corresponding generally to FIG. 2 but on a somewhat large scale, taken through portions of a modified form of the invention, parts being broken away.

As a preferred and exemplary embodiment of the instant invention, FIGS. 1 and 2 disclose a metal can **10** which comprises a tubular metal body **12** which is shown as being rectangular in horizontal cross-section but which may obviously be of any other desired or suitable shape or configuration. The ends of the body **12** are closed by top and bottom metal end members **14, 16** which are formed of any suitable metal and are secured

to the body **12** in any suitable manner. In the illustrated form of the invention the body **12** and end members **14, 16** are joined in conventional interfolded double seams **18**.

The top end member **14** is preferably formed with a countersunk, flat central panel **20** which is set into the upper end of the body **12** and is recessed below the top edge of the top double seam **18**.

The panel **20** is provided with a centrally disposed opening **22**, which may be utilized as a filling opening through which the container contents (not shown) may be introduced into the interior of the can. The opening **22** is defined by an upstanding throat **24** which preferably is formed integral with the panel **20**.

In order to provide the means for conveniently carrying the can **10**, a one-piece carrying handle **26** is firmly secured to the top end member **14** in such manner that when not in use, it lies flatly against the upper surface of the top end member, preferably below the top edge of the top seam **18**. The handle **26** is preferably made of a strong, flexible, substantially resilient material such as polyethylene or other suitable resinous plastic material and is formed with a gripping portion, generally designated as **28**, which comprises a grip bar **30** and a pair of legs **32** which convergently extend from the ends of the grip bar **30** and connect the grip bar **35** to the diametrically opposite sides of an anchor ring **34** which closely surrounds the throat **24**.

The upper portion of the anchor ring **34** is formed with a groove **36**, and the upper end of the throat **24** is formed into an outward curl **38** which is extended around the inner edge portion of the anchor ring **34** so that it closely grips and compresses the same, the raw edge **40** of the curl terminating at, and preferably being slightly buried and thus concealed in, the bottom of the groove **36**. This concealment of the raw edge **40** is of particular importance in the event the end member **14** is formed of a steel substrate which is coated on both sides with a protective layer of a suitable non-corrosive material such as tin or an organic coating, since in such intances the raw edge **40**, being unprotected, would be subject to rust or other corrosion if exposed.

The central filling opening **22** is closed by means of a plastic sealing plug **42** which is force-fitted therein to prevent leakage of the container contents along the throat **24**, the plug **42** being provided with an imperforate bottom wall **43** and an annular side wall **44** having formed therein an outwardly extending locking rib **46** which engages beneath the bottom edge of the throat **24** to firmly hold the plug **42** in place. The upper edge of the side wall **44** merges into an outwardly extending flange **48** which overlies and conceals the curl **38**. If desired, the flange **48** may contact the anchor ring **34** outwardly of the curl **38** to seal off the curl **38** from external atmosphere and to further protect it from corrosion.

As an alternate construction, FIG. 3 discloses a modified form of invention wherein the same carrying handle **26** is utilized but wherein the plastic plug **42** is replaced by a plug **50** which is formed of sheet metal. The plug **50** is also formed with an annular side wall **52**, the bottom portion of which is expanded outwardly, preferably after insertion of the plug **50** into the opening **22**, to form a locking rib **54**.

The upper end of the annular wall **52** is formed into an outwardly extending curl **56** which overlies and reinforces the curl **38**, the raw edge of the curl **56** also preferably being buried in the groove **36**. A film of sealing compound **58** may be interposed between the curls **38** and **56** to prevent leakage of the contents.

When it is desired to use the handle **26** to carry the

container **10**, the grip bar **30** is grasped and lifted, and the weight of the container and its contents thereafter cause the grip bar **30** and legs **32** to assume the vertical position shown in dot and dash lines in FIG. 2. In this position, the fingers of the person carrying the container fit easily around and beneath the grip bar **30** and a comfortable carrying grip is thereby obtained.

Since the legs **32** join the anchor ring **34** on diametrically opposed sides thereof at points which are substantially on the center line of the short dimension of the end member **14**, the container is balanced with respect to the grip bar **30** and is thus easily and readily carried. After use, the handle **26** tends to return to its initial flat position on the can end **14**.

If it is desired to use the central opening **22** as a dispensing opening, the plug **42** may be pried out of the opening when desired, and thereafter reinserted in snap fit engagement. The plug **50** is not intended for removal. To dispense the container contents when the plug **50** is used, it is intended that dispensing holes be cut in the end member **14** by any suitable cutting tool, such as a punch type can opener. It will be understood, of course, that a removable sheet metal plug may be provided in place of the non-removable plug **50**.

It is thought that the invention and many of its attendant advantages will be understood from the foregoing description and it will be apparent that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing all of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

I claim:

1. A carrying container, comprising a can body having a metal top end seamed thereto in an upstanding end seam, said end having an opening formed therein, and an upstanding throat defining said opening, and a carrying handle formed of flexible material and having an anchor ring which surrounds said throat, the upper portion of said throat being curled outwardly into tight engagement with said anchor ring to secure said handle in place on said metal end, said handle also including a grip bar and a pair of legs which connect said grip bar to opposite sides of said anchor ring, said grip bar and legs normally lying flatly against said metal end below the level of the top of the end seam but being movable to a substantially upright position when in use.

2. The container of claim **1** wherein said opening in the metal end is closed by a sealing plug in engagement with said throat and having a flange which overlies the upper end of said throat.

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THERON E. CONDON, *Primary Examiner.*

R. H. SCHWARTZ, *Assistant Examiner.*