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(11)

**EP 1 063 628 A2**

(12)

## EUROPEAN PATENT APPLICATION

(43) Date of publication:  
**27.12.2000 Bulletin 2000/52**

(51) Int Cl.7: **G09F 7/00, G09F 19/12**

(21) Application number: **00305261.0**

(22) Date of filing: **21.06.2000**

(84) Designated Contracting States:  
**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU  
MC NL PT SE**  
Designated Extension States:  
**AL LT LV MK RO SI**

(30) Priority: **24.06.1999 GB 9914768**  
**10.11.1999 GB 9926608**

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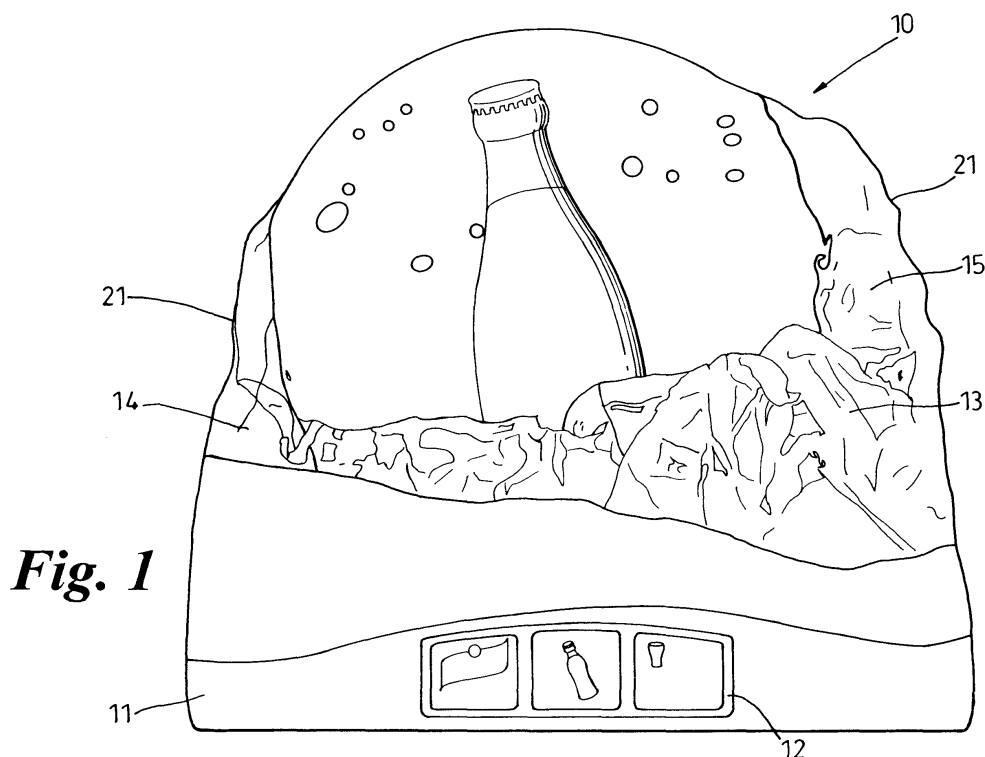
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### (54) Display

(57) The invention provides a method of manufacturing a display, particularly for chilled products, which includes an improved simulation of ice blocks.

The method comprises manufacturing a display (10) by creating a plurality of blocks (13, 14) of trans-

parent plastics material, characterised by coating at least some of these blocks (13, 14) individually with a transparent film of material, assembling said coated blocks (13, 14) together within a pre-formed and at least partly transparent housing assembly (16, 17) and sealing the blocks (13, 14) within said assembly.



**Fig. 1**

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## Description

[0001] This invention relates to a display suitable for advertising one or more products. It has particular application to displays for chilled products, such as chilled beverages, where it is desired to convey to a purchaser/potential purchaser that one or more brands of cool product are available to be dispensed. Such displays are frequently mounted on counter-tops at or adjacent a dispense point.

[0002] In US-A-5 379 539 is disclosed an illuminated sign whose characters appear like blocks of chiselled ice. The blocks may be vacuum formed from a sheet of plastics material which sheet is attached at its edges to a housing containing a light source for the display.

[0003] Whilst the illustration or simulation of ice in various forms is, therefore, known in relation to displays for chilled beverages, the image of the ice is often unconvincing. It is an object of the invention to provide a display which conveys a visual image of blocks of ice having a high degree of similarity to ice itself.

[0004] According to one aspect of the invention we provide a method of manufacturing a display comprising creating a plurality of blocks of transparent plastics material, characterised by coating at least some of these blocks individually with a transparent film of material, assembling said blocks together within a pre-formed and at least partly transparent housing assembly, and sealing the blocks within said assembly.

[0005] In another aspect of the invention there is provided a display comprising a plurality of blocks of transparent material, characterised in that at least some of the blocks have a coating of a transparent film and the blocks are assembled and sealed within a pre-formed and at least partly transparent housing assembly.

[0006] The blocks may be cast in moulds using e.g. a castable, acrylic, the constituents of which are methyl methacrylate monomer and methyl methacrylate polymer.

[0007] There may be a number of differently configured moulds shaped to give the impression of differently shaped irregular blocks of ice. The moulds may be shaped so as to provide a number of blocks which together form an array with at least some of the blocks adjoining one another (but separated by the applied film).

[0008] The transparent film may be a stretchwrap or shrinkwrap film such that the blocks may be loosely wrapped in film which is then heated, e.g. by warm air, so that it shrinks substantially around a block. The film thickness may be less than 100 microns. The film may be of a suitable plastics material, e.g. low density polyethylene material.

[0009] Alternatively the transparent film may be applied to the individual blocks by spraying or painting. The spray or paint may include a solvent which evaporates following application. The average film thickness may again be less than 100 microns.

[0010] The pre-formed housing assembly may comprise two or more components. One or more of these components may carry a brand or logo. One or more of the components may be shaped in its interior to receive the coated blocks in a predetermined pattern, such that the array of blocks is identically replicated for all such displays. One or more of the components may be vacuum formed from a plastic sheet. The sheet may be transparent. The pre-formed housing assembly is typically bonded together so that a seal is formed around a portion of the perimeter leaving an opening by which the coated blocks may be placed within the assembly and located in their predetermined pattern.

[0011] Castable acrylic may then be poured into the opening and the display allowed to set.

[0012] The castable acrylic may seal the opening and it may also act to hold the blocks in fixed position within the display. The assembled display may then be subject to heat treatment, e.g. in an autoclave, to bond the blocks, the film and the housing assembly together into a robust solid plastic unit.

[0013] The display may have a base carrying illumination means which is used to light the "ice" and any brand carried within the assembly. The illumination means may also illuminate window panels carried in the base of the display.

[0014] One embodiment of the invention will now be described, by way of example only, with reference to the accompanying drawings in which:

Figure 1 shows a front view of a finished display in accordance with the invention;

Figure 2 shows pre-formed components of a housing assembly in accordance with the invention, and Figure 3 shows two cast blocks of transparent plastic material as used in accordance with the invention.

[0015] The assembled display 10 is shown in front view in Figure 1. Its base portion 11 carries a display window 12 with panels illuminated from the interior of the display. The panels may carry, for example, brand name or logo advertising. The illumination means (not shown) also shines upwardly to illuminate simulated blocks of melting ice 13, 14 visible through the transparent upper front portion 15 of the display 10 and through which a branded product may also be advertised.

[0016] To create the display 10, a number of blocks of transparent acrylic, such as those illustrated in Figure 3, are cast into different predetermined shapes. These are then each wrapped individually in transparent low density polyethylene 25-015 FJB bags (supplied by Ecopac (UK) Limited), which are heat shrunk onto their respective block using a warm air gun. The film is 60 microns thick.

[0017] Alternatively the blocks are each sprayed or painted individually using a solvent-based transparent liquid which dries to form a film around the individual

block.

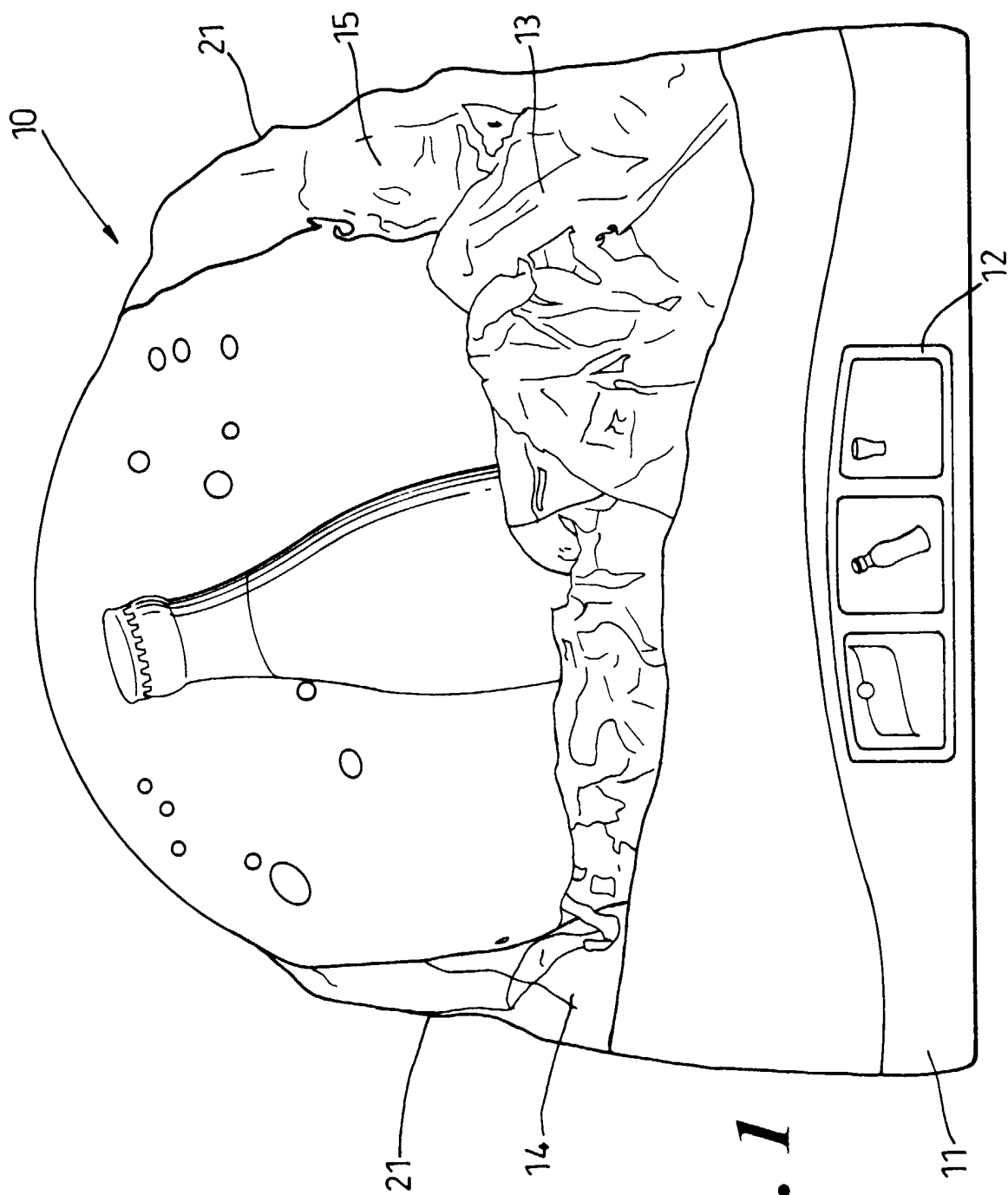
**[0018]** A housing assembly is created by separately vacuum-forming transparent cast acrylic sheeting into respective front 16 and rear 17 components (see Figure 2). Branding is printed onto 17 before vacuum forming. Both front 16 and rear 17 components are formed with internal indentations 18, 19 which permit the blocks 13, 14 etc. to be located in a predetermined manner to present an array of "ice" blocks. The exterior of the front 16 component is also shaped to provide a smoothed but lumpy surface 21 adjacent the inserted "ice" blocks 13, 14 etc.

**[0019]** The ultimately upper portions of the housing assembly (indicated by arrow X) are then bonded together adjacent their edges and along the sides with the ultimate base portion left open. The inverted housing assembly is then placed in a jig.

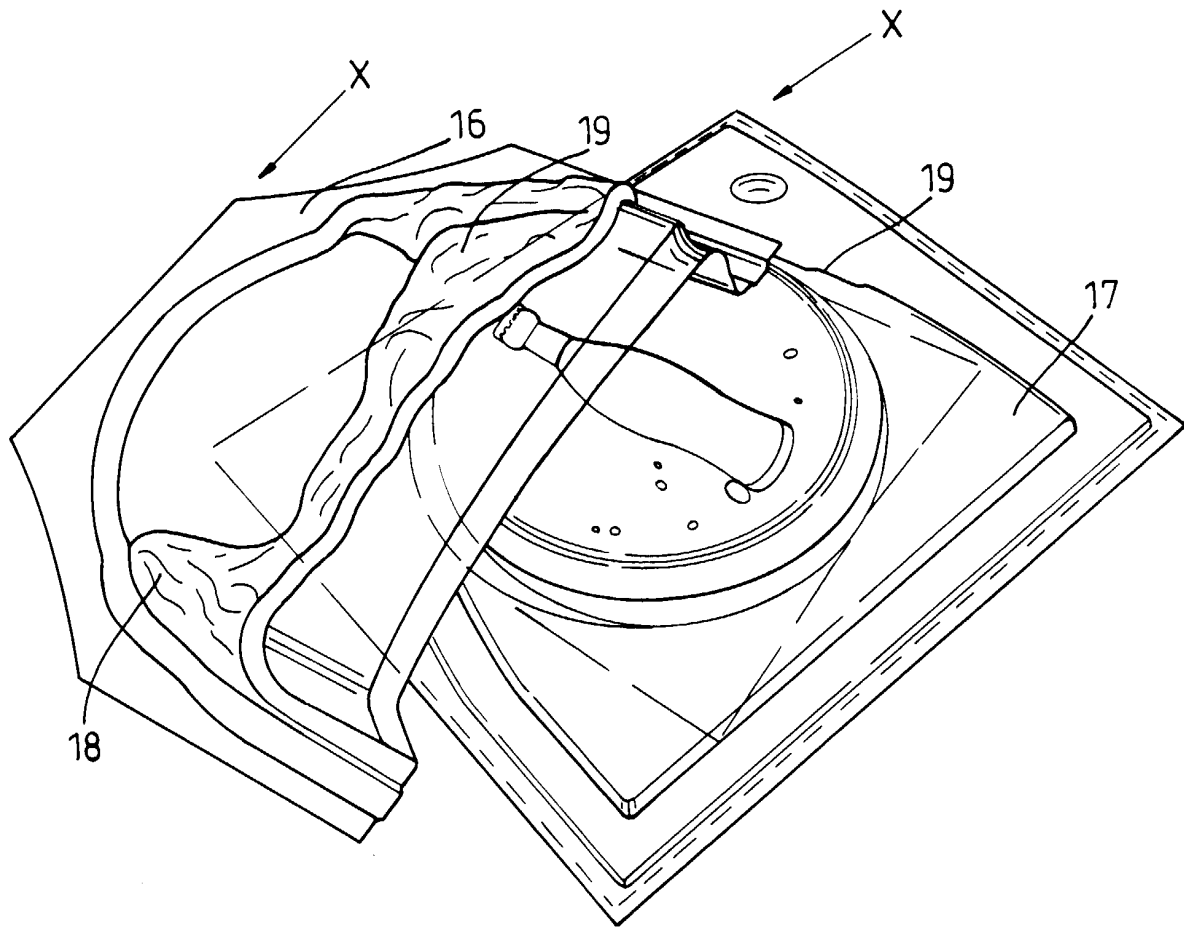
**[0020]** The individual wrapped or coated "ice" blocks are then placed, one at a time, into predetermined positions within the housing assembly, fitting snugly into the indentations 18, 19. Liquid transparent acrylic is then poured into the upper opening and runs around the blocks. The complete assembly is placed in an autoclave to allow the castable acrylic to fully cure. The upper portion of display 10 is then machined to the final lens size and display 10 is polished to a smooth finish.

## Claims

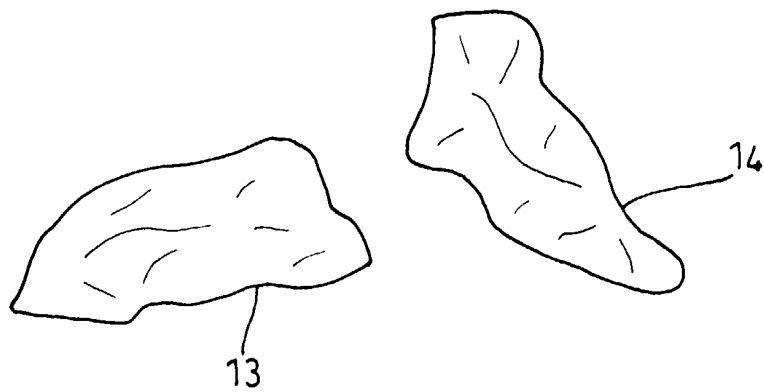
1. A method of manufacturing a display (10) comprising creating a plurality of blocks (13, 14) of transparent plastics material, characterised by coating at least some of these blocks (13, 14) individually with a transparent film of material, assembling said coated blocks (13, 14) together within a pre-formed and at least partly transparent housing assembly (16, 17) and sealing the blocks (13, 14) within said assembly.
2. A method according to Claim 1, characterised in that the blocks (13, 14) are coated by wrapping with a transparent film of plastics material.
3. A method as claimed in Claim 2, characterised in that the film used is stretchwrap or shrinkwrap.
4. A method as claimed in Claim 1, characterised in that the blocks (13, 14) are coated by spraying or painting.
5. A method as claimed in any preceding claim, characterised in that said blocks (13, 14) are made in a number of differently configured moulds shaped to give the impression of differently shaped irregular blocks of ice.
6. A method as claimed in Claim 5, characterised in that the moulds are shaped so as to provide a number of blocks (13, 14) which together form an array within the housing assembly (16, 17) with at least some of the blocks (13, 14) adjoining one another (but separated by transparent film).
7. A method as claimed in any preceding claim, characterised in that the pre-formed housing assembly (16, 17) comprises two or more components.
8. A method as claimed in Claim 7, characterised in that one or more of the components (16, 17) is shaped in its interior (18, 19) to receive the wrapped blocks (13, 14) in a predetermined pattern, such that the array of blocks is identically replicated for all such displays.
9. A method as claimed in any preceding claim, characterised in that once the blocks (13, 14) are assembled, castable acrylic is poured into an opening in said pre-formed housing assembly (16, 17).
10. A method as claimed in any preceding claim, characterised in that the assembled display is subject to heat treatment.
11. A display comprising a plurality of blocks (13, 14) of transparent material, characterised in that at least some of the blocks (13, 14) have a coating of a transparent film and the blocks (13, 14) are assembled and sealed within a pre-formed and at least partly transparent housing assembly (16, 17).
12. A display as claimed in Claim 11, characterised in that it has a base (11) in which is carried an illumination means adapted to illuminate the blocks (13, 14).



**Fig. 1**



***Fig. 2***



***Fig. 3***