No. 648,998. Patented May 8, 1900.

C. D. RUNDELL.

WICK.

(Application filed Jan. 16, 1899.)

(No Model.)

Fig. 1.

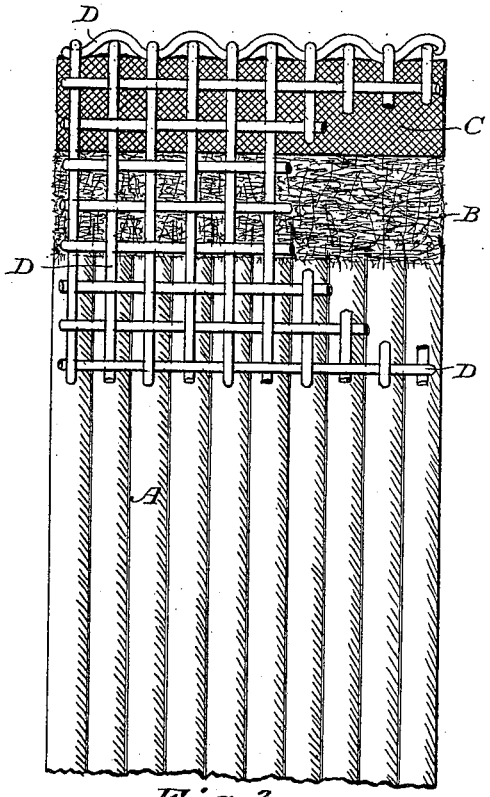


Fig. 2.

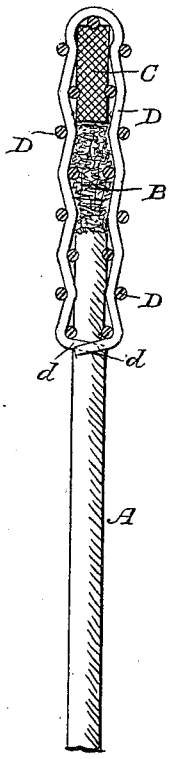
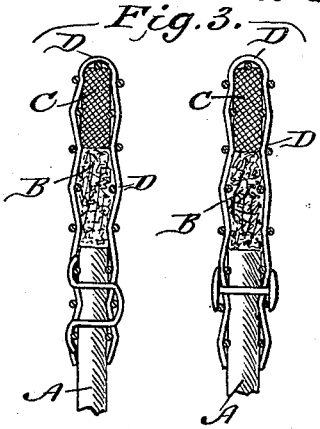


Fig. 3.



Witnesses

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Inventor

Commodore D. Rundell

By his Attorney

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

COMMODORE D. RUNDELL, OF CLEVELAND, OHIO, ASSIGNOR TO HENTIR SARAFIAN, OF SAME PLACE.

WICK.

SPECIFICATION forming part of Letters Patent No. 648,998, dated May 8, 1900.

Application filed January 16, 1899. Serial No. 702,224. (No model.)

To all whom it may concern:

Be it known that I, COMMODORE D. RUNDELL, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Lamp-Wicks, of which the following is a specification, that will enable those skilled in the art to which my invention pertains to make and use the same.

My invention relates to lamp-wicks of that kind which are made a separate article of manufacture to fit any lamp and have their body portion formed of woven cotton cloth, while the end which carries the flame is surmounted with a refractory or incombustible material which does not burn away or require trimming.

My invention consists in the peculiar construction of such lamp-wick which will present and maintain perfectly the alinement of the top of the wick, which will not char the cotton wick, and which will perfectly feed and is capable of being sold as a separate article of manufacture suited to any lamp; and it consists in the peculiar construction and arrangement of the parts of the wick, as hereinafter shown and described.

Figure 1 represents, on an enlarged scale, a side elevation of a lamp-wick embodying my improvements, some of the parts being broken away for the purpose of clearer illustration. Fig. 2 is a longitudinal sectional view of the same, and Fig. 3 shows two slight modifications thereof.

A represents the woven web of a common lamp-wick, extending into and partially embedded at its upper end in a mass B of asbestos or mineral wool. Above this mass B is a relatively-narrow strip of stiff millboard C, composed of asbestos and practically incombustible. A wire-gauze D or closely-perforated metal cage, cap, or sheath is placed over the top of the wick, embracing the hard asbestos crown and loose fiber fillings and holding them securely to the cotton body of the wick A, the wire-gauze being secured to the wick A in any suitable manner, either by clamping the lower ends D of some of the wires through the wick, as shown in Fig. 2, or by staples, as shown on the left of Fig. 3, or by rivets, as shown on the right of Fig. 3.

The ordinary wicking A of cotton or other woven fabric is the best conductor of oil from the reservoir to the burner. The mass of asbestos wool B, while not so good a conductor as the cotton wicking, is a better conductor than the millboard and serves the purpose well enough for a short distance, and it readily absorbs or takes up the oil from the cotton wicking, while keeping the latter away from the heat generated by the combustion of the gases at the top of the asbestos millboard, from which, however, it receives a considerable degree of heat which starts and promotes the conversion of oil into combustible gas.

The asbestos millboard C by reason of its stiffness preserves the top of the wick in any desired alinement and prevents the wire sheath from being dented and made crooked and also by reason of its compactness prevents too hasty generation of the combustible gas and its flow to the top edge, where combustion takes place, and, further, by reason of the compactness of the asbestos-millboard strip the oil is subjected to the highest degree of filtration, the heavier and grosser portions being held back, while the lighter, more volatile, or better illuminating portions are allowed to proceed to the point of combustion. By this means I am enabled to produce perfect combustion with absolutely no smoke or disagreeable odor arising from the flame.

The wire-gauze D or perforated metal cage holds the cotton wick, the mineral wool, and asbestos millboard all in proper place and in contact with each other, so that the whole structure is firm and secure and forms an integral article of manufacture suited to any lamp.

I am aware that cotton wicks with refractory tops have been used before the date of my invention, and I make no broad claim to the same. I am also aware that a woven-wire cap has been packed or stuffed with fibrous glass and also, further, that a special form of wick-tube has been fitted with a cotton wick below having a mineral wick above it and mineral wool between the two, but

without forming a separate integral article of manufacture that could be made and sold and fitted to any lamp. My invention comprises four essential features—viz., a cotton wick, loose asbestos fibers above the cotton wick, a crown of relatively-hard asbestos millboard above the loose fibers, and an inclosing sheath of woven wire which passes along the sides and over the end of the three parts of the wick and uniting them into a single integral article made and sold as a separate article of manufacture and applicable to any lamp. All the features of my composite wick are correlated. The hard asbestos crown preserves the alinement of the wick to a straight edge and even flame, preventing the wire from being dented in and made uneven. The loose fiber facilitates capillary transfer and prevents the charring of the subjacent cotton wick. The cotton wick depends into the oil-fount of any lamp and gives the freest and best feed, while the woven wire protects and unifies the whole and maintains its integrity.

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

A lamp-wick comprising four essential elements, viz. a body portion of cloth, a relatively-narrow upper end of asbestos millboard, a packing of loose mineral fiber between the end of the cloth wick and the millboard crown, and an inclosing and retaining sheath of gauze wire extending along both sides and over the end of the wick, and connecting and retaining the several elements in unitary structure, as a separate, complete, and self-sustaining article of manufacture, adapted to fit any lamp substantially as and for the purpose described.

In testimony whereof I affix my signature, in the presence of two witnesses, at Cleveland, Ohio, August 27, 1898.

COMMODORE D. RUNDELL.

Witnesses:
J. ELSOFFER,
WM. A. SKINKLE.