Specification of James Clarkson : securing artificial teeth.

A.D. 1873, 3rd DECEMBER. N° 3964.

SPECIFICATION

OF

JAMES CLARKSON.

SECURING ARTIFICIAL TEETH.

LONDON:
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1874.

A.D. 1873, 3rd DECEMBER. N° 3964.

Securing Artificial Teeth.

LETTERS PATENT to James Clarkson, of Islington, in the County of Middlesex, Dentist, for the Invention of "IMPROVED MEANS OF FASTENING, CONNECTING, OR SECURING ARTIFICIAL TEETH."

Sealed the 6th March 1874, and dated the 3rd December 1873.

PROVISIONAL SPECIFICATION left by the said James Clarkson at the Office of the Commissioners of Patents, with his Petition, on the 3rd December 1873.

I, JAMES CLARKSON, of Islington, in the County of Middlesex, Dentist, do hereby declare the nature of the said Invention for "IMPROVED MEANS OF FASTENING, CONNECTING, OR SECURING ARTIFICIAL TEETH," to be as follows:—

This Invention relates to certain improved means of fastening and connecting together or securing artificial teeth in a much more effectual manner than hitherto, whereby more useful and economical results are attained than is possible under the present system or method of fastening and connecting or securing such teeth.

Clarkson's Improvements in Securing Artificial Teeth.

The methods or means hitherto generally adopted for inserting and securing artificial teeth consist in inserting and securing them either on the roots of the natural teeth by means of a pivot or pin running up or into the root, or such teeth are fixed on or attached to a metallic or vulcanite base or frame forming a foundation on which to secure the artificial teeth.

The pins or platina fastenings for connecting and securing such teeth have hitherto been placed and fitted so as to run right up a hole in the centre of what are called "tube" teeth, and are soldered to the foundation frame or palate, the pins being held in their positions in the teeth by means of sulphur or mastic.

The disadvantage of this method of securing artificial teeth is that where the "bite" is closed and the tooth consequently short, thereby allowing very little length for the pin or pins, they are very liable to come off or to break. As hitherto practised in flat mineral teeth (so called from the back of the teeth being quite flat, the front teeth being only half teeth, and the back part not bearing the least resemblance to natural teeth), in each tooth two platina pins or rivets are usually inserted in a horizontal position in the backs for the purpose of securing them to the artificial frame or plate.

In vulcanite "pin" teeth generally used in the best description of vulcanite work, they, like the "flat" teeth, have two pins inserted in the back of each tooth to secure them to the vulcanite foundation or plate, the disadvantage of this system being that the pins or rivets in the backs of the teeth prevent them from being hollowed out in a natural manner.

This Invention has therefore been designed to remedy the above named disadvantages or defects, and it consists in forming or making artificial teeth with a lateral hole through each tooth through which hole a platina pin or fastening (made of the desired shape and size) is passed and secured to the side or lateral slope or angle of the tooth (or teeth), and not to the back part or up the centre of the tooth as hitherto.

The chief advantages of these improved means of fastening and connecting artificial teeth will be that the platina pins or fastenings of each tooth can if desired be easily connected or soldered laterally to those of the next and so on through the entire set, thus affording more strength

and solidity than can be secured by the old methods; and by reason of the fastenings being secured to the sides of the teeth, the back part and consequently the grinding surface of a mineral tooth can in all cases be made an exact imitation of a natural tooth. Also in consequence of the teeth being so fastened or connected together a plate may in many cases be entirely dispensed with, thus lessening the cost and rendering artificial teeth less cumbersome in the mouth.

And further in cases where a frame or plate cannot be dispensed with, it may be made thinner than is now the practice, corresponding strength and security being attained by the union of the teeth according to this improved method.

And in cases where a plate or frame is unnecessary the artificial teeth, all secured, can with the bands or fastenings be more easily adjusted in the mouth to the natural teeth, thus ensuring greater accuracy in the fit and more comfort to the wearer; and all the different kinds or patterns of artificial teeth now in use can be adapted to and be employed in this improved system or means of fastening or securing such teeth.

SPECIFICATION in pursuance of the conditions of the Letters Patent, filed by the said James Clarkson in the Great Seal Patent Office on the 1st June 1874.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, JAMES CLARKSON, of No. 109, Upper Street, Islington, in the County of Middlesex, Dentist, send greeting.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Third day of December, in the year of our Lord One thousand eight hundred and seventy-three, in the thirty-seventh year of Her reign, did, for Herself, Her heirs and successors give and grant unto me, the said James Clarkson, Her special licence that I, the said James Clarkson, my executors, administrators, and assigns, or such others as I, the said James Clarkson, 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 "IMPROVED MEANS OF FASTENING, CONNECTING, OR SECURING ARTIFICIAL TEETH," upon the condition (amongst others) that I, the said James Clarkson, 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 James Clarkson, do hereby declare the nature of my 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 nature of this Invention is to use and adapt lateral or approximate fastenings in the process of manufacturing mineral teeth, so that the grinding surfaces may in all cases be an exact imitation of nature, and by the junction of the said fastenings the teeth may be securely connected without a frame or foundation. To carry this out a piece of platina plate is cut about the size of the side of the tooth, and either the edges turned over or a wire passed through as a holdfast to the mineral. Two such fastenings, one for each side, are then inserted in the mould and the ordinary precautions taken to prevent the fastenings moving. If the wire passing through is allowed to project at the sides it forms a ready means of slightly soldering a band thereto for adjustment in the mouth, or as a holdfast or tag for vulcanite.

A tooth made with plate fastenings is suitable for junction with adjoining teeth by means of gold solder.

When vulcanite is desired between the teeth and under the teeth as a pad, wires with or without plate may be adapted as lateral fastenings. The following is a convenient method of carrying out the principle:— A wire is passed through the tooth in such a position as to allow of the tooth being ground to any necessary extent in the process of fitting for the mouth. The wire must also be long enough and bent at such an angle as to admit of its being twisted or soldered to the fastenings of the adjoining teeth. Greater security may be obtained by one or two additional pieces of wire projecting from the sides or by the use of two wires.

In all cases to carry out this Invention with respect to preserving the natural shape of the teeth, the fastenings must be attached in such a position as to allow of the tooth being ground to any required extent in the process of fitting for the mouth.

The principle of this Invention may be applied to "blocks" as well as single teeth, the fastenings being secured to each side of the block.

Any pattern of artificial tooth can be moulded and added to or cut away so as to adapt it to these fastenings, but it is preferable to make the moulds from the natural teeth.

The design of this Invention is to imitate nature not only in the shape of the teeth but also in the manner of the connection. This will be seen by the Drawings representing the junction of the processes of the natural teeth, and the application of the fastenings used in this improvement.

Teeth made according to this Invention may be used with frames or foundations when required for suction or other purposes; but such frames may be of considerable less thickness than usual; the required strength being obtained by means of the lateral unions.

Variations of this method of securing teeth could easily be made, a few such are represented in the Drawings. What is claimed as the Invention is the principle of employing lateral fastenings in imitation of the junction of the alveolar processes, thereby ensuring natural shape, solidity, and means of secure union in the artifical substitutes without necessarily employing a foundation or frame, whether in the form of plate, band, bar, or wire; the teeth being securely connected by the junction of the fastenings.

Explanation of the Drawings.

Figure 1 [a]. Tube tooth as manufactured, side view.
„ 1 [b]. Tube tooth „ „ back view.

Figure 2 [a]. Flat tooth as manufactured, side view.
„ 2 [b]. Flat tooth „ „ back view.

Figure 3 [a]. Vulcanite pin tooth as manufactured, side view.
„ 3 [b]. Vulcanite pin tooth „ „ back view.

Figure 4 [a]. Crown of natural front tooth, side view.
Figure 4 [b]. Crown of natural front tooth, back view.

Figure 5 [a]. Mineral tooth moulded from natural, side view.

„ 5 [b]. Mineral tooth „ „ back view.

Space between the dotted lines shows where it is often desirable to carry the fastenings.

Figure 6 [a]. Shows convenient shape for front tooth fastening.

„ 6 [b]. Shows convenient shape for molar fastening.

"The dotted lines show where the plate ought to be turned over."

Figure 7 [a]. Side view of a front tooth made according to this Invention. It will be seen that the tooth might be ground as far as the bulge *c* without weakening the tooth as regards its fastening.

Figure 7 [b]. Shows a back view of the same tooth.

Figure 8 [a]. A side view of tooth according to this Invention with a lateral pin, which besides acting as a fastening is useful for slightly soldering a band thereto for adjustment in the mouth.

Figure 8 [b]. Shows a back view of the same.

Figure 9 [a]. Side view of front tooth according to this Invention with wire and projecting tags.

Figure 9 [b]. Back view of the same.

Figure 10 [a]. Side view of front tooth with two wires passing through.

„ 10 [b]. Back view of the same.

Figure 11 [a]. Molar tooth with lateral plate fastening, side view.

„ 11 [b]. The same with projecting wire.

Figure 12 [a]. Side view of molar tooth with wire and two tags or three.

„ 12 [b]. Side view of molar tooth with two wires.

Figure 13. Alveolar processes of two bicuspid teeth showing the junction.

Figure 14. Same as Figure 13, only the dotted lines include the junction and a segment of each process.

Fig. 15. Shows the junction and segments as included between the dotted lines of Figure 14.

Figure 16. Junction and two fastenings for bicuspids according to this Invention.

Figure 17 [a]. A variation of the shape of fastenings.
„ 17 [b]. Shows the fastening in the tooth.

Figure 18 [a]. A variation of the shape of fastenings.
Figure 18 [b]. Shows the fastening in the tooth.

Figure 19. Another variation showing wires placed at the sides.

Figure 20. Four front teeth soldered together.

Figure 21. The same but with vulcanite *c*, *c*, *c*, *c*, as a pad under the teeth.

Figure 22. Block of four teeth with fastenings at each side of the block.

Figure 23. Two teeth (Fig. 8) soldered together and wires twisted as tags for vulcanite.

In witness whereof, I, the said James Clarkson, have hereunto set my hand and seal, this First day of June, in the year of our Lord One thousand eight hundred and seventy-four.

JAMES CLARKSON. (L.S.)

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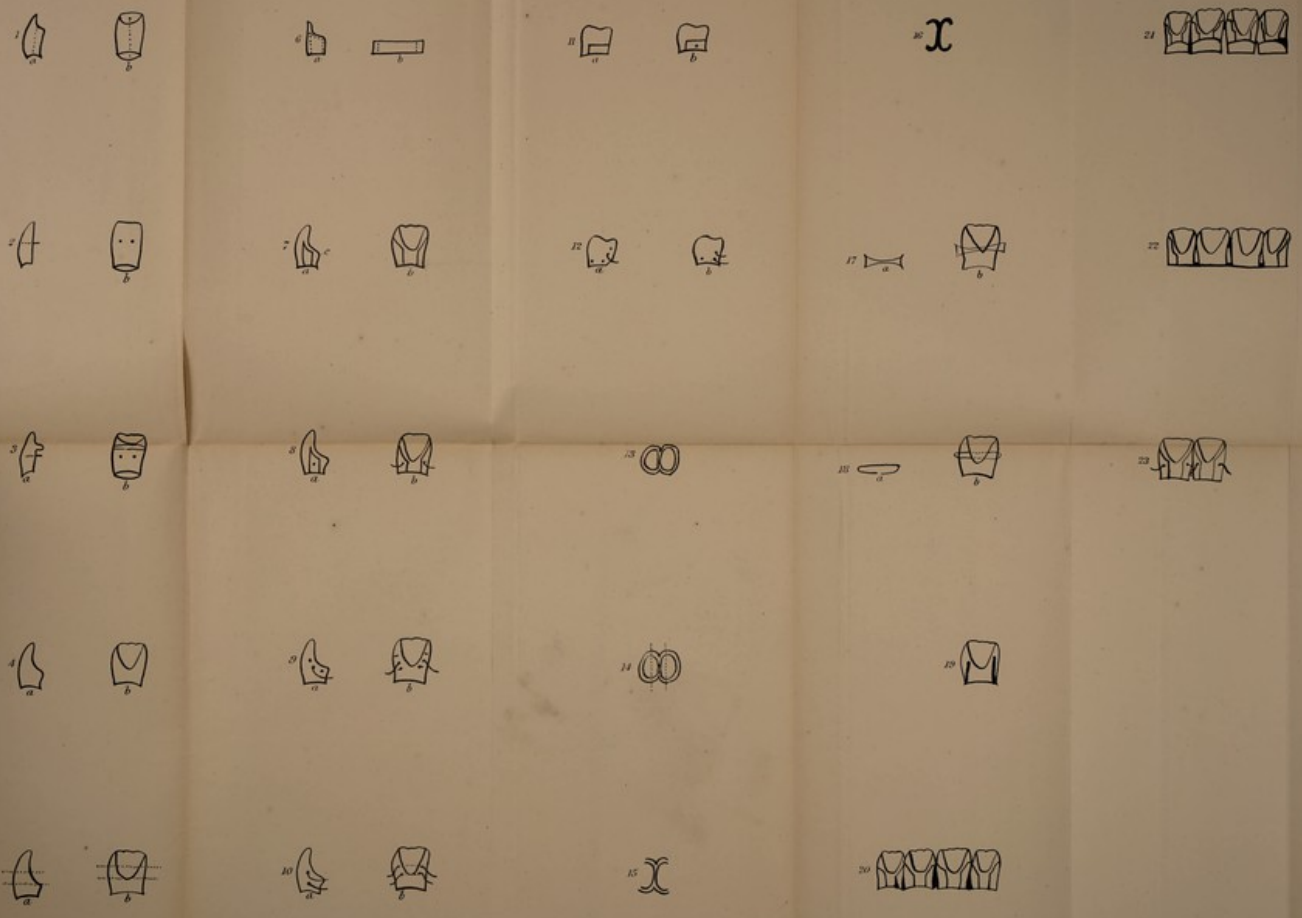
CLARKSON'S SPECIFICATION.

(1 SHEET)



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