

July 28, 1942.

F. P. ATKINS

2,291,067

VOTIVE LIGHT AND THE LIKE

Filed March 6, 1940

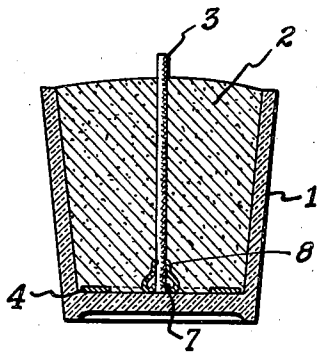


FIG. 1.



FIG. 2.

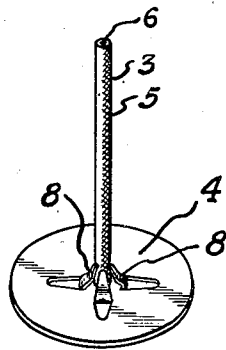


FIG. 3.

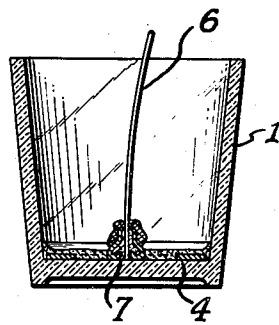


FIG. 4.

INVENTOR.
FRANK P. ATKINS.
Allen & Allen
ATTORNEYS.

UNITED STATES PATENT OFFICE

2,291,067

VOTIVE LIGHT AND THE LIKE

Frank P. Atkins, Cincinnati, Ohio, assignor to
Atkins & Pearce Mfg. Co., Cincinnati, Ohio, a
corporation of Ohio

Application March 6, 1940, Serial No. 322,584

6 Claims. (Cl. 67—21)

I shall describe my invention in connection with votive lights, and point out the problems which my invention solves in connection therewith; but it will be apparent that my invention applies to other lights presenting analogous problems, and I do not desire the appended claims construed as limited otherwise than in accordance with their terms.

Votive lights as used in churches comprise a cup or container, usually of glass, and a candle structure which is placed therein. Due to the fact that the heat of burning may liquefy the fuel for a considerable distance below the actual flame in the cup, it has been the practice to employ a wicking which is reinforced and stiffened so as to be self-sustaining, as in my Patent No. 1,496,837, dated June 18, 1924. It has been the practice to employ as a stiffening agent some combustible or expendable substance which will not interfere with the disintegration and burning-off of the wick as the candle burns down. Also it has been frequent to provide at the bottom end of the wick a metal holder to retain the last portion of the wick upright until the fuel is substantially all consumed.

When the candle is consumed in the votive light, there remains in the cup the metal standard aforesaid, together with an unused small portion of the wick, some pieces, perhaps, of carbonized wick, and a very slight amount of fuel. The glass cups or the like are repeatedly used for additional candles, and frequently without adequate cleaning. This is especially so because the residual film of fuel frequently sticks the holder to the glass so that the cups cannot be cleaned by merely upending or dumping them. To place a fresh candle into a cup containing the leavings of a former candle gives very unsatisfactory results. The fresh candle does not properly seat in the cup, and is likely to be awry and to drip. The fuel also is likely to drain away from the wick to fill the empty portion of the cup. This produces uneven burning and an excessive flame, and may be dangerous. As combustion proceeds and all of the fuel becomes liquefied, the standard for the new wick may catch and tilt on the old standard, bringing the wick out of alignment, sometimes permitting the flame to touch and crack the glass of the cup, and at other times permitting the wick to fall over and become submerged, whereby the flame is extinguished.

An object of my invention is the provision of a structure facilitating the cleaning of the cup. An object of my invention is the provision of

means requiring the removal from the cup of refuse from another burning before the cup can be re-used. Thus my invention provides greater safety as well as greater satisfaction in the operation of votive and similar lights.

Further objects of my invention include the provision of an improved structure for combustion illuminants, an improved means of flame control whereby combustion is made more even, with consequent safety and economy of fuel for a given burning time, and the provision of a structure with the inherent advantages noted above which is inexpensive to produce.

These and other objects of my invention which will be set forth hereinafter or will be apparent to one skilled in the art upon reading these specifications, I accomplish by that certain construction and arrangement of parts of which I shall now describe the aforesaid exemplary embodiment. Reference is now made to the drawing wherein:

Figure 1 is a vertical sectional view through a votive light showing one form of my invention.

Fig. 2 is an elevational view with parts in section of a form of wick which I may employ.

Fig. 3 is a perspective view of a wick and holder.

Fig. 4 is a sectional view showing a cup after the complete combustion of a candle.

Briefly, in the practice of my invention, I provide a structure for a votive, night light or similar device in which, after the fuel is all consumed, a structure will remain in the container which will preclude the insertion of another candle until that structure has been removed. I provide a structure which upon removal will clean out the container to such an extent that it will be safe to insert another candle. In order to control combustion and to prevent accidents, I prefer to employ as part of my structure a wicking in which a non-combustible element has been included. In other words, I prefer that a part of the structure which prevents the insertion of a new candle prior to cleaning of the container shall be a part of the wick structure. To this end I prefer to employ a wick comprising suitable wicking filaments woven, braided, or twisted around or otherwise associated with a non-combustible member which substantially retains its stiffness and its position despite the consumption of the fuel and the combustible part of the wick, and heat incident thereto. I also employ a support for the reinforced wick, which support is capable of holding the reinforcement upright in the container in spite of the liquefaction of the

fuel, the consumption of the fuel and the consumption of the combustible parts of the wick, so that when the candle has been completely consumed there remains in the container an up-standing structure which must be bodily removed before the container can be refilled.

In Fig. 1, 1 represents a glass container for a votive light. 2 represents the fuel of a votive candle having a centrally disposed wick 3. The wick is held in a holder at the bottom of the candle indicated at 4, the holder, the wick and the fuel constituting a completed article of manufacture to be placed in the container 1 for burning.

In Fig. 2, I have shown an exemplary wick structure in which cords or the like 5 are braided around a metallic core 6. The core is preferably made of stiff metallic wire which will neither disintegrate nor be consumed in the heat of the flame. Various materials are available; but a material should be chosen which will not react with any chemical substance present in the fuel. For most uses hardened steel wire is available; but I prefer to employ stainless steel wire not only because it exhibits less chemical reaction towards substances which may be found in the fuel, but also because for a given gauge it tends to be stiffer after combustion and to hold its shape better. The gauge of the wire may be chosen in accordance with the length of the wick. For ordinary votive lights I have found that wire of approximately 35 gauge to 28 gauge is entirely satisfactory.

The form of the holder or support 4 does not constitute a limitation upon my invention. I have shown a holder provided with a central perforation 7 preferably having its edges struck upwardly as shown, and ears 8 struck from the body of the holder and adapted to be clamped against the wick at a point spaced from the perforation 7 so as to give interspaced supporting points. Other types of holders may be employed. It is greatly to be preferred that a holder be chosen which will retain the wick reinforcement in upright position substantially centrally of the container after the consumption of the fuel and after the exposed combustible parts of the wick have been consumed. It is also greatly to be preferred that the engagement of the wick and the holder be such that when the reinforcement is grasped for removing the support will come out with it. Thus it is not beyond the scope of my invention to bend the reinforcement over beneath the holder or to bare the lower end portion of the wick and fasten the reinforcement directly to a holder as by bending, clamping, riveting, brazing or the like.

My invention in its preferred form presents the aspect shown in Fig. 4 after the consumption of the wick and fuel. The reinforcement 6 will be held upright within the container and preferably, though not necessarily, will extend beyond the top thereof. It thus serves to prevent the insertion of a new candle into the container until the refuse of the old one has been removed. This is easily accomplished by grasping the reinforcement 6 and pulling it out of the container. With it will come the holder 4, and the container will be substantially clean except for a thin film of the fuel at the bottom. The support may be made substantially coextensive with the bottom of the container so as to carry out with it any carbonized portions of combustible wicking material which have fallen thereon during the burning of the candle.

Since the reinforcement of the wick is held up-

right at all times within the container, it will be evident that the burning wick cannot fall over against the side of the container so as to crack it, nor can it curl and become submerged in the fuel so as to extinguish the flame. Moreover, the flame is more even and the fuel lasts longer because of the controlled combustion. For the most part the wick is entirely consumed but some carbonized portions thereof may adhere to the wire or become dislodged and fall into the molten fuel. As has been explained, the reinforcement is such as to withstand the heat of the burning without disintegration and without substantial loss of shape or stiffness.

Modifications may be made in my invention without departing from the spirit of it.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. In a candle structure for votive lights, a reinforced wick comprising combustible wicking strands braided about a stiff substantially straight wire reinforcement of non-combustible character and of at least the length of said wick, and a holder for said wick and reinforcement located substantially at the bottom of said candle and retaining said non-combustible reinforcement in an upright position in spite of melting and consumption of the fuel and consumption of the wicking strands, said wire being of sufficient stiffness and strength as to enforce the cleaning of a container in which said candle has been burned prior to the insertion of a fresh candle.

2. In a votive candle, a body of fuel of substantial length, and a wick comprising wicking strands in association with a non-combustible, stiff, relatively straight metallic core of at least the length of said wick together with a holder for said wick located substantially at the bottom of said candle, and adapted to embrace said wicking strands and said core to hold said core upright in spite of the consumption of the fuel and wicking strands, said core being in the form of a wire of sufficient strength and stiffness as to enforce the cleaning of a container in which said candle has been burned prior to the insertion of a fresh candle.

3. In a votive candle, a body of fuel of substantial length, and a wick comprising wicking strands in association with a non-combustible stiff, relatively straight metallic core of at least the length of said wick, a holder for said wick located substantially at the bottom of said candle, holding said core upright in spite of the consumption of the fuel and wicking strands, said core comprising a metallic wire of a character which will retain substantially its position and stiffness in spite of the heat of the flame, said core being in the form of a wire of sufficient strength and stiffness as to enforce the cleaning of a container in which said candle has been burned prior to the insertion of a fresh candle.

4. In a votive candle, a body of fuel of substantial length, and a wick comprising wicking strands braided about a non-combustible metallic core of at least the length of said wick together with a holder for said wick located substantially at the bottom of said candle, and holding said core upright in spite of the consumption of the fuel and wicking strands, said core comprising a stiff, relatively straight metallic wire of a character which will retain substantially its position and stiffness in spite of the heat of the flame, the said wire being of stainless steel, said wire being of sufficient stiffness and strength as

to enforce the cleaning of a container in which said candle has been burned prior to the insertion of a fresh candle.

5. A wick structure for a candle comprising a holder, a wick projecting upwardly from said holder, and a non-combustible, non-disintegrable stiff, substantially straight wire reinforcement for said wick, attached to said holder so as to be maintained in upright position in spite of combustion, and so as to permit removal of said holder from a container by an upward pull exerted upon said reinforcement. 10

6. In a candle for use in a container, a body of fuel and a wick structure comprising a combustible part adapted to be progressively consumed, a non-combustible part of at least equal length, and a holder holding said non-combustible part upright, said non-combustible part and said holder being fastened together in such a way as to permit removal of refuse from said container by an upward pull on said non-combustible part.

FRANK P. ATKINS.