UNITED STATES PATENT OFFICE.

ADOLF ALBRECHT, OF BERLIN, GERMANY.

PROCESS OF PRODUCING INCOMBUSTIBLE LAMP-WICKS.

SPECIFICATION forming part of Letters Patent No. 651,026, dated June 5, 1900.

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To all whom it may concern:

Be it known that I, ADOLF ALBRECHT, a subject of the King of Prussia, German Emperor, residing at Berlin, in the Kingdom of Prussia, German Empire, have invented a certain new and useful Improved Process of Producing Incombustible Lamp-Wicks, of which the following is a full, clear, and exact description.

One of the main causes of the production of soot and irregular formation of the flame in connection with lamp-wicks is to be found in the uneven combustion of the wick. The disadvantage is particularly noticeable in connection with paraffin incandescent lamps, in which the form of the flame should correspond as nearly as possible with that of the mantle, so that any displacement of the flame is not only liable but almost certain to form soot patches or deposits on parts of the mantle. Attempts have been made to obviate this disadvantage by employing asbestos wicks and by fitting porous rings to the upper end of the wick; but these means all tend to diminish the suction powers of the wick.

According to the present process the wick is not only rendered non-combustible, but its suction powers are considerably increased.

The process consists in producing a precipitation of oxid or carbonate of magnesium on the fibers of the wick. In order to attain this, the oil is first removed from the wick in known manner and the latter then placed in a boiling solution of a magnesium salt soluble in water, such as sulfate or chlorid of magnesia. After the wick has become thoroughly saturated with this solution it is taken out, expressed, and then placed in a boiling alkaline solution or a boiling solution of alkaline salts, such as carbonate of soda, ammonia, or the like. This causes the carbonate of magnesium (not soluble in water) to separate out onto the fiber of the wick. Thus the wick will be rendered entirely incombustible, while the well-known porous nature of magnesia increases its power of suction, as has been proved by experiments made with the impregnated wick. Experiments have also shown that magnesia alone is suitable for the object in view, owing to the fact that all other earths or metals either reduce or entirely destroy the suction power of the wick.

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—

A process for rendering lamp-wicks incombustible and increasing the suction powers of the same which consists in first saturating the wick with a solution of a magnesium salt, and thereafter treating the same with a solution of an alkali or alkaline salt and thus producing a precipitation of an insoluble salt of magnesium on the fibers of the wick substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

ADOLF ALBRECHT.

Witnesses:
WOLDEMAR HAUPT,
HENRY HASPER.