Patent Application of

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for

TITLE: CONNECTABLE MODULAR CANDLE

CROSS-REFERENCE TO RELATED APPLICATIONS

This application claims the benefit of provisional patent application Ser. No. 61/076635, filed 2008 Jun 28 by the present inventors.

FEDERALLY SPONSORED RESEARCH Not Applicable

SEQUENCE LISTING OR PROGRAM Not Applicable

BACKGROUND—FIELD

This invention relates to devices which provide illumination through the burning of wax or wax like substances, specifically to an improved candle which is assembled by connecting its modular sections to create various sculptural forms.

BACKGROUND—PRIOR ART

Candles have been used for thousands of years to provide illumination as well as decoration. There are many methods of forming candles. One older method includes repeatedly dipping a burnable wick into a reservoir of molten wax. Others include suspending a wick within a mold cavity of an external mold while introducing molten wax into the external mold. Many candles though, share the deficiency as noted by U.S. Pat 20070122759 that once a candle has been cast it would have to be melted down in order to change its appearance. In prior art, to overcome this limitation U.S. Pat

20070122759 created an illumination device, comprising section(s) of wax having hole(s) through each section for the insertion of a wick and stacked to create a candle that can be rearranged and restacked at any time.

Another example of stacking is shown in U.S Pat 6203313 which is constructed of a series of wax members arrayed in a stack, and can be somewhat reconfigured because of the flexibility and "play" of the wick passing through the hole through the centers of the wax members. Another example of a stackable candle is U.S. Pat 3388960 which is a segmental candle where each segment is provided with cooperative means for interengagement with the other segment to insure axial alignment.

Although stacking allows for the creation of an orderly pile of wax sections, it does not provide the ability to create more complex configurations which can extend into Cartesian XYZ space. It does not easily allow for spanning structures like bridges, or overhanging structures. For example, with the stacking of wax sections you could create a tower but you would not be able to create a model of the Statue of Liberty.

Another difficulty with candle creation using molds is that the size of the candle is limited to the size of the mold. In order to make a larger candle a larger mold must be used. Additionally there is also the danger of handling large amounts of molten wax. Another problem with creating large candles is the larger cavities that form as the wax cools and then contracts. In prior art this shrinkage has been addressed by US Patent 6440349 by putting the candle under pressure conditions but it is still limited by the size constraints of the mold.

There is, therefore, a need in the industry for an apparatus which address these and other related, and unrelated, problems.

SUMMARY

The present invention discloses a class of illumination devices, connectable modular candles, which include a plurality of wax modules each having a plurality of sides with a plurality of projections and accepting means for interconnection with the various sides of other modular candles. In addition, there is a plurality of channels allowing wicks to pass through each module into other modules, providing for the creation of a more complex, configurable candle sculpture.

The foregoing has outlined some of the more pertinent features of the invention. These features should be construed to be merely illustrative. Further objects, advantages, and novel features will become apparent upon a reading of the following descriptions and examining the accompanying drawings.

DRAWINGS

FIG. 1 is a perspective view of a first embodiment of a connectable modular candle having primary projections and secondary cooperative cavities.

FIG. 2 is a bottom plan view of a first embodiment of a connectable modular candle.

FIG. 3 is a cross-sectional view of the candle shown in FIG. 2 along the line 13---13 in the direction of the arrows.

FIG. 4 illustrates the assembly of two connectable modular candles displaced relative to one another in the lengthwise direction with a wick passing through a wick passageway of the bottom candle, across the wick channel of the upper candle, and up through the wick passageway of the top candle.

FIG. 5 shows a cross-section of FIG. 4 taken on the line 17---17 in the direction of the arrows.

FIG. 6 is a bottom perspective view of two connected modular candles.

DETAILED DESCRIPTION

FIG. 1 is a perspective view of one embodiment of a single connectable modular candle. The projections extending from the top of the candle are referred to as primary projections 11. These projections are used to connect candles together. Opening to the outside are cavities which pass completely through the candle and out through the primary projections 11. These cavities will be referred to as wick passageways 12. The embodiment of this candle is not limited to wick passageways that pass only through primary projections, since wick passageways can pass through the top flat portions of the candle or sides as well. The wick passageway is used to pass a wick from one candle to the next.

FIG. 2 is a bottom plan view of one embodiment of a single connectable modular candle. A hollow cavity is shown within the bottom of the candle which will be referred to as wick channel 14. The wick channel 14 allows wicks to pass across the inside of the candle from one wick passageway to another wick passageway. The coupling cavities that accept the primary projections 11 will be referred to as secondary cooperative cavities 15. Projections 11 are friction fit into cavities 15.

FIG. 3 is a cross-section view of the candle shown in FIG. 2 along the line 13---13 in the direction of the arrows. FIG. 3 shows how passageways 12 pass completely through the

candle. It shows a side view of channel 14 and how it opens to passageways 12. It also shows how cavities 15 can accept projections 11.

FIG. 4 illustrates the assembly of two embodiments of connectable modular candles which are displaced relative to one another in the lengthwise direction. The wick, which passes through the bottom candle and out through the top, will be referred to as wick 16. The wick 16 enters through one of the secondary cooperative cavities and then though one of the wick passageways of the bottom candle, across the wick channel of the upper candle, and out through one of the wick passageways 12a of the top candle.

FIG. 5 shows a cross-section of FIG. 4 taken on the line 17---17 in the direction of the arrows. FIG. 5 shows how wick 16 enters through one of the cavities 15 of the lower candle, up through channel 14 and then out of one the passageways 12. The wick 16 then turns and passes across the channel 14a of the upper candle and then up through one of the passageways 12a and out. FIG. 5 also shows how projections 11 of the lower candle will connect with cavities 15 of the upper candle allowing the two candles to connect together. The open cavities 15 and 15a and the un-connected projections 11 and 11a illustrate other possible connection locations for other candles. The open passageways 12 and 12a show how the candles can accept multiple wicks.

FIG. 6 is a bottom perspective view of two connected modular candles. It shows the open cavities 15 and the channel 14. It shows how wick 16 passes through one of the passageways 12. The open cavities 15 and 15a show where other candles can be connected. The open passageway 12 shows where the candles can accept multiple wicks and the open channels 14 and 14a show where these wicks can pass across the inside of the candles from one wick passageway to another wick passageway.

Operation—Figs 1-6

The manner of using a connectable modular candle is to assemble as many separate candle modules as desired. Assembly is done by aligning projections 12 of one candle to the receiving cavities 15a of another and then pushing them together. While assembling the candles into the desired shape, wick 16 or wicks 16 should be threaded through in the desired burning pattern. The finished sculpture can then be displayed or lit as desired.

ADVANTAGES

Accordingly, the present invention may have one or more of the following advantages:

(a) in contradistinction to prior art, the advantage of providing an increase in the complexity of the structure of a candle which can be assembled;

(b) the ability to connect and reconnect a plurality of wax modules by the means of a plurality of projections extending from one module, and arranged to engage the accepting plurality of elements of another module during assembly;

(c) it provides a channel or channels, in various orientations, for a wick or wicks to pass from one wax module to another, from one wax module to many, from many wax modules to many, and from many wax modules to one. This channeling allows a candle to still be easily assembled despite its greater complexity.

(d) The ability to create small candles that can then be connected to create much larger candles without having to handle a large amount of dangerous molten wax.

(e) The ability to create small candles that can then be connected to create much larger candles without having to use a larger mold.

(f) A decrease in weight compared to an equivalently sized poured candle due to hollow cavities designed to pass wicks from one candle to the next.

CONCLUSION, RAMIFICATIONS, AND SCOPE OF THE INVENTION

Accordingly, the reader will see that one embodiment of the connectable modular candle can be used to create candles of various and more complex sculptural forms. In addition, these candles can easily be assembled and reassembled without having to melt and recast the entire candle. Furthermore, the connectable modular candle has the additional advantages in that it can be used to more easily create large candles as well as allowing these large candles to be lighter.

While the above description contains many specificities, these should not be construed as limitations on the scope, but rather as an exemplification of one preferred embodiment thereof. Many other variations are possible. For example, the shape of the individual candle modules can be of many various shapes as well as the shape of the projections and the receiving cooperative elements.