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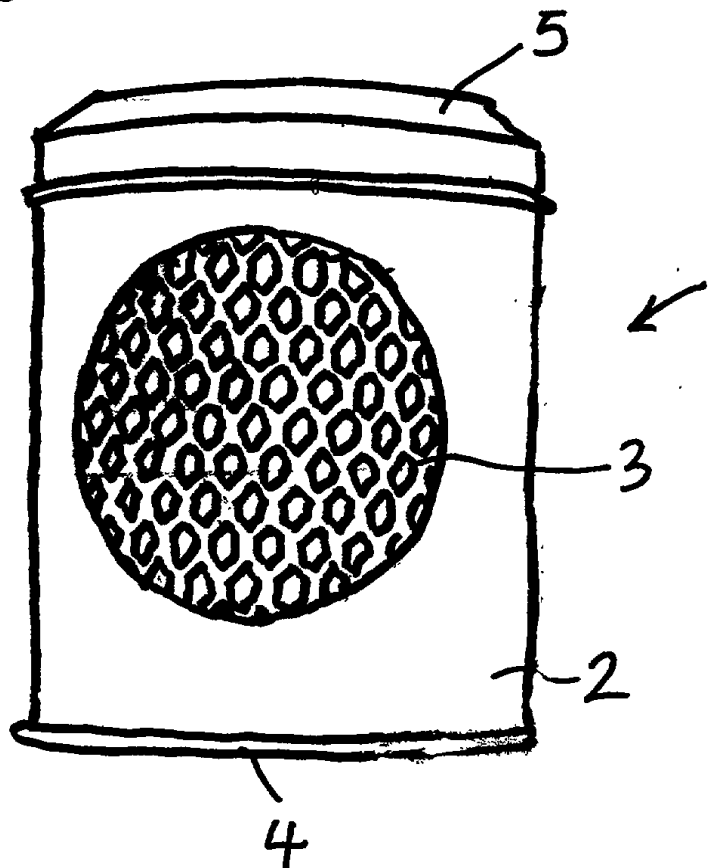
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(54) **Container with mesh window**

(57) A hollow container (1) has a wall (2) with an opening formed therein. A mesh window (12) located in the opening with its periphery seamed to the wall of the container surrounding the opening.

Fig 1



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Description

[0001] The invention relates to a container with a mesh window and, in particular, to a container with a mesh window seamed to a wall of the container. The invention also provides a method for making a container.

[0002] According to a first aspect of the invention, there is provided a hollow container having a wall with an opening formed therein; a mesh window located in the opening with its periphery seamed to the wall of the container surrounding the opening.

[0003] According to a second aspect of the invention, there is provided a method of making a hollow container having a wall with a mesh window therein, comprising the steps of: forming an opening in a sheet of material; the opening being formed with a surrounding flange comprising a first portion extending from the sheet in the direction generally perpendicular thereto and a second portion extending from the edge of the first portion in the direction generally parallel to the sheet and towards the centre of the opening to provide an annular ledge; locating a mesh window in the opening with its periphery overlying the annular ledge; and folding the material of the flange to grip the periphery of the window thereby seaming the window to the sheet of material.

[0004] Embodiments of the invention are described below, with reference to the accompanying drawings, in which:

Figure 1 is a front view of a container having a mesh window;

Figure 2 is a front view of another container having a mesh window;

Figure 3 is a sectional view through a sheet of material after a first operation to form an opening therein;

Figure 4 is a plan view of the sheet of material;

Figure 5 is a plan view of a mesh window;

Figure 6 is a sectional view through the sheet of material after a second operation thereon;

Figure 7 is a sectional view through the sheet of material after a third operation thereon; and

Figure 8 is a plan view of the sheet of material.

[0005] The method as described below for making a container with a mesh window in a wall thereof, is one where the window is formed in a pressing operation whilst the wall is in the form of a generally flat sheet. The wall is subsequently formed into a cylinder and welded or seamed to form a cylindrical side wall. At least one end wall is then seamed to the cylindrical wall to form a container.

[0006] Referring to Figures 1 and 2, metal containers 1 are shown having a cylindrical side wall 2 and a mesh window 3. The container of Figure 1 has a bottom end wall 4 seamed onto the wall 2 and is provided with a push on lid 5. The container of Figure 2 has a seamed top end wall 6 as well as a seamed bottom end wall 4.

[0007] A method of making the side wall 2 is described below with references to Figures 3 to 8.

[0008] As shown in Figures 1 and 2, a plain sheet of metal 7 is formed with a circular opening 8 in a first operation. The opening has a diameter D1 at this stage and is formed with a surrounding flange 9 comprising a first portion 10 which extends from the sheet 7 in the direction generally perpendicular thereto and a second portion 11 extending from the edge of the first portion in the direction generally parallel to the sheet 7 and back towards the centre of the opening. The second portion of the flange 9 provides an annular ledge 11.

[0009] In a second operation (see Figure 6), the flange is reformed to a S profile and a mesh window 12 is located in the opening with its periphery overlying the annular ledge 11. The diameter of the opening is D2 at this stage where D2 is slightly less than D1.

[0010] In a third operation (see Figures 7 and 8), the material of the flange is folded to grip the periphery of the mesh window thereby seaming the window to the sheet 7. At this stage, the opening has a diameter D3 which is slightly less than D2. It will be noticed that the diameter of the opening is twice reduced during the fixing of the window and in the final position is substantially equal to the inner diameter of the ledge portion 11 of the flange.

[0011] The sheet 7 is subsequently formed into a cylinder to provide the cylindrical side wall 2 of a container as shown in Figures 1 and 2.

[0012] The sheet 7 is preferably made of tinplate steel. The mesh window 12 is also preferably made of steel but may also be made of other materials having a degree of flexibility such as plastics, cardboard or even wood.

[0013] Whilst the window is shown here as being located in the side wall of a container, it can also be formed in an end wall or a lid.

[0014] The opening may have a circular, oval or other shaped periphery, so long as it does not have any sharp corners which would preclude the formation of the surrounding flange.

Claims

1. A hollow container having a wall with an opening formed therein;
a mesh window located in the opening with its periphery seamed to the wall of the container surrounding the opening.
2. A hollow container as claimed in Claim 1, wherein the opening is circular.
3. A hollow container as claimed in Claim 1, wherein the opening is oval.
4. A hollow container as claimed in any one of Claims

1 to 3, wherein the container and the window are both made of metal.

5. A method of making a hollow container having a wall with a mesh window therein, comprising the steps of: 5

forming an opening in a sheet of material; the opening being formed with a surrounding flange comprising a first portion extending from the sheet in the direction generally perpendicular thereto and a second portion extending from the edge of the first portion in the direction generally parallel to the sheet and towards the centre of the opening to provide an annular ledge; 10 15

locating a mesh window in the opening with its periphery overlying the annular ledge; and folding the material of the flange to grip the periphery of the window thereby seaming the window to the sheet of material. 20

6. A method as claimed in Claim 5, further comprising the subsequent steps of forming the wall into a cylindrical shape and fitting at least one end wall thereto by a seaming operation to form a container. 25

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Fig 1

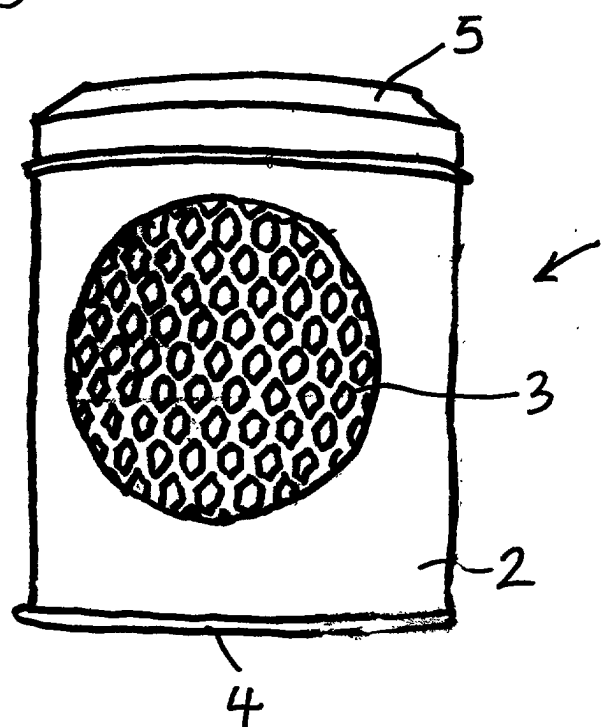


Fig 2

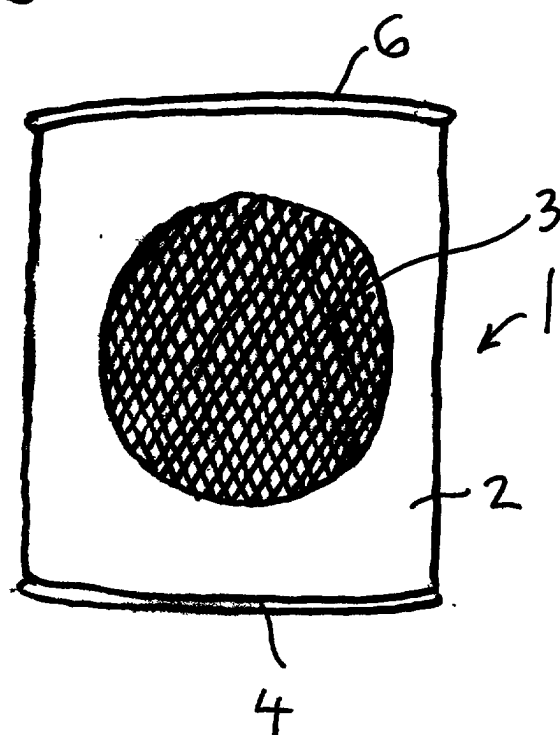


Fig 3

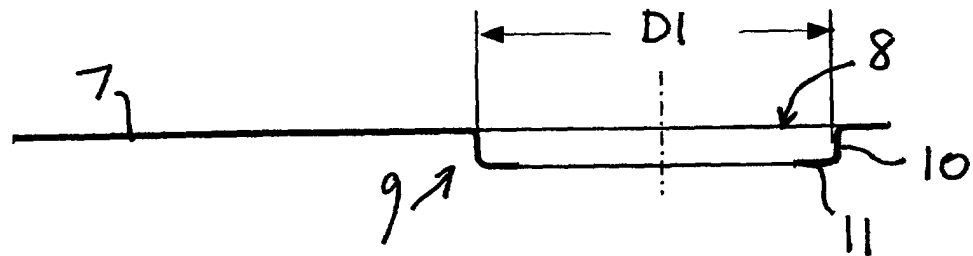


Fig 4

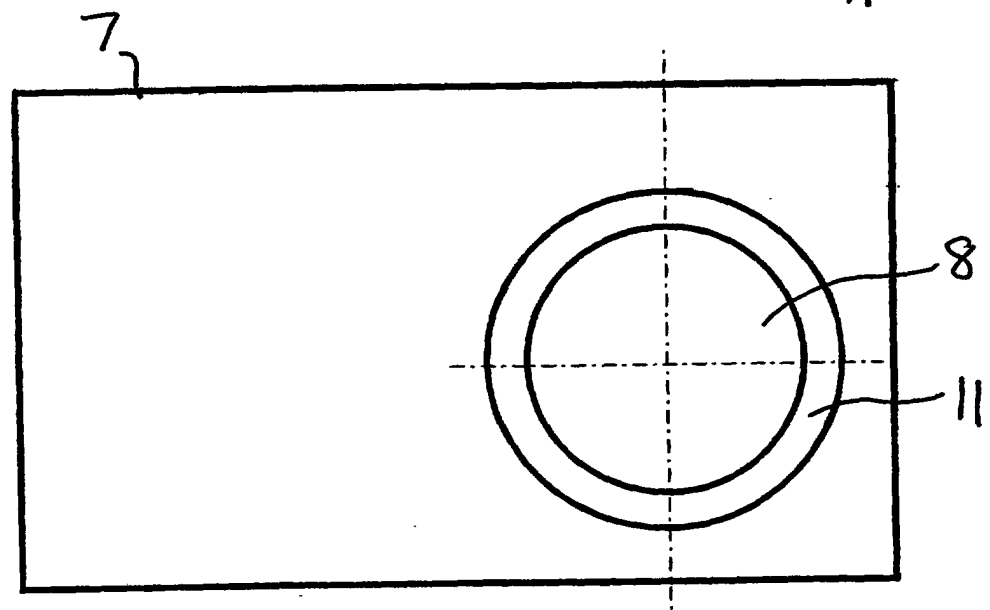


Fig 5

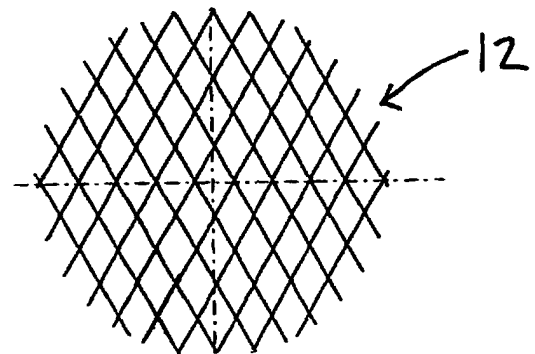


Fig 6

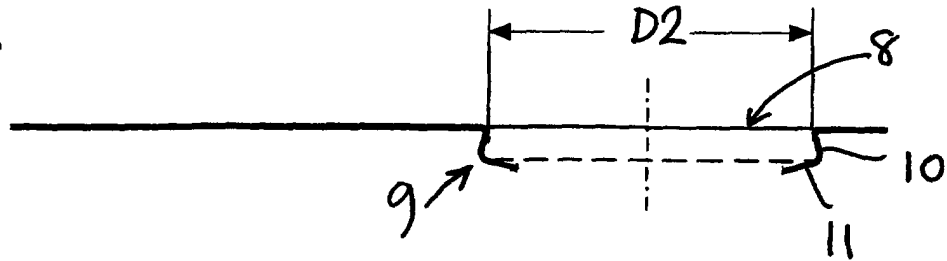


Fig 7

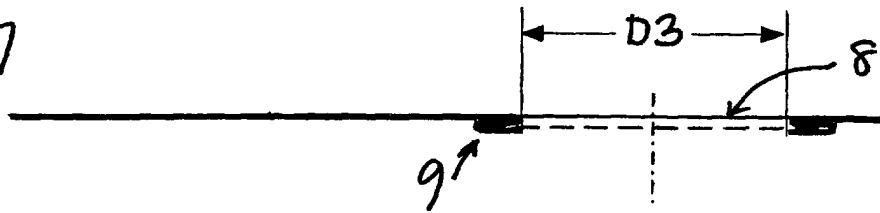
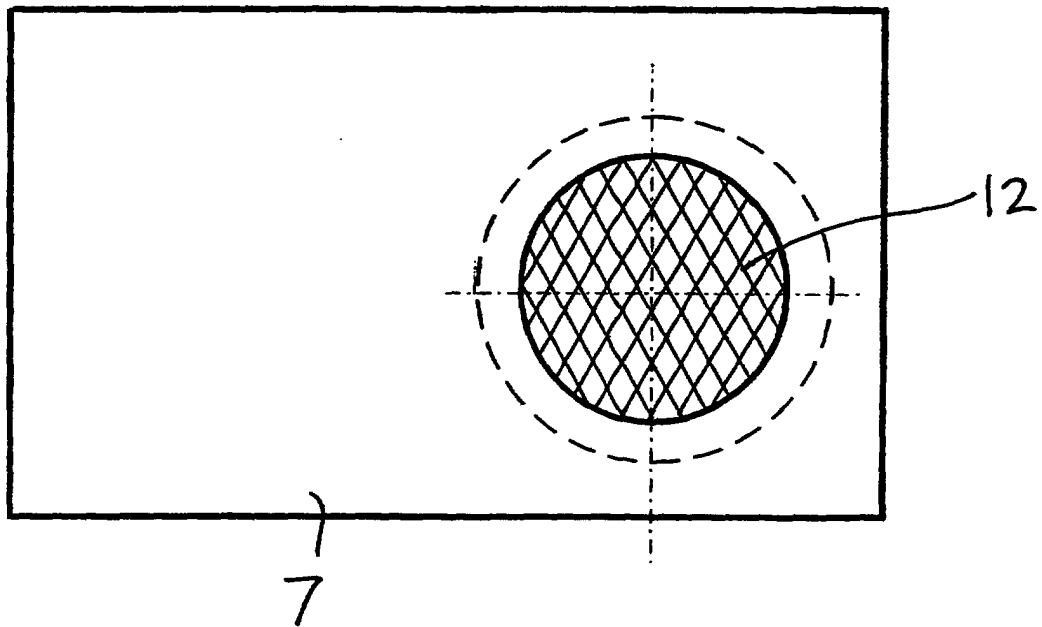


Fig 8





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EUROPEAN SEARCH REPORT

Application Number
EP 00 30 9384

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
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A	US 3 238 922 A (TREXLER, P.C.) 8 March 1966 (1966-03-08) * figure 2 *	3	
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The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.7) B65D A01K
Place of search THE HAGUE		Date of completion of the search 21 March 2001	Examiner Wennborg, J
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 00 30 9384

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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