

No. 794,771.

PATENTED JULY 18, 1905.

A. BAUER & B. K. HOLLISTER.  
FORMALDEHYDE CANDLE.  
APPLICATION FILED JAN. 4, 1904.

FIG. 1.

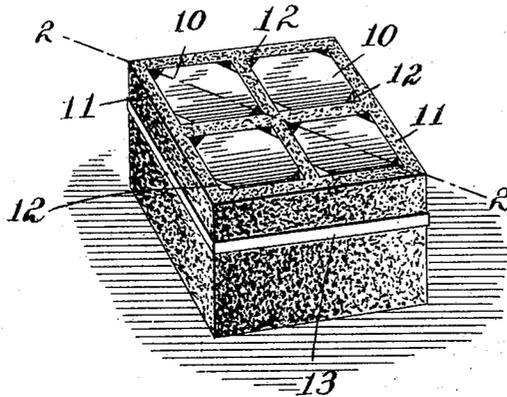


FIG. 2.

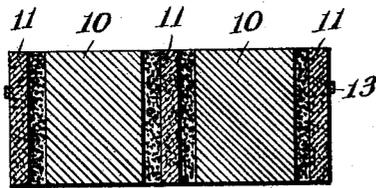
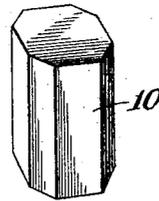


FIG. 3.



Witnesses:

Walter T. Estabrook

Milton Lenoir.

Inventors,

Alex Bauer and  
Bertram K. Hollister

By J. T. Bell, atty.

# UNITED STATES PATENT OFFICE.

ALECK BAUER AND BERTRAM K. HOLLISTER, OF CHICAGO, ILLINOIS,  
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## FORMALDEHYDE CANDLE.

SPECIFICATION forming part of Letters Patent No. 794,771, dated July 18, 1905.

Application filed January 4, 1904. Serial No. 187,642.

*To all whom it may concern:*

Be it known that we, ALECK BAUER and BERTRAM K. HOLLISTER, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Formaldehyde Candles, of which the following is a specification.

The object of this invention is to provide a formaldehyde candle of simple and compact form for reverting into a gaseous state a polymeric formaldehyde, technically known as "paraformaldehyde" and commercially known as "paraform."

A further object is to make a candle of this character which can be safely used, which will readily ignite and burn without sparking or flaming, and which will produce a perfect vaporization of a comparatively large quantity of paraformaldehyde with a minimum amount of combustible material.

The accompanying drawings illustrate one embodiment of the invention, and, referring thereto—

Figure 1 is a perspective view of the candle. Fig. 2 is a sectional view on the line 2-2 of Fig. 1. Fig. 3 is a detail perspective view of one of the tablets.

The candle comprises a shell 11, made of charcoal or other suitable combustible material which will burn without sparking or flaming and not ignite by friction. This shell is divided by cross-walls 11', forming an integral part of the shell and made of the combustible material into a plurality of separate compartments, which are open at top and bottom, as shown in Fig. 2. The paraformaldehyde is formed into tablets 10, adapted to fit in the compartments of the shell, and they are held in place in the shell by frictional engagement with the walls of the compartments. The corners of the tablets are preferably cut away, as shown in Fig. 3, so that spaces 12 will be left between the tablets and each cor-

ner of the compartments. These spaces promote combustion by providing for a circulation of the heat and gas and also promote the efficiency of the candle by allowing the gas to escape more readily.

The shell and the tablets are proportioned so that sufficient heat will be produced by the combustion of the shell to completely vaporize the tablets. By subdividing the paraformaldehyde into a plurality of tablets and completely surrounding each tablet with a wall of combustible material forming a part of the shell we find that a large quantity of the paraformaldehyde can be vaporized with a comparatively small quantity of the combustible material. The vaporization of the tablets proceeds downward to the same degree and coincidentally with the combustion of the shell, which also burns downward. The walls of the shell are sufficiently exposed to take up from the atmosphere all the oxygen required to insure perfect and even combustion.

To facilitate igniting the shell, we may provide a kindler 13 around the shell near its upper edge and made of some readily-ignitable material, such as paper coated with saltpeter.

In practice the shell is ignited at its upper edges by first igniting the kindler or in any other suitable manner, the cross-walls 11' becoming ignited from the outside walls. The shell will burn without sparking or flaming, and for this reason the candle can be used with perfect safety; but as a further precaution the candle can be placed in a plate or saucer, if desired, or the candle can be used in connection with the holder covered by United States Letters Patent No. 773,145, granted on October 25, 1904, to the undersigned, B. K. Hollister, assignor. This holder is adapted to be formed into a support for the candle while burning. The tablet may be made in a single piece, as shown

in Fig. 3, or in several pieces adapted to be nested one above the other in its compartment.

What we claim, and desire to secure by Letters Patent, is—

1. A formaldehyde candle comprising a shell made of charcoal, cross-walls forming an integral part of the shell and dividing it into a plurality of separate compartments open at top and bottom, and tablets of paraformaldehyde arranged in said compartments.

2. A formaldehyde candle comprising a shell of combustible material, cross-walls forming an integral part of the shell and dividing it into a plurality of separate compartments open at top and bottom, and tablets of paraformaldehyde held in said com-

partments by frictional engagement with the walls thereof, said tablets being cut away to leave open spaces between the tablets and the corners of the compartments.

3. A formaldehyde candle comprising a shell made of charcoal, cross-walls forming an integral part of the shell and dividing it into a plurality of separate compartments, tablets of paraformaldehyde in said compartments, and a kindler surrounding the shell near its upper edge.

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Witnesses:

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