

UNITED STATES PATENT OFFICE.

JOSEPH BEVERLEY FENBY, OF CASTLE-BROMWICH, ENGLAND, ASSIGNOR TO
THE LEE LAMP (PARENT) COMPANY, LIMITED, OF LONDON, ENGLAND.

INCOMBUSTIBLE WICK FOR BURNING HYDROCARBON OILS.

SPECIFICATION forming part of Letters Patent No. 580,308, dated April 6, 1897.

Application filed November 13, 1896. Serial No. 612,012. (No specimens.) Patented in England June 19, 1895, No. 11,913; in Turkey March 27, 1896, No. 503; in France April 3, 1896, No. 255,305; in Belgium April 3, 1896, No. 120,703; in Luxemburg April 4, 1896, No. 2,482; in Austria May 23, 1896, No. 46/2,046; in Spain May 29, 1896, No. 18,843, and in Italy June 30, 1896, LXXXI, 44.

To all whom it may concern:

Be it known that I, JOSEPH BEVERLEY FENBY, civil engineer, a subject of the Queen of Great Britain and Ireland, residing at the Mill House, Castle-Bromwich, in the county of Warwick, England, have invented certain Improvements in Incombustible Wicks for Burning Hydrocarbon Oils, (for which patents have been obtained in Great Britain, No. 11,913, dated June 19, 1895; in Austria, No. 46/2,046, dated May 23, 1896; in France, No. 255,305, dated April 3, 1896; in Belgium, No. 120,703, dated April 3, 1896; in Luxemburg, No. 2,482, dated April 4, 1896; in Spain, No. 18,843, dated May 29, 1896; in Italy, LXXXI, 44, dated June 30, 1896, and in Turkey, No. 503, dated March 27, 1896,) of which the following is a specification.

The object of this invention is to provide wicks for use in burning hydrocarbon oils, which wicks shall be practically incombustible, free from clogging by deposit, and efficient in lighting, burning, and extinguishing.

My improved wick is applicable to annular and flat wick burners or burners of any other shape. The materials and processes of production being nearly alike for all classes of wicks, the following will make the invention and the manner in which it may be performed clear.

I will describe my improved wick first for annular burners.

On a mandrel I wind any suitable textile fabric, such as calico or linen, with paste or cement, such as flour paste, until the desired diameter is reached, a due allowance being made for the shrinkage in diameter which will result during carbonization. The roll so formed is then thoroughly dried, and when dry is carbonized in a crucible sealed with charcoal powder, fine plumbago, sand, or an equivalent.

The resulting cylinder of carbon is then

cut in a lathe or by other means into suitable annular wicks.

Wicks for flat burners are made of the same materials and in the same way, except that they are made flat instead of being coiled on a mandrel.

The degree of porosity and capillary absorption can be regulated by the texture of the fabric used.

It is advisable to carbonize these wicks at a very high temperature and in a bed of material, such as fine plumbago, which will exclude air, give vent to evolved gases, and withstand great heat.

Wicks made as hereinbefore described are incombustible and can be kept clean by extinguishing the lamp in the following way: Instead of using an extinguisher or lowering the wick or blowing out the light the supply of oil is cut off, and that quantity held in the pores of the wick burns quickly away, the result being that the wick is burned off quite clean and does not catch fire and smolder, as a cotton wick would.

Before carbonizing the circular wicks I find it advisable to withdraw the mandrel and fill the bore of the cylinder with rag, paper, or other suitable material.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

An incombustible carbon wick for burning hydrocarbon oils, the said wick consisting of cemented layers of fabric, carbonized, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

J. BEVERLEY FENBY.

Witnesses:

J. C. CRAMPIN READ,
ALBERT NEWBY.