

May 29, 1962

F. W. RENWICK, SR., ETAL

3,036,452

ARTIFICIAL CANDLE

Filed May 2, 1960

2 Sheets-Sheet 1

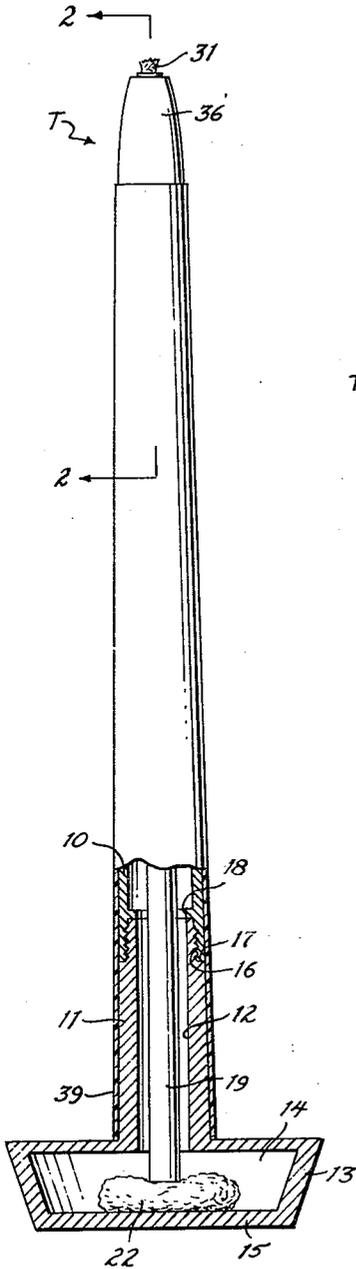


Fig. 1.

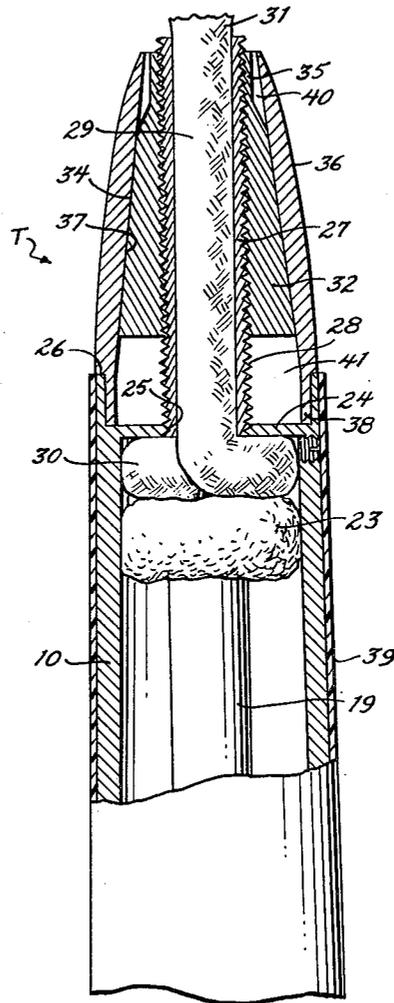


Fig. 3.

INVENTORS.
FREDERICK W. RENWICK, SR.
GRACE BUSH.
BY
John A. Robertson
ATTORNEY.

May 29, 1962

F. W. RENWICK, SR., ETAL

3,036,452

ARTIFICIAL CANDLE

Filed May 2, 1960

2 Sheets-Sheet 2

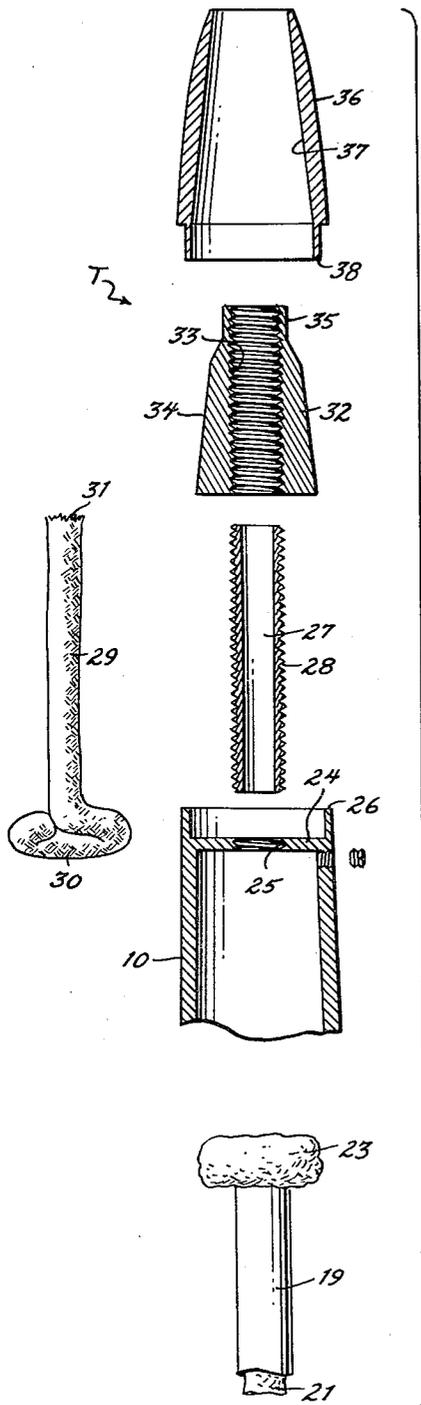


Fig. 4

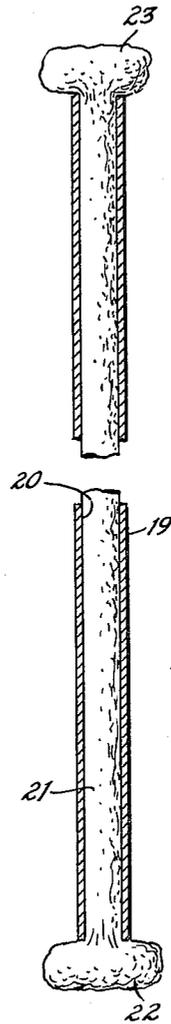


Fig. 2.

INVENTORS.
FREDERICK W. RENWICK, SR.
GRACE BUSH
BY
John A. Robertson
ATTORNEY.

1

3,036,452

ARTIFICIAL CANDLE

Frederick W. Renwick, Sr., and Grace Bush, Maple Shade, N.J., assignors to Hollwick, Inc., Maple Shade, N.J., a corporation of New Jersey

Filed May 2, 1960, Ser. No. 25,918

1 Claim. (Cl. 67—55)

The present invention relates to an artificial candle and is concerned primarily with certain novel features which provide heat-insulating properties, adjustability of the flame, and changes in the decorative appearance of the candle.

At the present time candles are meeting with widespread use in churches, supper clubs, and the dining rooms of nicer homes. Under the conditions in which such candles are used, they ordinarily are only partially consumed. Thus, in churches only five inches of an eighteen-inch candle is ordinarily burned before the candle is discarded. This is, of course, highly expensive. While it might be possible to consume a greater proportion of the candle, the actual conditions under which they are used precludes such practice.

The present invention is founded on the belief that if an artificial candle is provided which will meet the practical conditions of usage, it will in many cases be substituted for the conventional candle because of economy of use, more convenience in use, and offers more flexibility in the decorative effects.

The invention has in view as an important object the provision of an artificial candle which consumes a liquid fuel, preferably the fluid that is now commonly used in cigarette lighters. This necessarily involves the inclusion of a wick as an essential element of the candle. An important object is to provide, in an artificial candle, means for varying the extent to which the tip of the wick is exposed. With such an arrangement the size of the flame may be adjusted as occasion demands.

It has been found that when attempt has been made to use artificial candles the heat of the flame is conducted to the fuel reservoir, which results in overheating and an undesirable if not dangerous condition. Thus another important object of the invention is to provide in an artificial candle, one or more airspaces between the flame and the fuel supply and which airspaces afford insulating effects. The features of adjusting the flame and providing this insulation are intimately tied up with the novel construction of the tip of the artificial candle of this invention, as will be later described in detail.

Users of artificial candles often desire candles of a certain color. Thus, a housewife using candles on the dining-room table will on one occasion want the candles to be yellow to fit in with the general decor, while on another occasion she might wish them to be green or some other color. With this condition in mind, another highly important object of the invention is to provide an artificial candle which includes an outer removable and replaceable sheath. A set of such sheaths for each candle may be provided, and any particular sheath used at any time depending on the color or decorative effect desired.

Another object of the invention is to provide an artificial candle of the character indicated with a novel fuel reservoir which includes structural means for compressing the cotton batting which is ordinarily included in such a reservoir and thereby provide maximum space for the fluid. Thus, in accordance with the present invention, a tube of a diameter appreciably less than the candle casing is filled with the batting, with portions extending from opposite ends thereof in the nature of a mushroom head or powder puff. This head at one end engages the bottom of the reservoir and at the other end engages the

2

wick which is curled about beneath the upper casing end.

Various other more detailed objects and advantages of the invention, such as arise in connection with carrying out the above-noted ideas in a practical embodiment, will in part become apparent and in part be hereinafter stated as the description of the invention proceeds.

The invention therefore comprises an artificial candle which operates on liquid fuel and which includes a casing housing the fuel reservoir, with the latter including a longitudinally extending tube having cotton batting therein and a mushroom head at each end, a removable sheath over said casing, a tip structure providing adjustability in the extent to which the wick tip is exposed, and insulating airspaces between the flame and the casing.

For a full and more complete understanding of the invention, reference may be had to the following description and accompanying drawings, wherein:

FIGURE 1 is a side view, partly in section and partly in elevation, of an artificial candle designed in accordance with the precepts of this invention;

FIGURE 2 is a longitudinal section through the reservoir tube depicting the mushroom heads of cotton batting at both ends thereof;

FIGURE 3 is a section through the tip structure of the candle; and

FIGURE 4 is a view developing the several elements of the tip structure in exploded relation.

Referring now to the drawings, wherein like reference characters denote corresponding parts, and first more particularly to FIGURE 1, an artificial candle is therein illustrated as including a two-part casing with the parts being designated 10 and 11. The casing part 11 is in the nature of a pedestal and is, of course, susceptible of wide variation of design in actual use. The important features of construction so far as this invention is concerned are the tubular nature of the pedestal 11 as defined by a bore 12 and a base 13 providing a reservoir 14 and which includes a bottom wall 15. It will be noted that the upper end of the tubular part 11 is reduced, and exteriorly threaded as indicated at 16. This reduced portion provides a shoulder at 17.

The upper casing part 10 has a slight taper following the contour of a conventional candle, and this taper blends in with a corresponding taper on the part 11. The upper casing part 10 is also tubular, and the lower end is interiorly threaded so as to permit its being screwed onto the thread 16 with the free-end edge abutting the shoulder 17. If desired, an annular abutment ring 18 may also be included in the casing part 10.

It is evident that the bores of the parts 10 and 11 and the chamber 14 provide adequate space for receiving a fluid fuel. While the actual fuel employed is of course susceptible of wide variation, the invention has particularly in mind the use of conventional lighter fluid.

Referring now more particularly to FIGURE 2, a reservoir tube is therein depicted and designated 19. This tube 19 has a bore 20, and the space defined thereby is filled with batting 21 which is somewhat compressed as it is forced into the tube. This batting projects beyond the lower end and takes the form of a mushroom head or powder puff 22 that engages the bottom wall 15 of the reservoir 13. There is a second mushroom head or powder puff 23 at the upper end which engages the wick, as will be later described.

Referring now more particularly to FIGURE 4, the upper end of the casing part 10 is shown as closed by a top end wall 24 formed with a threaded aperture 25. The casing 10 is continued a slight distance above the end wall 24 to provide an annular lip 26.

The tip structure which is mounted on the upper end of the casing part 10 is referred to in its entirety by the

reference character T. It comprises a wick holder in the form of a cylindrical tube 27 that is exteriorly threaded as indicated at 28. It is evident that the lower end of this tube may be screwed into the threaded aperture 25 to affix the wick holder in position. Under optimum conditions of usage, the lower end of the wick holder 27 should be substantially flush with the underface of the end wall 24.

A wick is designated 29 and is of the material commonly employed for wicks. The wick 29 includes a central main body portion which extends throughout the wick holder 27, a lower end portion 30 which is curled about beneath the underface of the end wall 24, and an exposed tip portion 31. With the portion 30 positioned against the underface of the end wall 24, the mushroom head 23 is firmly pressed thereagainst so as to conduct fluid to the wick.

A so-called "snuffer" is designated 32. It includes a threaded bore 33 that is screwed onto the wick holder 27. It has an outer conical surface 34 which may be treated in any desired manner so that it is constituted a good friction surface. Thus it may be roughened or coated with a good friction material. The upper end of the snuffer 31 is reduced to provide a thin-walled nipple 35. Under conditions of usage, the tip 31 of the wick 29 projects a required distance above the nipple 35. A tip proper is designated 36. It comprises a main body portion of conical shape with the angle of the cone substantially conforming to the conical surface 34. Thus, the inner conical surface 37 of the tip is intended to frictionally engage the surface 34 so that as the tip 36 is rotated this movement is translated to the snuffer 32 so as to rotate the latter and move it upwardly or downwardly depending on the direction of rotation on the wick holder 27 and thereby adjust the extent to which the wick tip 31 is exposed.

The tip member 36 also includes a lower reduced end or neck 38 which is received within the lip 26 on the casing 10.

As illustrated in FIGURE 1, the outer contour of the casing parts 10 and 11 is a smooth continuous tapered surface over which is snugly fitted a sheath 39. The latter is intended for decorative purposes and may be removed and replaced by other sheaths as occasion demands. It may be of plastic or any other appropriate material.

It is important to note that, with the tip member 36 in place and the other parts assembled as illustrated in FIGURE 3, an air chamber is provided at 40 between the neck 35 and tip member 36. This air chamber affords heat-insulating effects. There is a second air chamber 41 between the lower end of the snuffer 32 and the end wall 24. These two air chambers materially reduce the amount of heat which is conducted from the flame to the casing.

Operation

With the candle assembled in the manner illustrated in the drawings and fluid fuel filling the bore of the cas-

ing and reservoir 24, it is evident that fluid will always be delivered to the curled wick end 30 by the mushroom head 23. When the candle is to be used, the tip member 36 is rotated to expose a required extent of the wick tip 31. This adjustment may be made either before or after the flame is created. The candle will remain lit as long as its use is required. The flame may be extinguished either by blowing thereon in the conventional manner or rotating the tip 36 to move the snuffer 32 upwardly so as to completely obliterate any exposed portion of the wick tip 31. During the periods of use the air chambers 40 and 41 prevent the casing from becoming overheated.

As above explained, the sheath 39 is removable and may be replaced by another sheath of a different color as occasion demands.

While a preferred specific embodiment of the invention is hereinbefore set forth, it is to be clearly understood that the invention is not to be limited to the exact constructions, mechanisms, and devices illustrated and described, because various modifications of these details may be provided in putting the invention into practice within the purview of the appended claim.

What is claimed is:

In an artificial candle, a cylindrical casing having an upper wall formed with a central aperture and spaced from the upper end of said casing, a tubular wick holder mounted in said aperture and having external threads, a wick extending through said wick holder and having a portion positioned beneath said wall and an upper exposed tip portion, a snuffer having a threaded bore in threaded engagement with said wick holder, and a tip member mounted over said snuffer and in driving engagement therewith whereby rotation of said tip member causes rotation of said snuffer about said wick holder to move said snuffer axially of said wick holder, said tip member having a lower portion spaced from said wick holder and an open bottom defined by a circular edge the external diameter of which is slightly less than the inside diameter of the upper end of said casing into which it fits, and an opening at the top of said tip member through which said wick holder and wick pass, with the tip member providing an insulating space over the wall of said casing.

References Cited in the file of this patent

UNITED STATES PATENTS

295,332	Baumeister	Mar. 18, 1884
813,940	Bentote	Feb. 27, 1906
1,663,064	Vaughn	Mar. 20, 1928
2,436,995	Hamilton	Mar. 2, 1948
2,749,733	Smith et al.	June 12, 1956

FOREIGN PATENTS

9,370	Great Britain	1887
3,424	Great Britain	1896