

UNITED STATES PATENT OFFICE.

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COMPOSITION OF MATTER AND METHOD OF APPLYING SAME.

SPECIFICATION forming part of Letters Patent No. 587,799, dated August 10, 1897.

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To all whom it may concern:

Be it known that I, JAMES Q. DIXON, a citizen of the United States, residing in the city of San Francisco, State of California, have invented certain new and useful Improvements in the Treatment of Manufactured Glass Articles, more particularly incandescent electric lamps—viz., the globes of same; and I do hereby declare the following to be a full, clear, and exact description thereof.

It is found in practice that rays of light passing through glass globes, colored, ground, or frosted, in process of manufacture are absorbed and counter-reflected to a greater or less extent and a portion lost for general illuminating purposes, whereas light having passed through such a globe and striking on small reflecting-surfaces immediately outside such a globe will be divergently reflected and add to the general illuminating power of the lamp, while the light will be generally diffused and not be reflected in one direction more than in another.

The objects of the invention are to prevent absorption and counter-reflection of light and to provide a globe in which the reflection and dispersion of light-rays will take place from the outside surfaces of particles outside the globes and in which the light will not have to pass through either colored or ground glass to any extent.

The invention consists, first, in a composition of matter for the designated purposes consisting of materials substantially as and in the proportions hereinafter specified, and, secondly, in the manner of applying the said composition of matter, thus comprising a method, which method would be practicable only with the designated composition of matter or its equivalent.

The following are the ingredients used in the designated composition of matter, taken in about the proportions set forth: solution of silicate of soda, thirty-two ounces; solution of silicate of potassa, eight ounces; silicate of iron, one ounce, and powdered glass, a sufficient quantity to give the desired opacity.

The method of using this composition of matter is as follows: The globe is thoroughly

covered with this mixture, and when the latter is nearly dry is brushed off, removing undetached or loosely adherent particles. It is then laid in one hand, more frosting thrown on, and the hand being lightly closed it is rotated therein by the other hand, which operation presses a suitable quantity of the loose frosting into that already attached to the globe and rounds up and makes even the whole. The globe is then laid aside in a proper place to dry, and when perfectly dry it is rotated once more in the hand, brushed off, and is ready for attachment to the light by the ordinary well-known socket or other suitable means.

The proportion of the silicate of iron to the mixed silicates of soda and potassa may vary to a certain extent without material result.

It is found by experience that the silicate of iron adds very materially to the desirable qualities of the composition, and being a silicate it assimilates itself readily to the other silicates in the composition.

While the described composition of matter and method are particularly adapted for use on electric lamps, it is evident that their use may be much more widely extended. I therefore do not desire to restrict the use of the invention to that particular article, as other articles of glass or equivalent materials may be similarly operated on.

I am aware that lamps and their bulbs have been colored, stained, and frosted in various ways, and such I do not desire to claim, broadly; but,

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

1. A composition of matter for the purpose set forth, consisting of the following ingredients in about the designated proportions, namely: solution of silicate of soda, solution of silicate of potassa, silicate of iron, and glass, broken into small fragments or reduced to a powder, substantially as specified.

2. The method of applying the herein-described composition of matter, or its equivalent, to the surfaces of suitable articles, which method consists in applying the com-

position moist, permitting it nearly to dry,
applying a little more of the same material,
pressing it firmly into that first applied, while
rotating the article to get an equal thickness
5 of the application around it and smoothing
or leveling the surface thereof, then permit-
ting the whole to dry perfectly so that the

article is ready for use, substantially as speci-
fied.

JAMES Q. DIXON.

Witnesses:

FOREST P. TRALLES,

WILLIAM A. THOMPSON, Jr.