H. HALVORSON.
Lamp-Wicks.

No. 212,309. Patented Feb. 18, 1879.

Fig. 1.

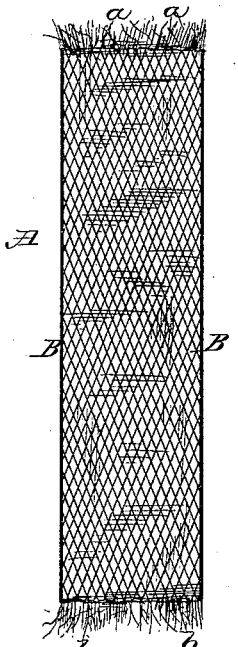

Fig. 2.

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HALVOR HALVORSON, OF NASHUA, N. H., ASSIGNOR TO WILLIAM EARL, OF SAME PLACE, AND BENJN. A. EARL, OF PHILADELPHIA, PA.

IMPROVEMENT IN LAMP-WICKS.

Specification forming part of Letters Patent No. **212,309**, dated February 18, 1879; application filed October 9, 1878.

To all whom it may concern:

Be it known that I, HALVOR HALVORSON, a resident of Nashua, in the county of Hillsborough and State of New Hampshire, have invented certain new and useful Improvements in Lamp-Wicks; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to the braided or woven wicks commonly used in kerosene or other lamps; and it consists in means for securing the even trimming of the wick and for preventing raveling or fraying upon its edges, which destroys the regular form of the flame, causes the lamp to smoke, and by diverting the flame to one side not only blackens the chimney, but frequently causes it to break because of the unequal expansion of the glass.

In using the ordinary wick sold in the market it frequently happens that with the utmost care in trimming and lighting the ends thereof fray or ravel at or near the edge the moment the wick is cut, or else become ragged soon after the lamp is lighted. Moreover, every one is familiar with the difficulty which is experienced in trimming the wicks, so that the strands which lie near the edge shall be of the same length as those near the center. This is owing to the fact that as the operator trims the wick the blades of the scissors tend to press the longitudinal fibers out of their perpendicular position in the direction the cut is made, and as the binding-threads which unite the fibers are severed there is nothing to support those strands which lie at the edge of the wick, and are therefore cut last. Thus it happens almost inevitably that these are cut longer than the fibers in the center. When lighted, therefore, and raised to the proper height, these strands, which project above the others, divert the body of the flame to one side, and by their own excess of combustion cause the lamp to smoke violently, blackening the chimney, and frequently causing its destruction.

To avoid these difficulties, I apply to the edges or selvages of the wick a thin sizing or solution of glue or other suitable adhesive material, which unites the longitudinal fibers or strands to the binding-threads in such a manner as to prevent said threads from giving way immediately above the cut edge of the wick, and also to avoid all raveling or fraying of the wick in the manner described. By this means the difficulties mentioned above are wholly obviated.

Referring to the drawings, Figure 1 is a view of the ordinary woven or braided wick with the size applied, and Fig. 2 is a transverse section of the same.

A represents the ordinary lamp-wick sold in the market, composed of longitudinal strands *a*, woven with the transverse binding-threads *b*. To the edges of this fabric I apply a thin size or solution of glue or other adhesive material, as indicated at B in the drawings. This substance may be applied to the selvage of the wick either while in the loom in process of manufacture or after the wick is finished. In the latter case a convenient method is to place one or more wicks between two plane surfaces, allowing the edges of the wicks to project very slightly, and apply the size or other adhesive substance with a brush; or a long web of wicking may be wound upon itself and the size applied to the coiled edge.

It should be understood that while this sizing, glue, or other substance may be composed of any material of an adhesive or mucilaginous character which is insoluble in the oil or other illuminating-fluid, it should be of such consistency, and so applied, as to coat the selvage only without penetrating so far as sensibly to diminish its width by clogging the strands. Glue, starch, dextrine, mucilage, or any adhesive substance in solution may be used. In practice, however, the glue known in commerce as "Bonnet glue" and a solution of dextrine are preferable.

Besides securing the even trimming of the wick and avoiding the constant smoking and dim illumination which are so often experienced, I have found in actual practice that by my invention another most important advantage is secured. In carrying the lamp about

the house it has been found necessary, when using the ordinary wick, to turn the latter down so far as to diminish the size of the flame to one-third or one-fourth its usual size. This is necessary to avoid the dense volume of smoke which is apt to be produced by the current of air which strikes the flame when the lamp is moved rapidly. But with my invention the lamp may be carried freely and rapidly without turning the wick lower than when the lamp is at rest.

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

As a new article of manufacture, a lamp-wick having a solution of adhesive or mucilaginous material applied to its edges, substantially in the manner and for the purposes set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

HALVOR HALVORSON.

Witnesses:
A. McKEAN,
G. C. SHATTUCK.