United States Patent

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[54] **CONTAINER CARRIER**
5 Claims, 3 Drawing Figs.

[52] **U.S. Cl.** **294/31.2**
[51] **Int. Cl.** **A45j 45/00**
[50] **Field of Search** 294/31.2, 87.2; 224/55; 206/65

[56] **References Cited**

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ABSTRACT: A container carrier formed of plastic sheet material having ends integrally connected to an endless band and extending inwardly therefrom, is formed by blanking handle ends totally within an aperture formed by the endless band. The handle ends extend at an angle to the inner periphery of the endless band thereby allowing the ends to lie parallel to one another within the endless band.

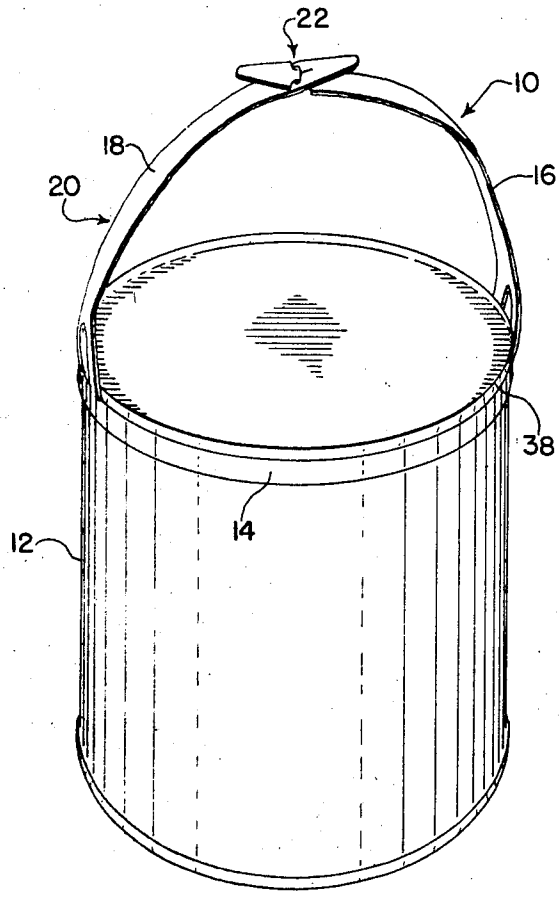


Fig. 1

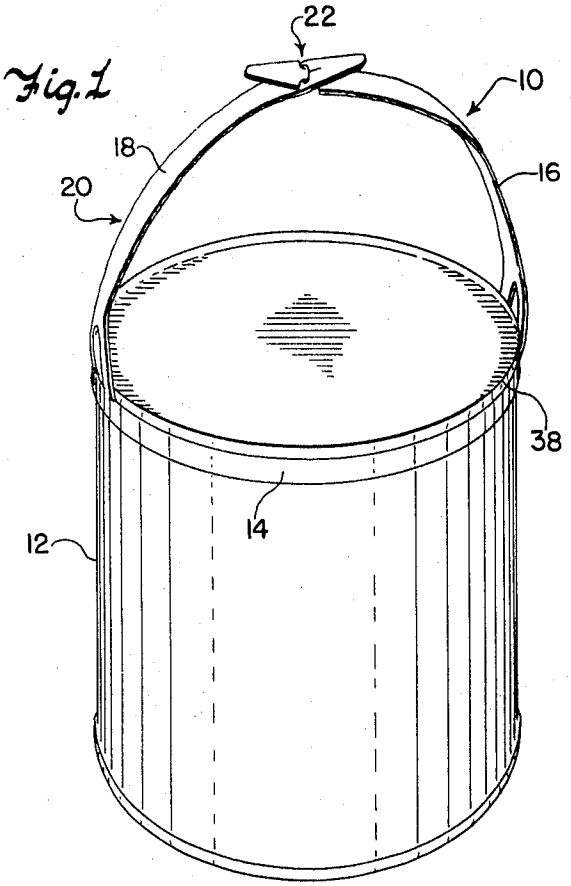
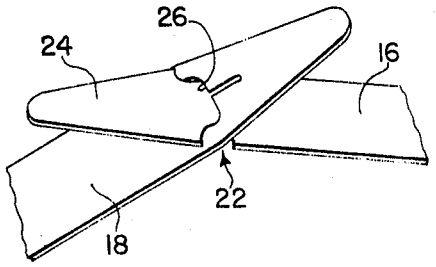


Fig. 2



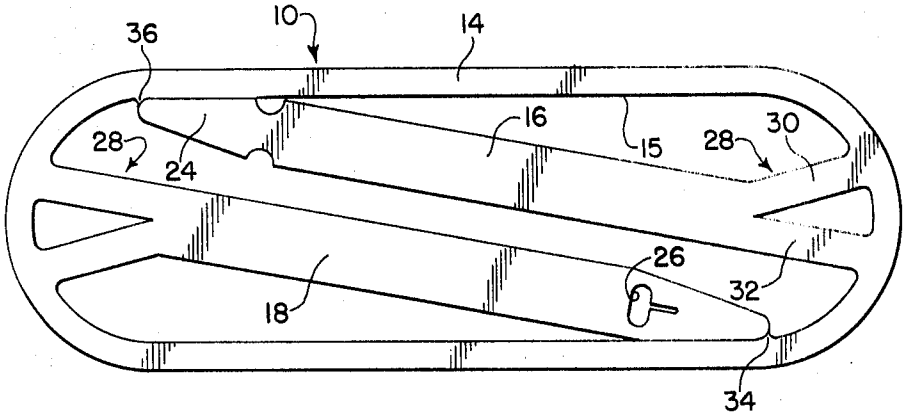


Fig. 3

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CONTAINER CARRIER

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention is concerned generally with a package or article carrier, and more particularly with a receptacle for holding and carrying paint cans or the like.

2. Description of the Prior Art

Heretofore, paint cans or other large containers have been carried by the use of metal bail elements connected to complementary attaching means affixed to the container. This construction has been found to be undesirable for a variety of reasons. For example, the commonly used bail is extremely uncomfortable to use by the person carrying it because of the tendency of the small diameter wire to "cut" into the hands of the user. The above-mentioned construction also necessitates additional operations on the container itself in placing a complementary attaching means near the rim of the container.

The present invention is directed to a container carrier made of plastic sheet material which includes an integral handle or bail element constructed to overcome the aforementioned prior art deficiencies.

SUMMARY OF THE INVENTION

It is an object of this invention to provide a unitary container carrier which includes an integral bail means.

It is another object of the invention to provide a container carrier which is adapted to high-speed manufacturing techniques and is easy and convenient for a user to handle.

It is still another object of this invention to provide a flexible carrier for single containers which can be efficiently formed from a continuous strip of thermoplastic material to provide a plurality of interconnected carriers which may be readily separated from one another prior to or during assembly.

The foregoing and other objects, features and advantages of the invention will be apparent from the following more particular description of a preferred embodiment thereof, as illustrated in the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of a container carrier embodying the present invention wherein the carrier is shown applied to a large container with the bail portions of the carrier completely connected and extending in an upward direction from the container;

FIG. 2 is an enlarged fragmentary perspective view of the attachment means between the two handle ends of the container carrier; and

FIG. 3 is a top plan view of the container carrier blank prior to assembly to a container.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the drawings, one embodiment of the invention will be described as applied to a paint can or the like, as shown in FIG. 1. Carrier **10** is formed of a flat sheet of plastic material (not shown) which is resilient, flexible and elastic. It is formed from blanking a continuous strip of sheet material into the form shown in FIG. 3. The blanking process forms an endless band **14** having handle ends **16** and **18** extending integral with the band and within the aperture of the same band. This inwardly extending relationship of the arm with the band is important in that a container carrier having a bail portion, can be constructed out of relatively small areas of the sheet material since the bail portion is blanked from the inner portion of the endless band, which would ordinarily be waste material.

Although polyethylene is a preferred example of a suitable carrier material which is quite resistant to tearing, other functionally similar materials would also be satisfactory. The configuration of the container carrier, in its rest position, enables it to be produced from a relatively small amount of material.

The container carrier **10** as shown in FIG. **3**, has a major and minor axis, and may be in the form of an ellipse or a flattened elliptical figure or any other curvilinear figure defined by an endless band.

The blanking process produces a pair of handle ends **16** and **18** extending inwardly from points in the vicinity of the major axis and along the inner periphery **15** of the endless band. The handle ends **16** and **18** are formed at an angle to the major axis of the endless band thereby allowing them to be axially spaced from one another and yet be confined wholly within the inner periphery of the endless band when at rest position. The handle ends **16** and **18** are integral with the endless band **14** and are connected to the inner periphery of the band by connecting portions **28**. FIG. **3** shows that the connecting portions **28** are of a generally V-shaped configuration having legs **30** and **32** emanating from the band **14** and the apex of the V-shape connecting the leg portions to the handle end portions. This V-shaped connecting portion will provide a means for distributing the load from the handle ends to the endless band. It is to be understood that other structural configurations may serve as a means for distributing a load and that the V-shaped configuration serves as a primary embodiment of the invention.

In use, as in FIG. **1**, the bands **16** and **18** are pivoted upwardly to form a generally U-shaped bail element **20** which has a length approximately double that of the length of one handle end. The two discrete handle end portions **16** and **18** are connected to one another by fastening means **22**. The use of this fastening means thus provides an effective unitary carrier structure including a relatively large bail element. The fastening means **22**, shown more clearly in FIG. **2**, is a preferred embodiment of the invention and consists of a tongue **24** and groove **26**. Upon extending the handle ends upwardly, the angular relationship of the ends to the major axis will tend to diminish, due to distortion of the material, and provide an interlocking, overlapping arrangement with one another. It can be seen that the tongue can readily be inserted within the groove and the normal holding stresses will force the tongue into the holding position in the groove and thus present an effective locking means.

The container carrier **10** can be most efficiently produced by stamping a series of similar blanks from a continuous strip of material (not shown). This carrier is therefore, adapted and designed to be produced on a large scale production line basis.

The container carriers **10** may be readily shipped, either as individual blanks or strips of partially connected blanks, and stored because the extension of the handle ends inwardly of the endless band will provide a structurally sound base for stacking one container carrier upon another. Frangible connections as at **36, 34** may be employed to maintain the handle ends **16, 18** respectively generally coplanar with the endless band **14** prior to assembly. The carrier then may be positioned on a container, such as paint can **12**, by stretching the minor axis of the endless band outwardly and forcing the major axis inwardly to conform to the cylindrical surface of the container below the enlarged bead or chime **38**. When thus assembled, the carrier snugly receives the complementary container in a container retaining position beneath the peripheral bead structure **38** of a paint can or the like. In this position, the handle ends **16, 18** will extend upwardly and can be easily positioned into their attaching configuration, as shown in FIG. **2**.

The container carrier, when in the position as shown in FIG. **1**, will provide a relatively soft and efficient bail means for handling a heavy container, which would otherwise produce an unusual strain on the hand of the individual carrying the container. Upon use of the container, e.g., removing the lid of the container, the fastening means can be easily disconnected when operations would require complete access to the top of the container. The bail means **20** could also be readily reassembled to use as an aid in pouring in a manner similar to existing bail means.

While the invention has particularly been shown and described with reference to a preferred embodiment thereof,

it will be understood by those skilled in the art that various changes in form and details may be made therein without departing from the spirit and scope of the invention or claims.

We claim:

1. A unitary container carrier of thermoplastic sheet material comprising an endless band, handle ends each being integrally connected to the endless band by a connecting portion, said endless band having major and minor axes and being adapted to receive a complementary container, said connecting portions attached to said endless band in the vicinity of the major axis thereof with said connecting portions and associated handle ends extending inwardly from the inner periphery of the endless band when the carrier is at rest position, said handle ends being axially spaced from one another and confined wholly within the inner periphery of the endless band, fastening means provided on the free extremities of the handle end to interconnect the handle ends together, whereby the endless band is configured to snugly engage and hold a complementary container while the handles are arranged to form a generally U-shaped bail when in use and form a compact planar blank when not in use.

2. A container carrier in accordance with claim 1, wherein the handle ends are positioned parallel to one another and at an angle to the major axis of the endless band.

3. A container carrier in accordance with claim 1, wherein the attaching means comprises a tongue on one handle end extremity and a groove on the other handle end extremity, said tongue and groove serving to interconnect the handle ends.

4. A container carrier in accordance with claim 1, wherein the connecting portions includes means for distributing the load from the handle ends to the endless band.

5. A container carrier in accordance with claim 4, wherein the means for distributing the load consists of two leg portions in a substantially V-shaped configuration emanating from the handle ends to the endless band.