

Specification of Frederic Louis Lawrence : coloring and hardening elastic gums for dental purposes.

Contributors

Lawrence, Frederic Louis.

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A.D. 1859, *9th August.* N° 1842.

S P E C I F I C A T I O N

OF

FREDERIC LOUIS LAWRENCE.

COLORING AND HARDENING ELASTIC
GUMS FOR DENTAL PURPOSES.

LONDON:

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A.D. 1859, 9th AUGUST. N° 1842.

Coloring and Hardening Elastic Gums for Dental Purposes.

LETTERS PATENT to Frederic Louis Lawrence, of 50, Berners Street, Oxford Street, in the County of Middlesex, Dentist, for the Invention of "**IMPROVEMENTS IN COLORING AND HARDENING ELASTIC GUMS FOR DENTAL PURPOSES.**"

Sealed the 22nd November 1859, and dated the 9th August 1859.

PROVISIONAL SPECIFICATION left by the said Frederic Louis Lawrence at the Office of the Commissioners of Patents, with his Petition, on the 9th August 1859.

I, **FREDERIC LOUIS LAWRENCE**, of 50, Berners Street, Oxford Street, in the
5 County of Middlesex, Dentist, do hereby declare the nature of the Invention for "**IMPROVEMENTS IN COLORING AND HARDENING ELASTIC GUMS FOR DENTAL PURPOSES,**" to be as follows:—

This Invention consists in coloring to the required tint the elastic gums used by dentists, and hardening them for the purpose of being used in lieu of
10 gold or bone at present in use. I take caoutchouc, sulphur, oxide of zinc, and cinibar (vermillion) in certain proportions, and pass them together through grinding rollers or masticating apparatus until thoroughly incorporated or blended. The proportions which are believed to be most suitable are at the rate of about $3\frac{1}{2}$ lbs. of caoutchouc, $1\frac{1}{2}$ lbs. of sulphur, 1 lb. of vermillion,
15 $9\frac{1}{2}$ lbs. of oxide of zinc, but these proportions may be varied. The compound is to be moulded as heretofore when using compounds of caoutchouc for dental purposes, and subjected to heat, as is well understood, to obtain the desired hardness, after which it is polished by any known means, and then placed in

Lawrence's Improvements in Coloring, &c. Elastic Gums for Dental Purposes.

a closed glass vessel containing alcohol or other suitable liquid, and subjected to solar light, which brings the required flesh color to the surface. By this means the material will be found better suited to answer the purpose of bone or gold.

SPECIFICATION in pursuance of the conditions of the Letters Patent, filed 5 by the said Frederick Louis Lawrence in the Great Seal Patent Office on the 8th February 1860.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, FREDERICK LOUIS LAWRENCE, of 50, Berners Street, Oxford Street, in the County of Middlesex, Dentist, send greeting. 10

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Ninth day of August, in the year of our Lord One thousand eight hundred and fifty-nine, in the twenty-third year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said Frederick Louis Lawrence, Her special licence that I, the said 15 Frederick Louis Lawrence, my executors, administrators, and assigns, or such others as I, the said Frederick Louis Lawrence, my executors, administrators, and assigns, should at any time agree with, and no others, from time to time and at all times thereafter during the term therein expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom 20 of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for "**IMPROVEMENTS IN COLORING AND HARDENING ELASTIC GUMS FOR DENTAL PURPOSES**," upon the condition (amongst others) that I, the said Frederick Louis Lawrence, my executors or administrators, by an instrument in writing under my, or their, or one of their hands and seals, 25 should particularly describe and ascertain the nature of the said Invention, and in what manner the same was to be performed, and cause the same to be filed in the Great Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent.

NOW KNOW YE, that I, the said Frederick Louis Lawrence, do 30 hereby declare the nature of the said Invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement thereof, that is to say:—

This Invention consists in coloring to the required tint the elastic gums used by dentists, and hardening them for the purpose of being used in lieu of 35 gold or bone at present in use. I take caoutchouc, sulphur, oxide of zinc, and cinnibar (vermillion), in certain proportions, and pass them together

Lawrence's Improvements in Coloring, &c. Elastic Gums for Dental Purposes.

through grinding rollers or masticating apparatus until thoroughly incorporated or blended. The proportions which are believed to be most suitable are at the rate of about $3\frac{1}{2}$ lbs. of caoutchouc, $1\frac{1}{2}$ lbs. of sulphur, 1 lb. of vermilion, $9\frac{1}{2}$ lbs. of oxide of zinc, but these proportions may be varied. The compound
5 is to be moulded as heretofore when using compounds of caoutchouc for dental purposes, and subjected to heat, as is well understood, to obtain the desired hardness; after which it is polished by any known means, and then placed in a closed glass vessel containing alcohol or other suitable liquid, and subjected to solar light, which brings the required flesh color to the surface. By this
10 means the material will be found better suited to answer the purpose of bone or gold.

Having thus stated the nature of my Invention, I will proceed more fully to describe the manner of performing the same.

Sulphur compounds of india-rubber (caoutchouc) have before been used by
15 dentists in preparing artificial gums and palates, but the color thereof has not been satisfactory.

The object of my Invention, as above stated, is to obtain a better or more natural color than has heretofore been obtained when using sulphur compounds of india-rubber hardened by heat for dental purposes. The proportions
20 of the substances above mentioned may be varied, but I believe those above given are the most convenient. When the compound has been prepared, the same is used in the plastic state, and is moulded into the proper form in like manner to that heretofore resorted to when using sulphur compounds of india-rubber in the production of artificial gums or palates, and the moulded gums
25 or palates with the teeth, whilst retained in the moulds are subjected to heat to produce the change as heretofore, and as is well understood. The hardened artificial gums or palates when cold and polished are immersed in alcohol, and placed in a position where the sun's rays will act thereon, by which the color of the india-rubber compound will be changed, and the desired effect produced.

30 In witness whereof, I, the said Frederick Louis Lawrence, have hereunto set my hand and seal, this Fourteenth day of October, in the year of our Lord One thousand eight hundred and fifty-nine.

FREDERICK L. LAWRENCE. (L.S.)

LONDON:

Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty. 1860.

Lawrence's Improvements in Coloring &c. Plastic Gunns for Dental Purposes.

through grinding rollers or masticating apparatus until thoroughly incorporated or blended. The proportions which are subjected to be most suitable are at the rate of about 6½ lbs. of caoutchouc, 1½ lbs. of sulphur, 1 lb. of vermilion, 9½ lbs. of oxide of zinc, but these proportions may be varied. The compound is to be moulded as heretofore when using compounds of caoutchouc for dental purposes, and subjected to heat, as is well understood to obtain the desired hardness; after which it is polished by any known means, and then placed in a closed glass vessel containing alcohol or other suitable liquid, and subjected to solar light, which brings the required flesh color to the surface. By this means the material will be found better suited to answer the purpose of bone or gold.

Having thus stated the nature of my invention, I will proceed more fully to describe the manner of performing the same.

Sulphur compounds of india-rubber (caoutchouc) have before been used by dentists in preparing artificial gums and plates, but the color thereof has not been satisfactory.

The object of my invention, as above stated, is to obtain a better or more natural color than has heretofore been obtained when using sulphur compounds of india-rubber hardened by heat for dental purposes. The proportions of the substances above mentioned may be varied, but I believe those above given are the most convenient. When the compound has been prepared, the same is used in the plastic state, and is moulded into the proper form in the manner to that heretofore resorted to when using sulphur compounds of india-rubber in the production of artificial gums or plates, and the moulded gums or plates with the teeth, whilst retained in the moulds are subjected to heat to produce the change as heretofore, and as is well understood. The hardened artificial gums or plates when cold and polished are immersed in alcohol, and placed in a position where the sun's rays will act thereon, by which the color of the india-rubber compound will be changed, and the desired effect produced.

In witness whereof, I, the said Frederick Lock Lawrence, have hereunto set my hand and seal, this fourteenth day of October, in the year of our Lord One thousand eight hundred and fifty-nine.

FREDERICK L. LAWRENCE, (Esq.)

LONDON:
Printed by GEORGE EDWARDS, STATIONER AND PRINTER, 15, MARK LANE.
Printed to the Queen's most Excellent Majesty, 1853.