Specification of Henri Adrien Bonneville : mineral teeth.

A.D. 1868, 1st DECEMBER. N° 3652.

SPECIFICATION

OF

HENRI ADRIEN BONNEVILLE.

MINERAL TEETH.

LONDON:
PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,
PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY:
PUBLISHED AT THE GREAT SEAL PATENT OFFICE,
25, SOUTHAMPTON BUILDINGS, HOLBORN.
1869.

Price 4d.

A.D. 1868, 1st DECEMBER. N° 3652.

Mineral Teeth.

LETTERS PATENT to Henri Adrien Bonneville, of the British and Foreign Patent Offices, 18, Chaussée d'Antin, Paris, in the Empire of France, and 10, Sackville Street, Piccadilly, in the County of Middlesex, Patent Agent, for the Invention of "IMPROVEMENTS IN THE MANUFACTURE OF MINERAL TEETH, AND IN THE METHOD OF FIXING SUCH MINERAL TEETH TO THE DENTAL PIECE."—A communication from Jean Baptiste Abel Duchesne, residing at Rue Lafayette, in Paris, aforesaid, Surgeon.

Sealed the 28th May 1869, and dated the 1st December 1868.

PROVISIONAL SPECIFICATION left by the said Henri Adrien Bonneville at the Office of the Commissioners of Patents, with his Petition, on the 1st December 1868.

I, HENRI ADRIEN BONNEVILLE, of the British and Foreign Patent Offices, 18, Chaussée d'Antin, Paris, in the Empire of France, and 10, Sackville Street, Piccadilly, in the County of Middlesex, Patent Agent, do hereby declare the nature of the said Invention for "IMPROVEMENTS IN THE MANUFACTURE OF MINERAL TEETH, AND IN THE METHOD OF FIXING SUCH MINERAL TEETH TO THE DENTAL PIECE," a communication

from Jean Baptiste Abel Duchesne, a person resident at Rue Lafayette, in Paris, aforesaid, Surgeon, to be as follows :—

The Invention communicated to me relates to a new and improved system of fixing mineral teeth to the dental piece, and consists in a new and improved mode of producing mineral teeth. Each tooth is furnished with a hollow of a size exceeding that of the orifice, by which orifice the rubber in its plastic state enters into the tooth, assuming inside the internal configuration, and, as it were, the shape of a nail head of a pyramidal form or of the form of a flattened cone, and the rubber being properly vulcanized the tooth becomes firmly attached to the dental piece. The hole being obtained by placing on the rear side of the mould of the tooth, which is moulded of materials well known to tooth manufacturers, the base of a piece of wood, or of any other material cut into the shape of a cone, and which can be consumed or melted at a lesser degree of heat than that required for the baking of the tooth, the said piece of wood or other material being consumed or done away with during the process of biscuiting, there remains in the centre of the tooth a hollow corresponding in size and shape with the wood or other material which has disappeared. The principle of strength claimed for this tooth consists in the fact that the rubber, a portion of the dental piece to which it is to be attached, entering into the tooth itself, the tooth actually forms part and parcel, so to speak, of the dental piece; and the principle of the Invention consists in the hollow in the centre of the tooth of a larger size than the orifice by which the rubber or other plastic material is introduced of whatever form this hollow may be, whether produced by the consuming, melting, or annihilating of any animal, vegetable, or mineral matter that can be so annihilating by a lesser degree of heat than that required for the biscuiting or baking of the tooth.

SPECIFICATION in pursuance of the conditions of the Letters Patent, filed by the said Henri Adrien Bonneville in the Great Seal Patent Office on the 29th May 1869.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, Henri Adrien Bonneville, of the British and Foreign Patent Offices, 18,

Chaussée d'Antin, Paris, in the Empire of France, and 10, Sackville Street, Piccadilly, in the County of Middlesex, Patent Agent, send greeting.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the First day of December, in the year of our Lord One thousand eight hundred and sixty-eight, in the thirty-second year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said Henri Adrien Bonneville, Her special licence, that I, the said Henri Adrien Bonneville, my executors, administrators, and assigns, or such others as I, the said Henri Adrien Bonneville, 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 of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for "IMPROVEMENTS IN THE MANUFACTURE OF MINERAL TEETH, AND IN THE METHOD OF FIXING SUCH MINERAL TEETH TO THE DENTAL PIECE," a communication from Jean Baptiste Abel Duchesne, a person resident at Rue Lafayette, in Paris, aforesaid, Surgeon, upon the condition (amongst others that I, the said Henri Adrien Bonneville, my executors or administrators, by an instrument in writing under my, or their, or one of their hands and seals, 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 Henri Adrien Bonneville, do 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:—

The Invention communicated to me relates to a new and improved system of fixing mineral teeth to the dental piece and consists in a new and improved mode of producing mineral teeth. Each tooth is furnished with a hollow of a size exceeding that of the orifice through the tooth, by which orifice the rubber in its plastic state enters into the tooth, assuming inside the internal configuration, and outside, as it were, the shape of a nail head of a pyramidal form or of the form of a flattened cone, and the rubber being properly vulcanised the tooth becomes firmly

attached to the dental piece. The hole being obtained by placing on the rear side of the tooth, which is moulded of materials well known to tooth manufacturers, a base or piece of wood or any other material cut into the shape of a cone and fusible at a lower degree of temperature than that required for the tooth, the said piece of wood or other material being consumed or done away with during the process of biscuiting there remains in the centre of the tooth a hollow corresponding in size and shape with the base which has disappeared. The principle of strength claimed for this tooth exists in the fact that the rubber which forms part of the dental piece to which it is to be attached entering into the tooth itself, the tooth actually forms part and parcel, so to speak, of the dental piece.

Having thus given a brief description of this Invention, I will proceed to enter into further details regarding it. Heretofore mineral teeth have been made in Europe as well as in America so as to enable the dentist to attach them either to metal or to vulcanised rubber platina pins embedded in the teeth, these platina pins being absolutely necessary for metal work, whilst for rubber work exclusive various contrivances have been resorted to, consisting in hollows cut into the sides or backs, or in both combined, of the teeth, or in holes pierced vertically through the same. These contrivances have generally been pronounced by the dental profession as perfectly useless, and the defective (for rubber) platina pins have, for want of better, remained in use. Recently the use of a button attachment composed of the same material as the tooth itself has been introduced, but this also, in addition to its want of solidity, the point cut in under the head of the button being composed of the same brittle material (porcelaine) as the tooth, and lacking the strength which the tooth itself as a solid body naturally possesses, has the still greater defect of adding to the thickness and consequent clumsiness of the tooth, which requires a thick rim of rubber for its embedment.

Now, the improvements secured by the said Letters Patent overcome all these defects. In making the said improved teeth they are moulded as described with materials well known to teeth manufacturers, and there is placed a part, say less than one-half, of the body and enamel on the face side of the tooth or mould; a somewhat greater quantity is placed on the other or back side of the mould; then the base of a piece of wood cut into the form of a cone with its top cut off, as described before, is placed on the face side, the point or apex of the cone presenting itself upper-

most. The two sides of the mould are then brought together and the piece of wood is of course enclosed in the centre of the tooth, presenting its apex or smallest part towards the back of the tooth or mould. The teeth being dried and taken from the mould are placed in the fire and biscuited in the usual manner. During the process of biscuiting, as before stated, the wood is consumed, and there remains a hollow corresponding in size and shape with the wood which has disappeared. It may be here stated that the same effect could be produced with any other matter that is combustible, and it could also be accomplished with any fusible matter, with wax and many other vegetable or animal matters, or with any of the fusible metals, which melt at a lesser degree of heat than that required for the tooth, but preference should be given to the piece of wood as before stated. The teeth are now ready to be trimmed, and it is in this process that the trimmer pierces with a drill or file known as the rat tail file the hole which gives communication with the hollow at the point indicated by the moulder on the back of the tooth at the time of moulding. The opening made by the trimmer should be about the size of the head of an ordinary pin, or a little larger as may be desired. The teeth are then to be tacked in the ordinary way, and they are ready for the market.

Having thus described and particularly ascertained the nature of the said Invention, and the manner in which the same is or may be carried into effect, I would observe in conclusion that what I consider novel and original, and therefore claim as the Invention secured to me by the herein-before part recited Letters Patent is, the hollow created in the tooth larger than the orifice which communicates with the same, whether the hollow be produced by combustion or by the melting, as above stated, and whatever the form or size of the hollow may be, or at whatever part of the tooth the same may be placed.

In witness whereof, I, the said Henri Adrien Bonneville, have hereunto set my hand and seal, the Twenty-sixth day of May, One thousand eight hundred and sixty-nine.

H. BONNEVILLE. (L.S.)

LONDON:
Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty. 1869.