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(54) **PLASTICS CONTAINERS.**

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EP 0 464 097 B1

Description

This invention relates to containers made of plastics material, hereinafter referred to as plastics containers. The invention is particularly concerned with plastics containers for holding paint, but containers according to the invention may be used for any other purpose that may be desired.

It is proposed to form the open top of such a container by way of a separately formed shroud secured around the top of the container body. Such a shroud can serve various purposes, for example to provide a sealing surface for a lid of the container, which makes a plug fit in the shroud. However, when the container is to be provided with a carrying handle, it may be disadvantageous to mount the handle by connecting it only to the said shroud, because of problems which will then arise in connecting the shroud to the container body securely enough to reliably support the weight of the container body and its contents in all circumstances, particularly under sudden strain. One solution to this problem, see e.g. W.O. 87/07578, is for the handle to be connected to the container body by way of holes extending through double thickness wall regions defined by the shroud and the container body. However, a problem with fixing the handle to the container body, with or without a shroud, is that the contents of the container can potentially leak via the handle mounting holes.

According to the present invention therefore, there is provided a plastics liquid container having a carrying handle mounted thereto at two locations by way of holes extending through the body of the container, and having a lid arranged to make a sealing engagement inside the mouth of the container, characterised in that said lid makes sealing engagement with the container at a location between said holes and the main part of the container body in which the contents of the container are located in use, such that when said lid is in sealing engagement with said container body no flow path exists between said holes and the main part of said container body, and including means separate from the said lid seal for securing the lid, in its closed condition, said securing means comprising interengaging means provided on the mouth of the container and the lid respectively and being arranged above said sealing means. By means of this arrangement no leakage of the container contents can occur through the said holes when the lid is in place, and also there can be no inward leakage of air to the contents.

Preferably the means for securing the lid in its closed condition, separate from the lid seal, may conveniently be located outwardly of, i.e. above, the said holes.

In a preferred embodiment the container may have an open top defined by a separately formed shroud secured around the top of the container body, the container body and the shroud together providing wall regions of double thickness at least at the handle mounting locations.

Preferably the handle is provided with mounting lugs which extend into the said holes from the outside.

If an air-tight seal is required, for example when the container is for solvent-borne paints, the lid seal may be provided by means of a flowed-in gasket of polymeric material on either the lid or the container body in the sealing zone therebetween, which gasket is different in material or composition from the said lid or body and is, in its working condition, softer than the material of the latter; further details of this sealing concept may be obtained from our British Patent Application No. 8820393.0.

An embodiment of the invention will now be described by way of example and with reference to the accompanying drawings, in which:-

Figure 1 is a side elevation view of a plastics container according to the invention, particularly for containing paint;

Figure 2 is a top plan view of the container; and Figure 3 is a vertical cross-sectional view on the line III-III of Figure 2, including an enlarged view.

Referring to the drawings, the container basically comprises a generally square-section open-topped body 1 provided with a reinforcing shroud 2 around its top, a pivotally mounted handle 3, and a lid 4. Figure 1 shows the handle 3 in full lines in its stowed position, and in ghost lines in a partially raised position. Referring now particularly to Figure 3, the body 1 of the container has a radially inset portion 6 around its top, arranged to provide an inwardly facing sealing surface 7 for the lid 4 and terminating in an upwardly directed annular wall portion 8 which provides a mounting for the shroud 2.

The shroud is received in the annular space provided by the inset portion 6 of the container body, and includes a central vertical wall portion 9 which engages face to face with the wall 8 of the body to form a double thickness wall and is formed with an inwardly facing annular hook portion 10 which engages under the bottom edge of the body wall 8 to securely attach the shroud to the body. The shroud further includes a lower annular wall portion 11 which fits flush with the top of the side wall 12 of the body 1 to define a substantially continuous outer surface therewith, and an upper annular wall portion 13 of inverted V-shape which terminates in an inwardly directed lid securing flange 14.

The handle is formed with an integral, inwardly facing, mounting lug 15 at each end thereof, which mounting lugs are rotatably received in holes 16 extending through the double thickness wall defined by the wall portions 8 and 9 of the body and shroud respectively, barbs 15a being provided on the inner ends of the lugs to prevent disengagement. Thus, the handle is mounted to a double thickness wall defined in combination by the container body 1 and the shroud 2.

The lid 4 of the container comprises a substantially flat top 17 formed with a depending annular side wall 18. An outwardly and upwardly projecting annular flange 19 of the lid is formed with an annular recess 20, which snaps over the lid securing flange 14 of the shroud to secure the lid in its closed position. The lid seal is provided by way of a flowed-in gasket 21 provided all around the outside surface of the lower region of the lid side wall 18. An outwardly extending annular shoulder 22 is formed on the wall 18 to define the upward termination of the flowed-in gasket 21, the effect of which is that at its top adjacent the shoulder 22, and as clearly shown in the enlarged view, the outwardly facing sealing surface of the gasket is of arcuate shape so as make a particularly efficient seal with a similarly shaped inwardly facing sealing surface of the shroud wall 9. To secure the lid in its closed position it is simply pushed into the mouth of the container until the lid holding flange 14 on the shroud springs into the recess 20 in the lid, while at the same time the sealing gasket 21 fits into the annular sealing surface defined by the shroud.

It will be noted that the seal between the lid and the container body is located inwardly of, i.e. below, the holes 17 provided in the body to mount the handle, thus ensuring that the contents of the container cannot leak out through the holes and that air cannot gain access to the contents by the same route.

A brush wiping bar 23 extends across the open mouth of the container body, being spot welded at its opposite ends to a shoulder 24 on the inset portion of the body, below the lid seal.

Claims

1. A plastics liquid container having a carrying handle (3) mounted thereto at two locations by way of holes (16) extending through the body (1) of the container, and having a lid (4) arranged to make a sealing engagement inside the mouth of the container, characterised in that said lid (4) makes sealing engagement with the container at a location between said holes (16) and the main part of the container body (1) in which the contents of the container

are located in use, such that when said lid (4) is in sealing engagement with said container body (1) no flow path exists between said holes (16) and the main part of said container body (1), and including means (14) separate from the said lid seal for securing the lid (4) in its closed condition, said securing means (14) comprising interengaging means provided on the mouth of the container and the lid (4) respectively and being arranged above said sealing means.

2. A container as claimed in claim 1, characterised by said securing means (14) being located above the said holes (16).
3. A container as claimed in claim 1 or 2, characterised in that the container has an open top which is defined by a separately formed shroud (2) secured around the top of the container body (1), the container body (1) and the shroud (2) together providing wall regions of double thickness at least at the said handle mounting locations.
4. A container as claimed in claim 1, 2 or 3, characterised in that the said handle (3) is provided with mounting lugs (15) which extend into the said holes (16) from the outside.
5. A container as claimed in claim 4, characterised in that the said handle (3) is pivotally mounted by way of two said mounting lugs (15) arranged on a common axis.
6. A container as claimed in any of the claims 3 to 5 characterised in that the container body (1) is formed with an outwardly facing inset shoulder (6) around its top which receives the said shroud (2).
7. A container as claimed in any of the claims 3 to 6, characterised in that the outside wall (11) of the shroud (2) is flush with the outside wall (12) of the container body (1).
8. A container as claimed in claim 7, characterised in that the handle (3) has a stowed position in which an outside surface thereof is flush with the outside wall (11) of the shroud (2).
9. A container as claimed in claim 3 or in any of claims 4 to 8 when dependent upon claim 3 wherein the lid makes securing engagement with the said shroud (2).

10. A container as claimed in claim 9, wherein the said securing engagement is by means of an inwardly projecting annular flange (14) on the shroud (2) which snaps into an annular recess (20) in the lid (4).

Patentansprüche

1. Kunststoff-Flüssigkeitsbehälter mit einem Traggriff (3), der an ihm an zwei Stellen mittels den Körper (1) des Behälters durchsetzender Löcher (16) angebracht ist, und mit einem Deckel (4), der zur Bildung eines Dichteingriffs innerhalb des Munds des Behälters angeordnet ist,
dadurch gekennzeichnet, daß der Deckel (4) einen Dichteingriff mit dem Behälter an einer Stelle zwischen den Löchern (16) und dem Hauptteil des Behälterkörpers (1), in dem sich die Inhalte des Behälters bei Verwendung befinden, bildet, so daß, wenn sich der Deckel (4) in Dichteingriff mit dem Behälterkörper (1) befindet, kein Fließweg zwischen den Löchern (16) und dem Hauptteil des Behälterkörpers (1) vorhanden ist, und der von der Deckeldichtung separate Mittel (14) zum Sichern des Deckels (4) in seinem geschlossenen Zustand aufweist, wobei das Sicherungsmittel (14) ineinander greifende Mittel aufweist, die an dem Mund des Behälters bzw. dem Deckel (4) vorgesehen und über dem Dichtungsmittel angeordnet sind.
2. Behälter nach Anspruch 1, **dadurch gekennzeichnet**, daß das Sicherungsmittel (14) über den Löchern (16) angeordnet ist.
3. Behälter nach Anspruch 1 oder 2, **dadurch gekennzeichnet**, daß der Behälter eine offene Oberseite hat, die durch eine um die Oberseite des Behälterkörpers (1) herum gesicherte, separat gebildete Abdeckung (2) festgelegt ist, wobei der Behälterkörper (1) und die Abdeckung (2) zusammen wenigstens an den Griffanbringungsstellen Wandbereiche doppelter Dicke vorsehen.
4. Behälter nach Anspruch 1, 2 oder 3, **dadurch gekennzeichnet**, daß der Griff (3) mit Anbringungsösen (15) versehen ist, die von außen in die Löcher (16) ragen.
5. Behälter nach Anspruch 4, **dadurch gekennzeichnet**, daß der Griff (3) mittels zweier auf einer gemeinsamen Achse angeordneter Anbringungsösen (15) schwenkbar angebracht ist.

6. Behälter nach einem der Ansprüche 3 bis 5, **dadurch gekennzeichnet**, daß der Behälterkörper (1) um seine Oberseite herum mit einer nach außen weisenden Einsetzschulter (6) gebildet ist, die die Abdeckung (2) aufnimmt.
7. Behälter nach einem der Ansprüche 3 bis 6, **dadurch gekennzeichnet**, daß die Außenwand (11) der Abdeckung (2) mit der Außenwand (12) des Behälterkörpers (1) fluchtet.
8. Behälter nach Anspruch 7, **dadurch gekennzeichnet**, daß der Griff (3) eine untergebrachte Stellung hat, in der seine Außenfläche mit der Außenwand (11) der Abdeckung (2) fluchtet.
9. Behälter nach Anspruch 3 oder einem der Ansprüche 4 bis 8, sofern von Anspruch 3 abhängig, in dem der Deckel einen Sicherungseingriff mit der Abdeckung (2) bildet.
10. Behälter nach Anspruch 9, in dem der Sicherungseingriff mittels eines einwärts vorstehenden Ringflanschs (14) an der Abdeckung (2) gebildet ist, der in eine Ringausnehmung (20) in dem Deckel (4) schnappt.

Revendications

1. Conteneur de liquide en matière plastique comportant une poignée de transport (3) disposée sur ledit conteneur au niveau de deux emplacements au moyen d'orifices (16) s'étendant à travers le corps (1) du conteneur et comportant un couvercle (4) adapté pour s'engager de façon étanche dans l'ouverture du conteneur, caractérisé en ce que ledit couvercle (4) assure une étanchéité avec le conteneur au niveau d'un emplacement situé entre lesdits orifices (16) et la partie restante du corps de conteneur (1) dans lequel les contenus du conteneur sont situés lors de l'utilisation, de telle sorte que lorsque ledit couvercle (4) coopère de façon étanche avec ledit corps de conteneur (1) aucune voie d'écoulement n'existe entre les orifices (16) et la partie restante dudit corps de conteneur (1), et en ce qu'il comporte des moyens (14) séparés dudit couvercle pour fixer le couvercle (4) dans sa position fermée, lesdits moyens de fixation (14) comportant des moyens d'accouplement prévus respectivement sur l'ouverture du conteneur et le couvercle (4) et disposés au dessus des moyens d'étanchéité.
2. Conteneur selon la revendication 1, caractérisé en ce que les moyens de fixation (14) sont disposés au dessus desdits orifices (16).

3. Conteneur selon l'une des revendications 1 et 2, caractérisé en ce que le conteneur comporte une partie supérieure ouverte qui est délimitée par une enveloppe de protection (2) formée de façon séparée et fixée autour de la partie supérieure du corps de conteneur (1), le corps de conteneur (1) et l'enveloppe de protection (2) étant tous deux munis de zones formant parois à double épaisseur au moins au niveau desdits emplacements de montage des poignées. 5
10
4. Conteneur selon l'une quelconque des revendications 1,2 ou 3, caractérisé en ce que ladite poignée (3) est munie de saillies (15) formant support s'étendant dans lesdits orifices (16) à partir de l'extérieur. 15
5. Conteneur selon la revendication 4, caractérisé en ce que ladite poignée (3) est montée formant façon pivotante au moyen de deux desdites saillies formant support (15) disposées sur un axe commun. 20
6. Conteneur selon l'une quelconque des revendications 3 à 5, caractérisé en ce que le corps de conteneur (1) comporte un épaulement d'emboîtement tourné vers l'extérieur autour de sa partie supérieure, qui reçoit ladite enveloppe de protection (2). 25
30
7. Conteneur selon l'une quelconque des revendications 3 à 6, caractérisé en ce que la paroi externe (11) de l'enveloppe de protection (2) affleure la paroi externe (12) du corps de conteneur (1). 35
8. Conteneur selon la revendication 7, caractérisé en ce que la poignée (3) comporte une position repliée dans laquelle sa surface extérieure affleure la paroi externe (11) de l'enveloppe de protection (2). 40
9. Conteneur selon la revendication 3 ou selon l'une quelconque des revendications 4 à 8 dépendantes de la revendication 3, dans lequel le couvercle assure la fixation de ladite enveloppe de protection (2). 45
10. Conteneur selon la revendication 9, dans lequel ladite fixation est assurée au moyen d'une bride annulaire (14) faisant saillie vers l'intérieur disposée sur l'enveloppe de protection (2) qui s'encliquette dans un logement annulaire (20) du couvercle (4). 50
55

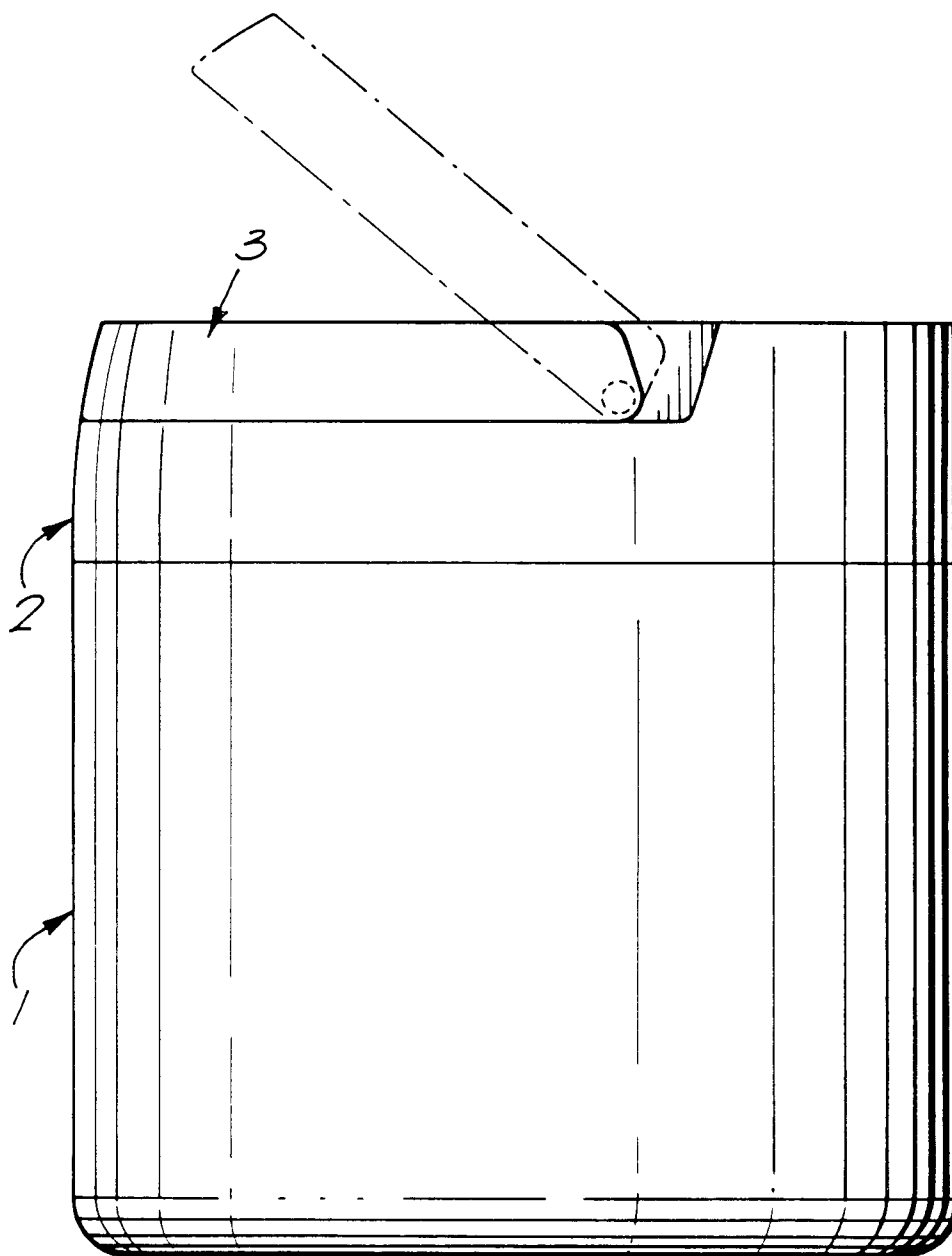


FIG. 1.

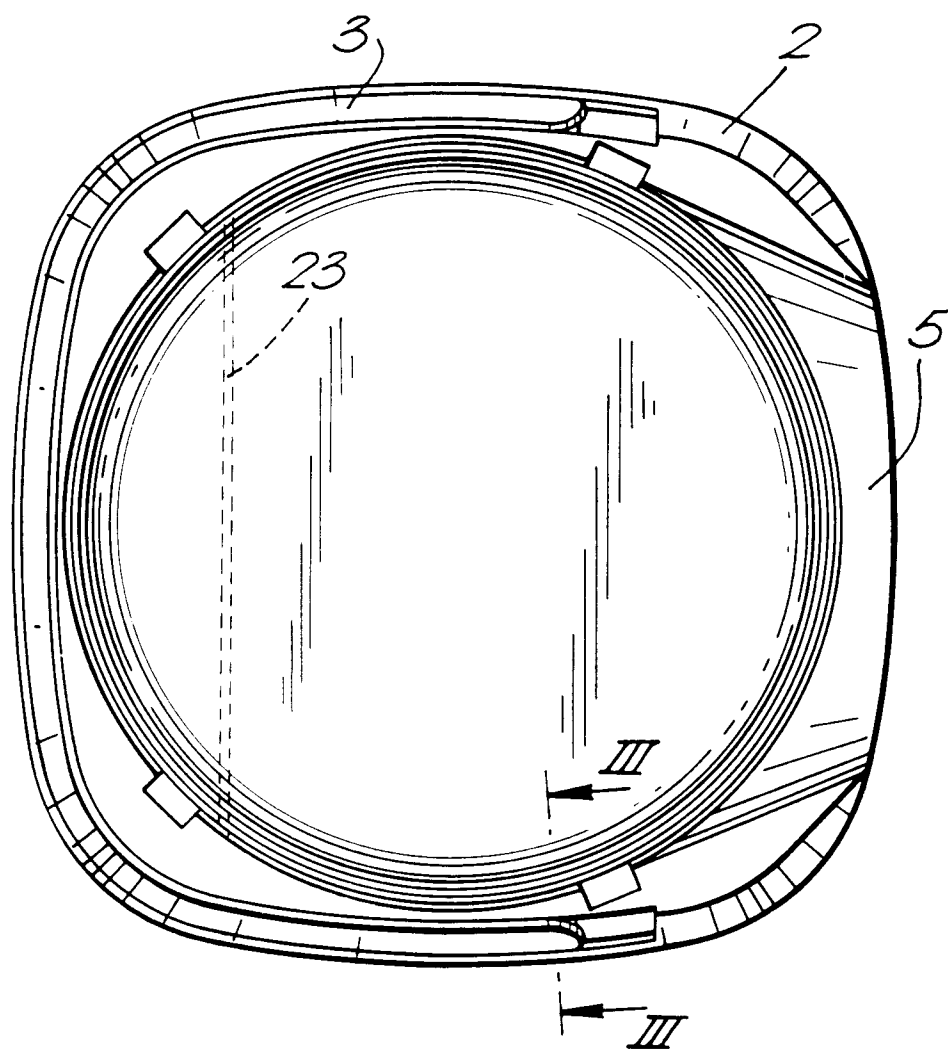


FIG. 2.

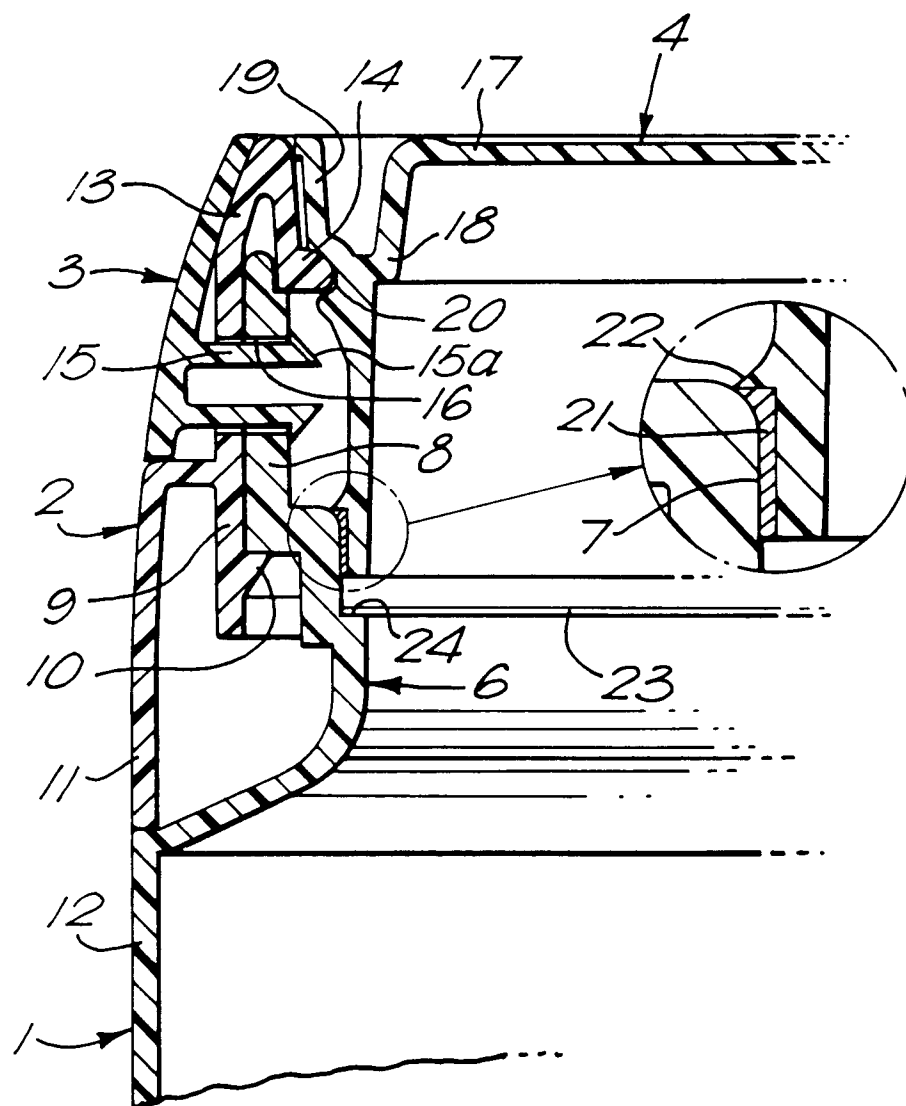


FIG. 3.