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(54) Candles.

(57) A multi-element candle structure is made up of a plurality of superposed candle elements (1) which frictionally engage one with another and which are not fused together. The candle elements may interfit one with another, to which end each candle element is formed with a projection (4) at one end and a cavity (5) at the other end so that the projecting end of one element can fit within the cavity in the abuting end of an adjacent element. Each candle element may have a central bore (2) so that the aligned bores of the superposed elements form a continuous bore to receive a wick element (6).

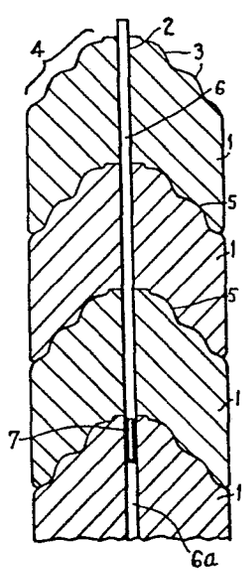

Fig.2

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C A N D L E S

The present invention relates to candles and to candle elements.

It is an object of the invention to provide means enabling a large number of differently coloured decorative candles of various sizes to be produced, as desired, from a series of candle elements.

From one aspect the invention provides a multi-element candle in which the individual elements from which the candle is built up are not fused together.

From another aspect the invention provides a candle comprising a plurality of superposed elements which are frictionally engaged one with another. Preferably the elements interfit one with another, in which case each element may have one end formed as a projection and its other end formed with a cavity, so that the shaped end of one element can fit within the cavity in the abuting end of an adjacent element. With such a configuration, it is possible to construct a candle either with the projections uppermost, or alternatively with the cavities uppermost.

From a further aspect the invention provides a candle structure comprising a plurality of apertured candle elements which are superposed one above the other around a central core element extending through said apertures.

According to a feature of the invention, the candle elements are not provided with individual wicks but are formed with a bore into which a separate wick is inserted when a plurality of the elements have been superposed one on the other to form a candle structure.

From yet another aspect therefore the invention provides a candle structure comprising a plurality of similar superposed elements each of which has a separate bore, and a separate wick inserted through the aligned bores of the superposed elements, wherein the structure is such that the wick can be replaced by inserting a new wick from either the lower end or the upper end of the candle structure.

Alternatively each candle element may be provided with a wick and the ends of the wick at the opposite ends of the element are so formed that when two or more elements are superposed, a wick end on one element will lie adjacent the wick end of an abuting candle element thereby effectively forming a continuous wick structure through a candle comprising a plurality of superposed elements.

According to a further feature of the invention the lower end of the wick or of each wick section is encased in a non-inflammable material e.g. by crimping a metal tag about the lower end of the wick which serves to make the wick self-extinguishing and also anchors the wick firmly in the unmelted wax.

The invention also provides a candle element for forming a candle composed of a plurality of superposed elements wherein one end of each element is formed as a projection and the other end of each element is formed with a recess to receive the projecting end of an adjacent element.

The invention will now be further

described by way of example, with reference to the accompanying drawings in which:

Figure 1 is a perspective view of one embodiment of candle element according to the present invention,

Figure 2 is a sectional view through a candle made up of a plurality of the elements shown in Figure 1,

Figure 3 is a sectional view through a further embodiment of candle structure,

Figure 4 is a scrap view showing an alternative means of joining wick sections together, and

Figure 5 is a somewhat diagrammatic sectional view of another embodiment of candle structure.

Referring to Figure 1, a candle element comprises a generally cylindrical body 1 moulded from a suitable candle wax which is provided with a central bore 2 for receiving a wick. The upper end of the body is provided with a succession of sloping annular shoulders 3 forming a protruding male end, generally indicated at 4, and the lower end of the body is provided with a recess 5 forming a female end which has a configuration so as generally to match the configuration of the protruding male end.

As shown in Figure 2, a plurality of such elements can be superposed to form a candle of any desired length or height with the protruding or male end 4 of one element fitting within the recess or female end 5 of the next adjacent element.

The elements interlock with each other by means of the shouldered configuration 3 and are held together by frictional interengagement of the interfitting portions.

It will be appreciated that the

configuration of the candle element shown in Figures 1 and 2 is only given by way of example and that numerous other shapes of element may be made in order to form a candle structure of which the various elements interfit together in frictional engagement.

The bores 2 of the various superposed elements are aligned to form a passage through the candle to receive a wick 6 which is stiffened with wax so that it can readily be passed through the bore. It will be appreciated that the diameter of the bore 2 and the size of the wick 6 are chosen in relation to the diameter of the candle elements so as to provide satisfactory burning characteristics for the candle. Thus, the wick must be of sufficient diameter to be able to burn the wax forming the candle but must not be so large as to cause too rapid a rate of burning or flaring of the candle.

The relationship between the diameter of the bore 2 and the size of the wick 6 is such as to allow the wick easily to be adjusted up and down within the bore but not large enough to allow any significant seepage of molten wax into the bore as the candle is burning.

As shown, the lower end of the wick is encased in a sheath 7 of non-inflammable material, for example a piece of metal foil either wrapped round or crimped onto the wick. This non-inflammable covering anchors the wick firmly in the unmelted wax and prevents the end from falling over and possibly out of the side of the candle if it is allowed to burn to the lower end of the wick. When the wick is finally consumed or largely consumed, the unburnt end including the non-inflammable covering can readily be ejected by pushing up a succeeding wick 6a from underneath if the surrounding wax is still molten. Alternatively, the wick end can be pulled out from the top of the candle after the wax has hardened, and a succeeding

wick 6a pushed through the hole left by the enclosed end of the previous wick.

A candle produced from a series of elements as described possesses a number of advantageous features. Thus, the candle elements may be produced in a wide variety of different colours thereby enabling decorative candles to be produced incorporating elements of two or more different colours whereby an enormous range of different coloured decorative candles can be produced by a limited range of coloured elements e.g. 20 colours. Candles can also be built up to any desired height as required for a particular decorative or aesthetic effect and, moreover, can be maintained substantially at the desired height as they are burnt by adding successive candle elements at the bottom of a candle as the upper elements burn down and inserting a further wick through the bore of the candle from time to time as is necessary, and as is depicted in Figure 2.

The facility of being able continually to replenish the candle as it is used up considerably reduces the wastage from unburnt ends, which is a common disadvantage with a decorative candle.

Figure 3 shows a further embodiment in which the candle comprises a plurality of elements 11, (here shown as two elements) each incorporating their own wick 16. As can be seen, the upper end 16a of each wick projects from the upper surface of the candle element and is stiffened by virtue of the wax which it contains, whilst the lower end of the wick is encased in a sheath 17 of a non-inflammable material as previously described and is located adjacent a recess 15 which receives the upper end 16a of the wick of a lower candle element. Clearly the wick 16 is required to be located at the centre of the upper surface of the candle element and likewise the recess 15 must be located on the central axis of the

candle section. To this end the wick is slightly inclined from the axis of the candle element so that its lower end lies adjacent to the recess 15. It can be seen that the upper end 16a of one wick overlaps the sheathed lower end of an adjacent wick, within the recess 15, when two candle sections are placed one on top of the other, with the two wicks in contact. Thus, as the upper candle element burns down the wick is gradually extinguished when it reaches the non-inflammable sheath 17, but at this time the flame is transferred to the upper end 16a of the wick of the next lower element.

As can be seen, the candle elements are of a different shape to that shown in Figures 1 and 2 and are illustrated as being of a generally plain cylindrical shape having a plateau 18 on the upper surface which engages in the corresponding shallow recess 15 in the lower surface of the next superposed element. It will be appreciated that the elements can take any convenient form and that instead of being circular they can be of multi-sided form bearing in mind the necessity for them to have a peripheral boundary in relation to the wick which is such as to ensure satisfactory burning of the overall wax surface at any time. It will also be appreciated that the shape of the recess need not necessarily exactly correspond with the upper configuration of an adjacent candle element, provided that the two parts interfit together in frictional engagement and that the transition of burning from one element to the next section occurs in a satisfactory manner.

Figure 4 is a scrap view of a further arrangement for joining together the wicks of two adjacent candle elements 21. In this embodiment the wicks 26 extend axially through each element and are intended to be joined with their adjacent ends in line and in abutting relationship. Thus, the ends of the wick are stiffened

with wax and project respectively from above the upper surface 21a of an element and into the recess 25 at the lower end of an element. The lower end of the wick is provided with a pin 22 such that as one element is placed upon the next adjacent element the pin at the lower end of the upper element pierces into the upper end of the wick of the lower element and the two adjacent wick ends substantially abut. With this arrangement as the upper element burns down, the flame from the wick is transferred onto the upper end of the next wick in the next lower element.

Figure 5 shows a further embodiment of candle structure according to the invention in which the candle elements 31 are of a generally plain annular configuration and do not interfit one with another, but merely rest one upon the other. In this embodiment the elements are provided with a bore 32 of considerably larger diameter than that which is required to receive a wick and the aligned bores of the superposed elements accommodate a central cylndrical core candle structure 33 complete with a wick 36, but the wick is of such a diameter as to provide the correct burning characteristics for the overall diameter of the candle including the superposed elements 31. Preferably the candle elements 31 are a frictional sliding fit on the outer surface of the central candle structure 33.

If desired, the central candle structure 33 may be provided with a bore to receive a separate wick instead of being formed with a moulded-in wick.

According to a modification of any of the candle structures herein described, at least the base section or sections of a candle structure may be of a simulated non-inflammable material which is not intended to be burnt but merely to provide a decorative effect. However it will be appreciated that with such

a structure, it is also readily possible to replenish the candle from the lower end in order to retain it at its desired height as it is burnt.

The present invention enables an enormous variety of decorative candles to be built up of elements of different colours so as to provide a great variety of decorative candles of any desired height and, where desired, enables the height of the candles to be virtually permanently maintained by the replenishment of the candle with additional elements fitted at its lower end as it is burning. Where the candle incorporates a separate wick this may also be replenished without disturbing the candle structure, as described with reference to Figure 2.

C L A I M S

1. A multi-element candle structure characterised in that the candle structure is made up of a plurality of superposed candle elements (1) which frictionally engage one with another and which are not fused together.

2. A candle structure as claimed in claim 1, characterised in that the candle elements interfit one with another.

3. A candle structure as claimed in claim 2, characterised in that each candle element is formed with a projection (4) at one end and a cavity (5) at the other end so that the projecting end of one element can fit within the cavity in the abuting end of an adjacent element.

4. A candle structure as claimed in any preceding claim, characterised in that the projection at one end of each candle element is formed by one or more shoulders (3).

5. A candle structure as claimed in any preceding claim, characterised in that each candle element is formed with a central bore (2) so that the aligned bores of the plurality of superposed candle elements form a continuous bore through the candle structure.

6. A candle structure as claimed in claim 5, characterised in that a wick structure comprising a stiffened wick element (6) is located in the central bore.

7. A candle structure as claimed in claim 6, characterised in that the wick element comprises a core candle (33) having a wick (36) of a diameter to provide the correct burning characteristics for the overall nominal diameter of the candle structure (31).

8. A candle structure as claimed in claim 1, 2, 3 or 4, characterised in that each candle element is provided with a wick (16) and the ends of the wick at the opposite ends of each element are so formed that a wick end on one element will lie adjacent a wick end of an abuting element thereby effectively forming a continuous wick through the candle structure.

9. A candle structure as claimed in claim 8, characterised

in that one end (16a) of a wick (16) projects from each candle element and the other end of the wick is located adjacent a central recess in the candle element.

10. A candle structure as claimed in claim 8, characterised in that one end of a wick (26) projects from each candle element and the other end of the wick is provided with a projecting pin (22).

11. A candle structure as claimed in any preceding claim, characterised in that the end of a wick forming the lower end in use is encased in a non-inflammable material (7,17).

12. For the purpose of forming a candle structure as claimed in any preceding claim, a candle element (1) characterised in that one end of said element is formed as a projection (4) and the other end of said element is formed with a recess (5) to receive the projecting end of an adjacent element.

13. A candle element as claimed in claim 12, characterised in that said element (1) is provided with a central bore (2)

14. A candle element as claimed in claim 12, characterised in that said element incorporates a wick (16,26) and the ends of the wick are so formed that one end (16a) of the wick projects from the projecting end of the candle element and the other end of the wick is located so as to lie adjacent the projecting wick end of an adjacent candle element.

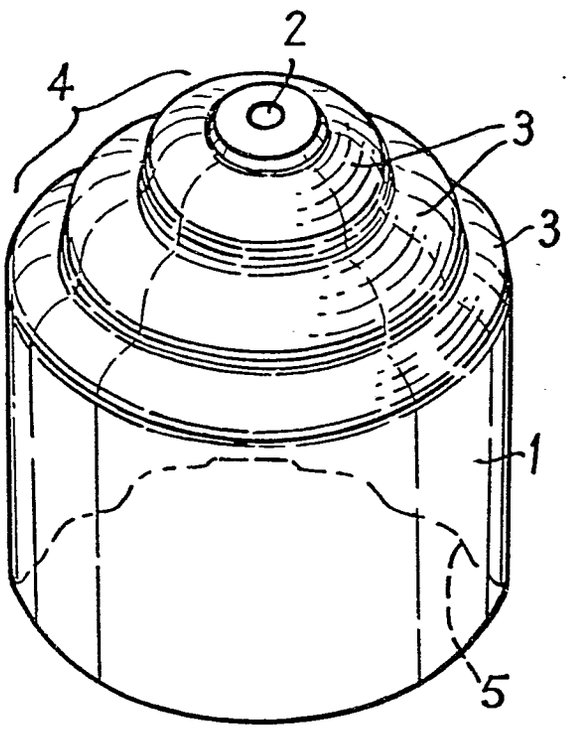

Fig.1

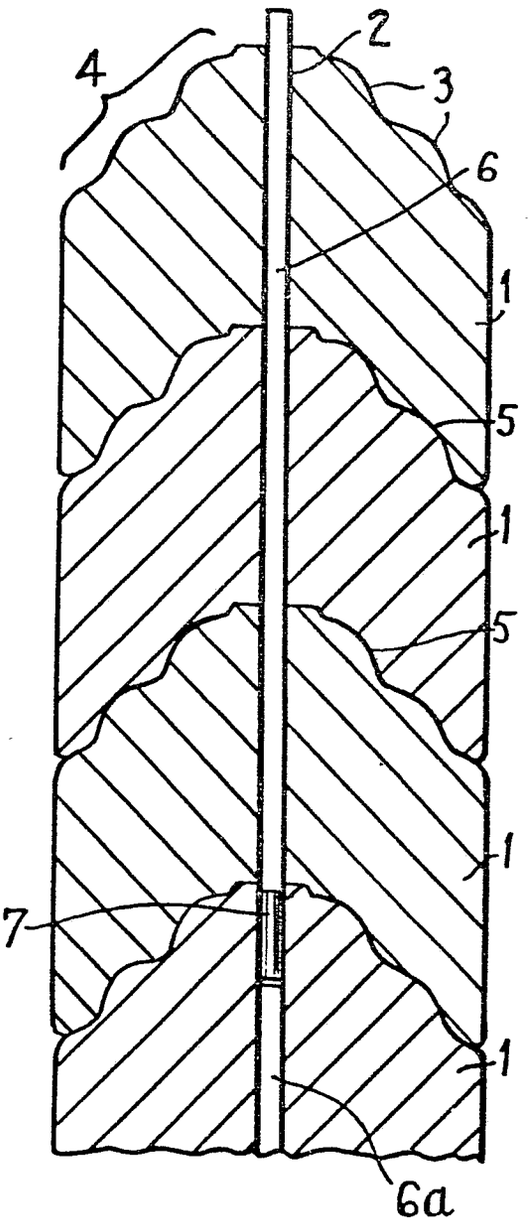

Fig.2

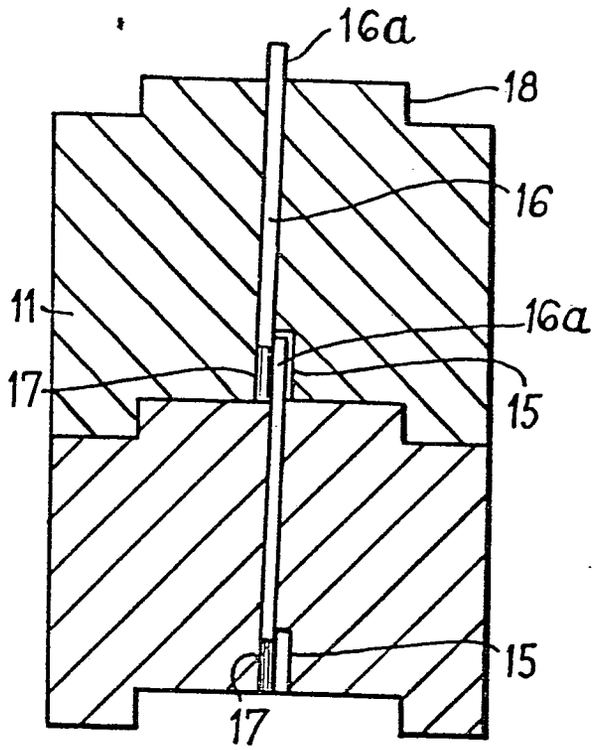

Fig.3

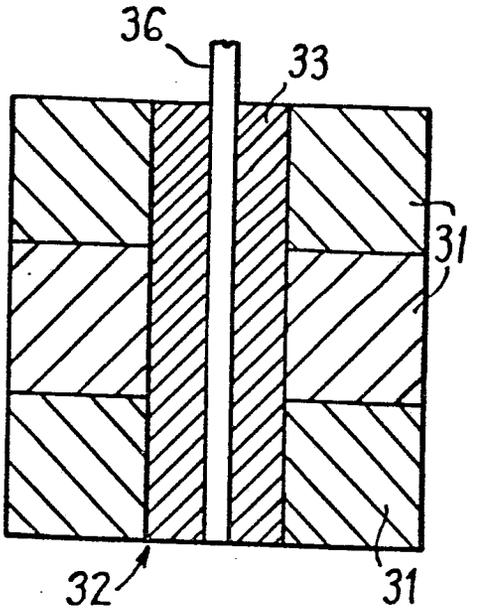

Fig.5

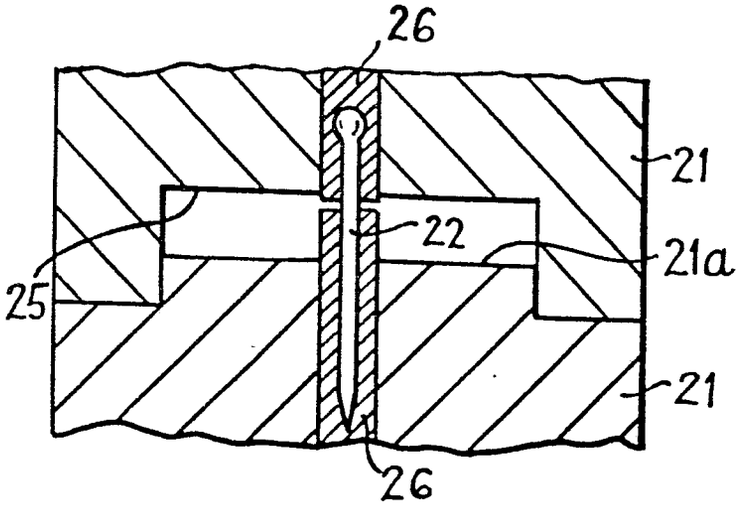

Fig.4

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European Patent Office

Application number

EP 80 30 1442

EUROPEAN SEARCH REPORT

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
X	US - A - 3 388 960 (F.J. CANGIALOSI) * Column 1, lines 39-64; column 2, line 42 - column 3, line 35; column 4, lines 45-73; figures *	1-6, 12,13
X	NL - A - 73 05 625 (H.G. LEFERINK) * Page 2, lines 16-25; figures 3-5 *	1-2, 5,13
X	US - A - 2 324 723 (J.M. POWERS et al.) * Page 1, column 2, line 46 - page 2; column 1, line 17; page 2, columns 39-57; figures 8-11 *	1-4, 8-9, 12-14
X	FR - A - 1 482 544 (R. EDELMAN) * Column 2, paragraphs 1,2,7,9; column 3, paragraphs 1-5 *	1-3, 8-9, 12-14
	DE - B - 1 267 774 (H.A. MOSSMULLER NACHF.) * Column 1, line 28 - column 2, line 27 *	1,7
	FR - A - 2 200 481 (THIELE) * Claim 1; figures *	11

CLASSIFICATION OF THE APPLICATION (Int Cl ³)

C 11 C 5/00

TECHNICAL FIELDS SEARCHED (Int.Cl.³)

C 11 C 5/00

CATEGORY OF CITED DOCUMENTS

X: particularly relevant
A: technological background
O: non-written disclosure
P: intermediate document
T: theory or principle underlying the invention
E: conflicting application
D: document cited in the application
L: citation for other reasons

&: member of the same patent family, corresponding document

X The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	04-07-1980	SCHUERMANS

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