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### (54) Candle display unit

(57) This invention relates to a candle display unit comprising a base (11) having upper (13) and lower surfaces, opposed side walls (15) carried by the base (11), the sidewalls (15) each having an upper portion (16) which extends above the base (11) and a lower portion

which extends below the base, and a candle mounting recess (12) open to the upper surface (13) of the base (11), the unit having a depression (16) in the upper surface of the base (11), the depression (16) being in flow communication with the recess (12).

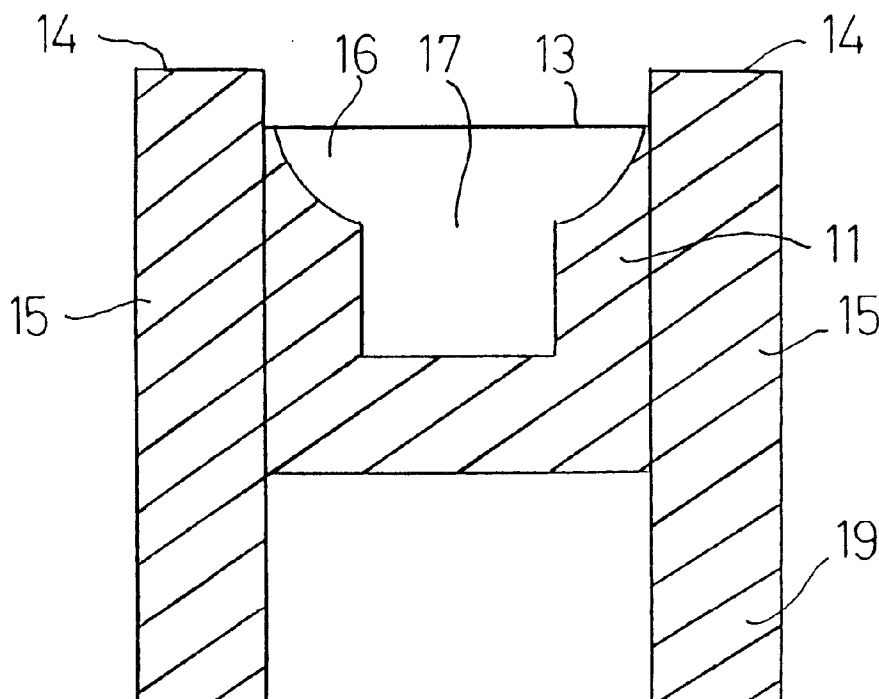


FIG 5

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## Description

### FIELD OF THE INVENTION

This invention relates to a candle display unit.

In a particularly advantageous arrangement the invention relates to a candle display unit which can be selected alone or with others from a set of candle display units, for instance to provide an indication of a person's age on a birthday cake or the names of two persons on a wedding cake, or a selected greeting on an anniversary or other special day on a cake or on another receiver surface.

Unless otherwise stated the candle display unit will be described in relation to a cake providing a horizontal or near horizontal mounting surface, and reference to geometrical terms such as "above" and "below" will be to that assumed position of use.

### BACKGROUND TO THE INVENTION

Candles are often mounted directly on to a cake or the like, and for this reason the mounting area needs to be of a consistency to receive and yet hold the candles, which can dictate the type of cake covering the cake maker must use. Thus it is traditional for cake makers to form the upper surface of a celebration cake, such as a birthday cake or a wedding cake, with a sugar-based "icing" or equivalent decorative covering of a consistency to receive and support directly a plurality of candles. To hold the candle in position the icing is pierced, which can detract from the appearance of a cake which is brought to the table after the candles have been extinguished and removed. A further disadvantage is that each candle making up a display, for instance of the child's age, needs for best effect to be positioned accurately and if one or more of the candles is initially misplaced, and then re-positioned, the icing will have been damaged, detracting from the cake appearance; furthermore, because of that damage it may not be possible to re-position the candle in the desired alignment with other candles. Another possible disadvantage is that it is usually only possible to light the candles after they have been inserted into the cake covering, and so the child's age e.g. "7" is limited typically to a single line of candles, because of the difficulty of lighting candles which are not in line but alongside. Any "greetings message" such as "Happy Birthday" written in coloured icing needs to be positioned away from position to be used by the candles.

Traditionally, only "numerals" e.g. "7", are indicated by such burning candle displays, since usually only one but at most three numerals are required i.e. it is not normal for the candles to be arranged in an array indicating the child's or person's name, even if the space available for finger manipulation of the candle positions would permit this.

A known problem is to prevent unsightly wax solid-

ifying on the icing, both to retain the attractive appearance of the covering after the candles have been removed prior to the cake being cut, and more seriously in order to mitigate the risk that some children may be allergic to wax residue.

### DISCLOSURE OF THE PRIOR ART

A candle display unit has been disclosed in European Patent publication 695910 for which the present applicant is the inventor, and also in McNiell USA Patent 2,468,505, and in USA Patent 4,721,455.

### DISCLOSURE OF THE INVENTION

There is now proposed a candle display unit of modified form to that of European Patent publication 695910 and which offers a superior performance. The modified form also can permit an aesthetically more pleasing shape and thus add to the attractiveness of a cake upon which the candle display unit is mounted.

Thus there is proposed a candle display unit comprising a base having upper and lower surfaces, opposed side walls carried by the base, the sidewalls each having an upper portion which extends above the base and a lower portion which extends below the base, and a candle mounting recess open to the upper surface of the base characterised by a depression in the upper surface of the base, the depression being in flow communication with the recess.

Preferably the depression is annular and surrounds the recess, the depression being adapted to receive and retain candle wax flowing from a lighted candle having its lower end securely held in the recess.

Suitably the sidewalls are of scalloped form, with the upper portion providing an additional barrier to the outflow of melted wax (for instance if the melted candle-wax overflows the depressions).

The lower portions of the sidewalls can provide a mounting for the candle display unit, either by resting on the upper cake surface, or by piercing the surface covering. Since piercing of the covering will cause a continuous indentation in the covering, in a preferred embodiment separate projections extending further than the lower portions are provided, usefully extending from the base but alternatively from the sidewalls, for spaced or intermittent piercing of the icing or the like; thus a greater variety of cake coverings can be used, as well as a more accurate and thus acceptable display.

Usefully, the unit is shaped as a numeral or as a letter so that it can be used where necessary with one or more additional numerals or letters to form the person's age or name, to be highlighted when the candles are alight.

In one manner of use, the candles are positioned in the recesses, and are lit before the unit is positioned on the cake, with the lower portions of the candle display unit (or the projections if available) inserted into the icing

or equivalent. In a further manner of use, the candles can be positioned and/or lit after the unit has been positioned as desired.

In an alternative embodiment, intended with the unit to stand generally vertically, the candle recess(es) and depressions can be formed in the uppermost surface (in use) of the unit.

If a unit is for a single numeral e.g. "7", or letter e.g. "A", then we foresee that the unit would be part of a set supplied together e.g. "1-10" or "A-Z", from which the user can then select the required combination e.g. "21" or "ALISON" respectively. Usefully for the numerals there will be a corresponding number of recesses e.g. the numeral "7" will be illuminated by seven candles. Preferably, the numeral "0" has nine recesses, so that when placed alongside the numeral "1" to form the number "10", there are ten recesses in total.

#### BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be further described, by way of example, with reference to the accompanying drawings, not to scale, in which:-

- Fig.1 is a front view of a first embodiment of candle display unit, representing the numeral "1";
- Fig.2 is a view on the line II-II of Fig.1;
- Fig.3 is a view of on the line III-III of Fig.1;
- Fig.4 is a front view of a second embodiment of candle display unit representing the numeral "4";
- Fig.5 is an enlarged view on the line V-V of Fig.1;
- Fig.6 is a front view of a third embodiment of candle display unit, adapted to celebrate a birthday;
- Fig.7 is a view corresponding to that of Fig.5 for a fourth embodiment of candle display unit; and,
- Fig.8 is sectional front view of fifth embodiment of candle display unit.

#### DISCLOSURE OF THE EXEMPLARY EMBODIMENTS

The candle display unit 10 of Fig.1 is of a plastics material, selected from those suitable for contact with foodstuffs, and resistant to melting at candle-wax melt temperatures. A suitable material is polypropylene, which can be self-coloured and has good impact resistance; another suitable material is polyethylene, which also can be self-coloured and has good impact resistance though with a slightly lower melting temperature. Alternative materials are polycarbonate, or ABS nylon, both of which have higher melt temperature resistance

than polypropylene and polyethylene.

The outline shape when viewed from above of unit 10 is the numeral "1". Within this outline shape, the base 11 has a similar shape, with a single candle-receiving recess 12 centrally positioned, and sized to receive a single candle (not shown).

In the embodiment of Fig.4 the unit 20 viewed from above has the outline shape of the numeral "4", with the outline shape of the base 21 being similar, with four candle-receiving recesses 12 spaced apart and in the base 21. The four candles when inserted and alight will in use help to outline the numeral "4". In an alternative embodiment it will be understood that a different numeral can be outlined, or a letter of an alphabet, and alone or in a selected combination, in each case with the recesses positioned so that the candles in use can act to help highlight the selected numeral or letter against the base background.

In a further alternative arrangement, a particular outline shape of the base and candle array can be selected which is appropriate to the interest of the person being celebrated, for instance a military medal, or the badge of an organisation.

In an alternative embodiment more candles are arranged, side by side or closely so, such that they can be lit as by a hand-held match without the need to pass over an already lit candle, to limit the likelihood that the hand or finger is burned by a previously-lit candle.

In use the unit 10,20 acts to retain molten candle wax until it solidifies, to prevent the wax settling on the cake or other mounting surface. Thus the unit is constructed to provide both a primary and a secondary reservoir. The secondary reservoir is provided by the upper surface 13 (Fig.5) of base 11 and the inwardly facing (inside) surfaces of the upper portions 14 of sidewalls 15. The primary reservoir is provided by depression 16 in the upper surface 13. Depression 16 is annular with a central opening forming the open end 17 for candle-receiving recess 12, so that depression 16 is in flow communication with recess 12, and so that the open end 17 of the recess 12 is below the upper surface of base 13. An advantage of the primary reservoir is that solidified wax therein helps to hold the candle steady and upright; the solidified wax can be formed prior to the unit being mounted onto a cake or the like, and can then be from a different candle to the one inserted in the recess, perhaps of a differently coloured wax (possibly blue for a boy's candle and pink for a girl's candle) for added decorative effect.

In this embodiment, the unit also includes projections in the form of prongs 18, which can be used to position and locate the unit upon icing or an equivalent surface covering of a cake. In an alternative embodiment, such icing or equivalent need no longer be used, if the purpose for which it was provided was not for decoration but to support and locate the candles, since with embodiments of the invention for which prongs are provided, the prongs can locate directly in the cake.

In the embodiment shown the prongs 18 extend downwardly from the lower surface of base 11, conveniently being integral therewith. A prong 18 can be spaced from a recess as in the embodiment of Fig.1 or can be aligned with a recess if desired. In an alternative embodiment the prongs extend from the sidewalls.

In use, the candles can be positioned in the respective recesses, lit, and then placed on the cake; in an alternative method of use, the candles can be lit after the unit has been positioned.

The scalloped outer shape of sidewall 15 enhances the appearance of the candle display unit.

It will be understood that the two units "1" and "4" can be arranged side by side on a cake top, to show a child's age i.e. "14"; different units, or combinations of units, can be arranged for other ages. In particular, combinations for special occasions such as "18" and "21" for birthdays, and "25TH" and "50TH" for wedding anniversaries for example, can be integrally formed, the latter including the letters "TH", perhaps in superscript, together with the numerals. The unit can also include wording such as "BIRTHDAY" or "ANNIVERSARY" together with the numerals and/or letters as desired.

In the embodiment of Fig.6, the candle display unit 30 is generally rectangular in plan view, with rounded corners. The base 31 carries the legend "HAPPY BIRTHDAY", and is surrounded by a sidewall 32. The sidewall projects both above and below the base, and is formed integrally with the base. The inner 33 and outer 34 edges of the sidewall are scalloped.

Located in the upper edge 35 of the sidewall are a number of candle recesses 12, each of which has a surrounding depression 16 for the purpose previously described. In this embodiment, however, the depressions 16 comprise the only reservoir for molten wax, though clearly in other embodiments the sidewall 32 can be adapted to have upstanding lips to act as a secondary reservoir if desired. In this embodiment there are ten recesses 12, though clearly in other embodiments more or fewer recesses could be present, as desired.

Alternative designs of display unit could have alternative legends, such as "HAPPY ANNIVERSARY", "HAPPY CHRISTMAS", "CONGRATULATIONS", as well as combination pictorial designs, such as the number "18" or "21" with a key design, as frequently used to represent these significant birthdays.

The unit 40 of Fig.7 is similar to that shown in Fig. 5, except that the candle receiving recess 12 has a portion 41 which projects below the base 42. This embodiment allows the weight of plastic material in the unit to be minimised.

The unit 50 of Fig.8 is adapted to stand upright, the prong 51 being adapted for pressing into the icing or cake surface. The recess 12 is formed in the upper surface 52 of the numeral ("2" in this embodiment), and is surrounded by a depression 53 adapted to retain molten wax.

An advantage of the embodiment of Fig.8 is that the

unit can be observed from the side, i.e. it is not necessary for a person to stand over the cake to observe the unit. The elderly, infirm and disabled who can only view the cake and its display unit from the side might therefore obtain greater pleasure from such an embodiment.

Units similar to the unit of Fig.1, but of different shapes, could also be provided, for example, a unit in the form of a horseshoe, adapted to stand above the surface of a cake.

10 The recesses 12 typically will have an (upper) open end 17 of diameter in the range 4-5mm, but this will depend on the diameters of suitable candles locally available; in the embodiment of Fig.5 the open ends of the recesses are each 4.5mm in diameter. The recesses 12 15 have a depth (i.e. below the depression) in the range 3-5mm, in the embodiment of Fig.5 3.5mm. The depressions 16 have a diameter in the range 7-10mm, in the embodiment of Fig.5 8.5mm, and a depth in the range 1.5-2.5mm, in the embodiment of Fig.5 2mm.

20 In a suitable embodiment the recesses will have a small draft, in the range 1-15°, in a preferred embodiment of 5°. Thus the candle-receiving recesses will be frusto-conical and single-ended, having a closed (lower) end of smaller diameter than the (upper) open end 17.

25 The recesses can include four ribs or radial inward projections (not shown) equi-angularly spaced, extending downwardly from the open end 17 of each recess. The ribs can have zero draft. An advantage of a ribbed recess arrangement is that a candle can be held more securely (against tilting) even in a small depth candle recess, prior to the depression filling or being filled with 30 pre-melted but now solidified candle wax, with part of the non-melted wax of a candle being extruded between the ribs as the candle is pressed into the recess. The likelihood of a lighted candle tilting is reduced, so that the attractive display (of parallel candles) retained as the candles burn.

35 The sidewall upper portion 14 will typically project above the surface 13 of the base 11 in the range 1-2mm, in the embodiment of Fig.5 by 1.5mm; and the sidewall lower portion 19 will project in the other opposed direction below the base 11 in the range 2-4mm, in the embodiment of Fig.5 by 3mm with a base thickness of 6mm. An advantage of the base 11 being spaced from the 40 mounting surface (e.g. the iced surface of a cake) is that the mounting surface is more thermally isolated from the candles, i.e. any heating of the base 11 by a candle is not transferred as readily to the mounting surface.

45 In addition, an advantage of the scalloped edges is that they dissipate a greater quantity of heat than would flat edges (notwithstanding that the heat transferred to the display unit when of plastic material may be small). Such enhanced heat dissipation will minimise local thermal stressing, particularly in the areas adjacent the recesses. The local thermal stressing may be most acute 50 when a recess is at an extremity of the numeral, such as recesses 12a of Fig.4, the positioning of which is determined by the numeral concerned.

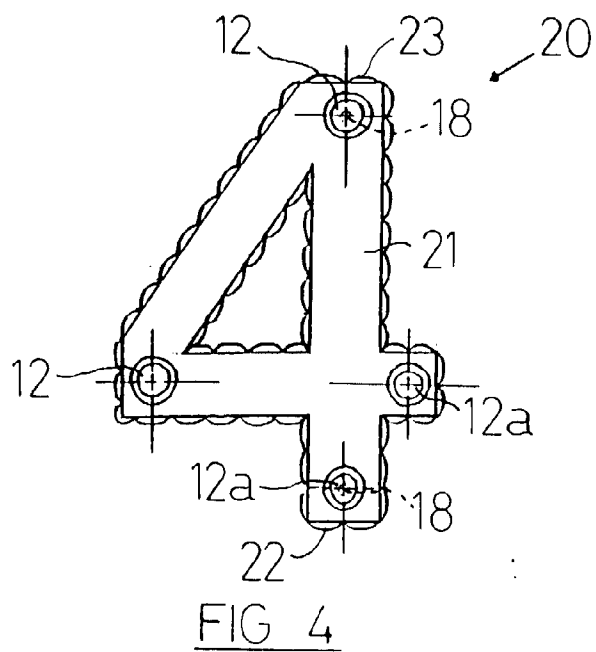
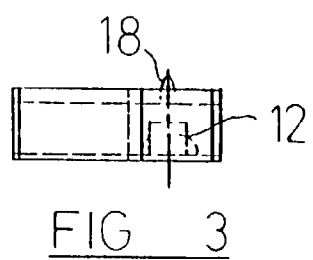
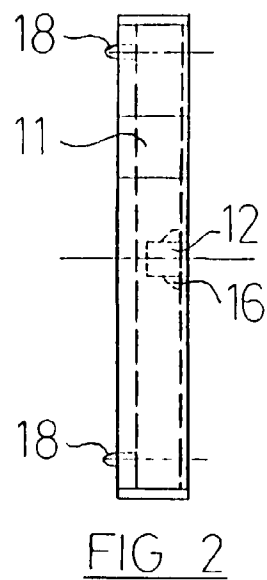
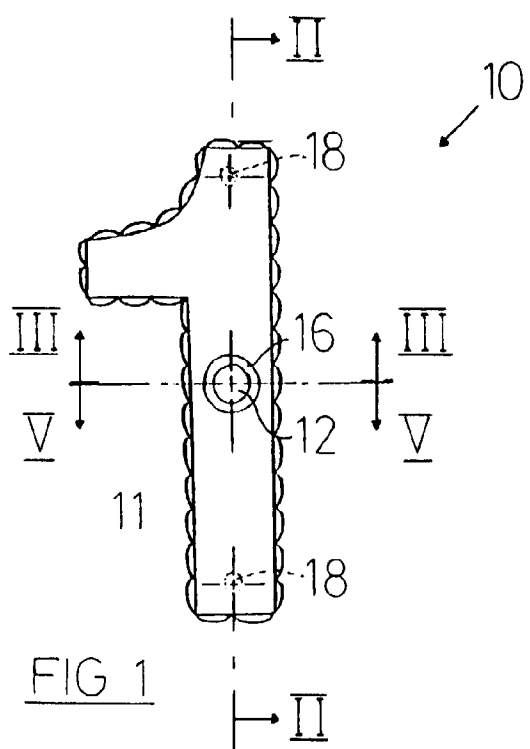
In alternative embodiments, the display units are adapted to stand substantially upright on the mounting surface, i.e. a projection extends from surface 22 of the numeral "4" of the Fig.4 embodiment, or from the surface 36 of the unit 30 of the Fig.6 embodiment, as two examples. In the former such embodiment, it is envisaged that there would be a single candle recess located in surface 23; in the latter such embodiment, there may be one, two, three, or perhaps more, candle recesses in the surface 37. The projection from the surface 22/36 could be adapted to be pressed into the mounting surface, or it could be adapted to locate in a cooperating aperture in a support plate, which support plate is adapted to rest upon the mounting surface. Accordingly, the display units could be suited to viewing from the side rather than from above, as in the embodiment of Fig.8.

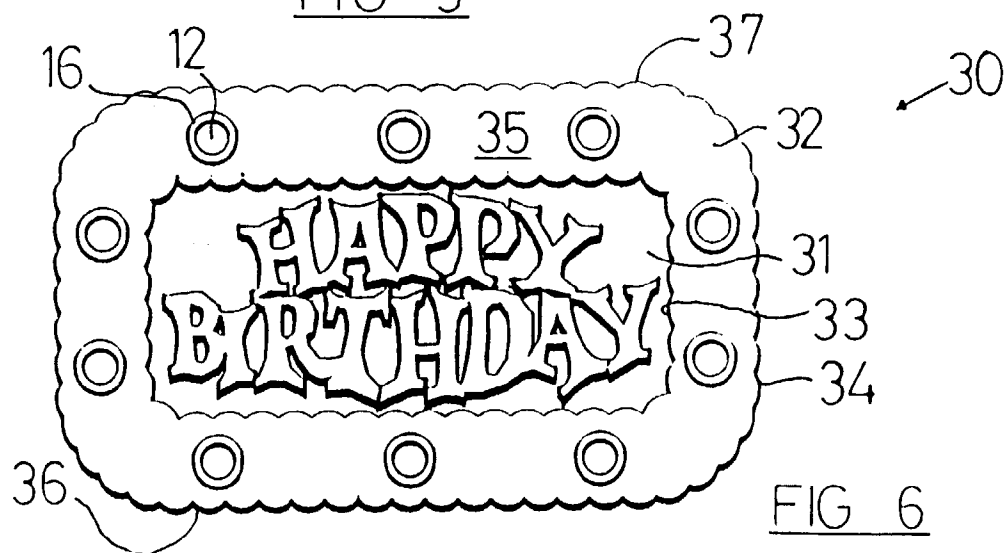
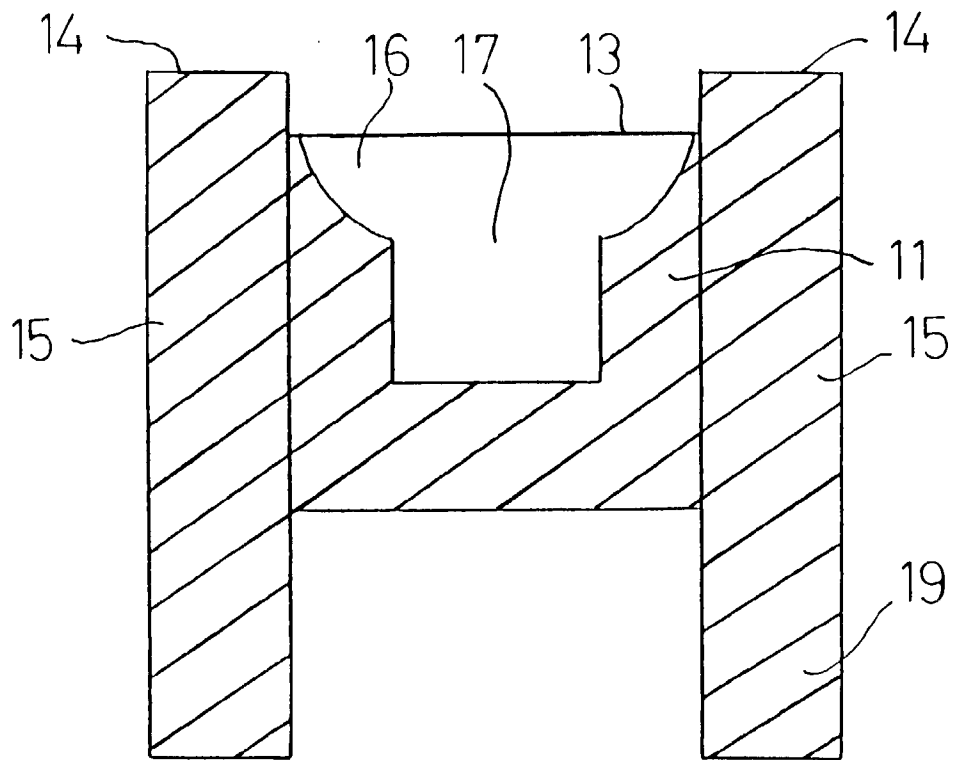
In yet another alternative embodiment, the display units are adapted to rest at an angle, the projection from the surface 22/36 being angled and adapted to fit into a corresponding aperture in a support plate. The candle recess(es) would be similarly angled relative to the unit, so that the candle(s) remain substantially vertical in use.

8. A candle display unit according to claim 1 in which the unit comprises a combination of numerals and/or letters, integrally formed.

#### Claims

1. A candle display unit comprising a base having upper and lower surfaces, opposed side walls carried by the base, the sidewalls each having an upper portion which extends above the base and a lower portion which extends below the base, and a candle mounting recess open to the upper surface of the base, the unit having a depression in the upper surface of the base, the depression being in flow communication with the recess.
2. A candle display unit according to claim 1 in which the depression is annular and surrounds the recess.
3. A candle display unit according to claim 1 in which the sidewalls are of scalloped form.
4. A candle display unit according to claim 1 in which the lower portions of the sidewalls provide a mounting for the candle display unit.
5. A candle display unit according to claim 4 in which separate projections extending further than the lower portions are provided.
6. A candle display unit according to claim 1 in which the unit is shaped as a numeral or as a letter.
7. A candle display unit according to claim 1 which is adapted to stand generally vertically, the candle recess(es) and depressions can be formed in the uppermost surface (in use) of the unit.





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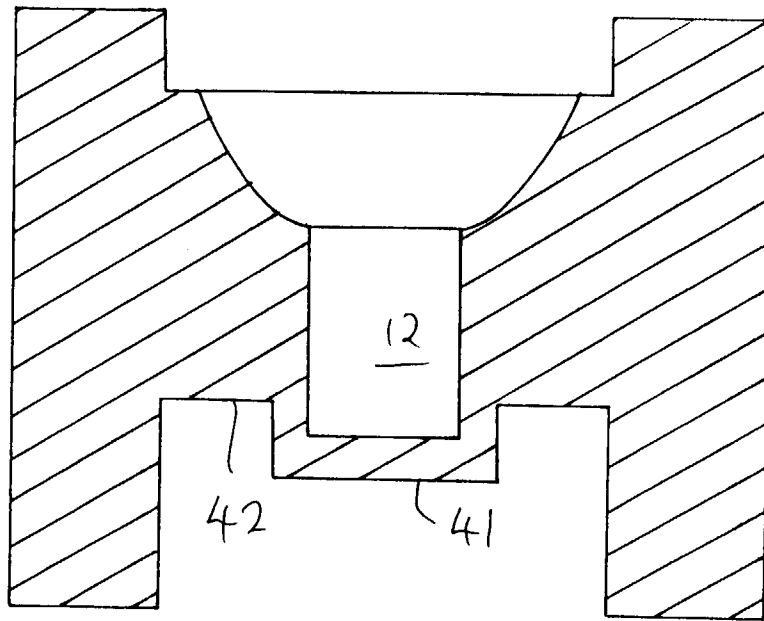
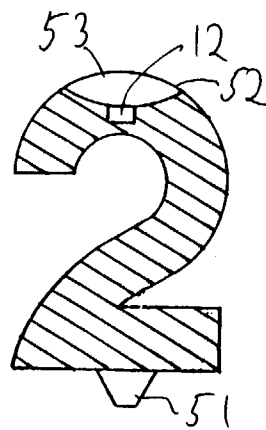


fig 7



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Fig 8