

**A dissertation on artificial teeth: evincing the advantages of teeth made of mineral paste ... / by N. De Chémant.**

**Contributors**

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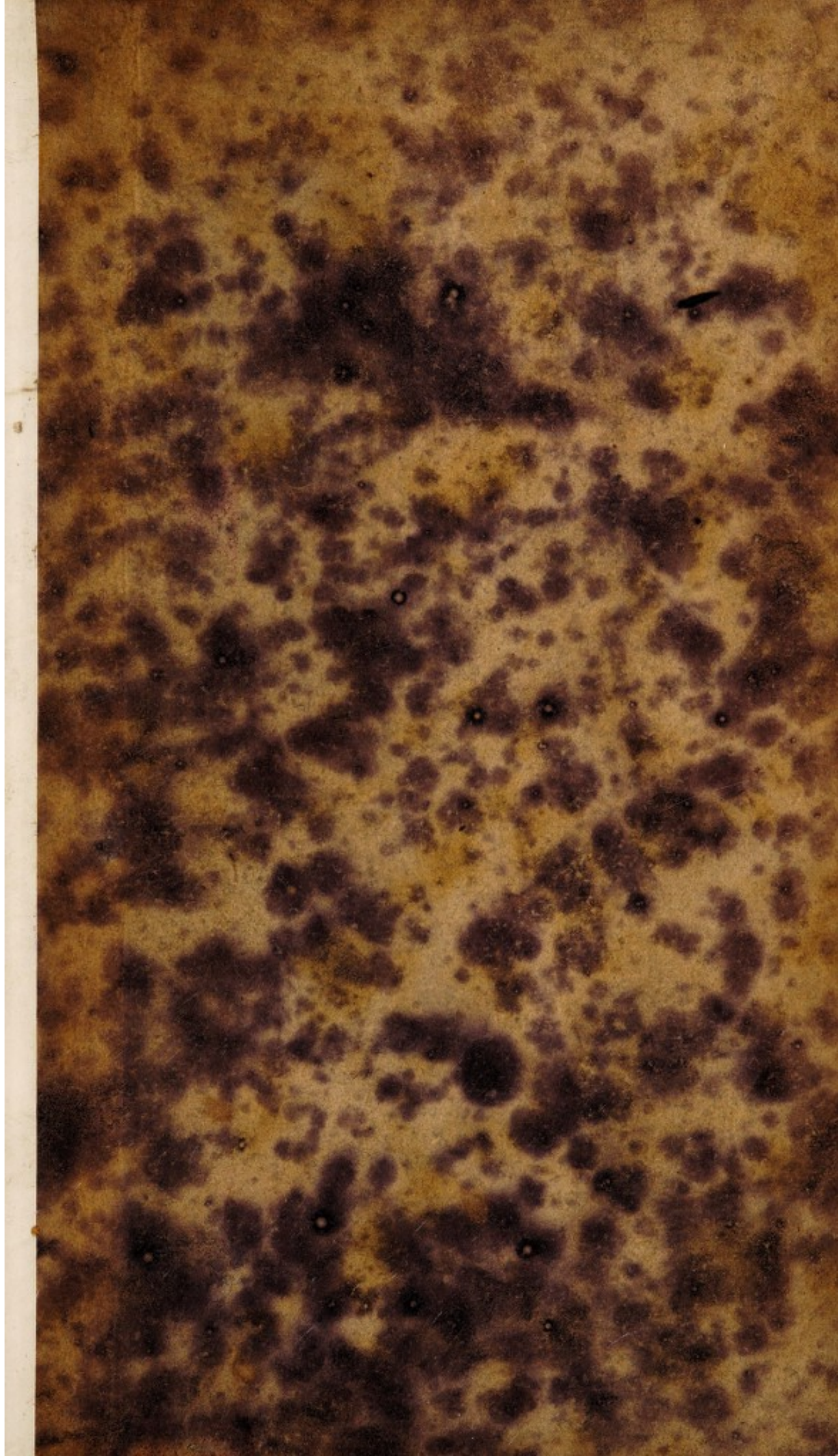
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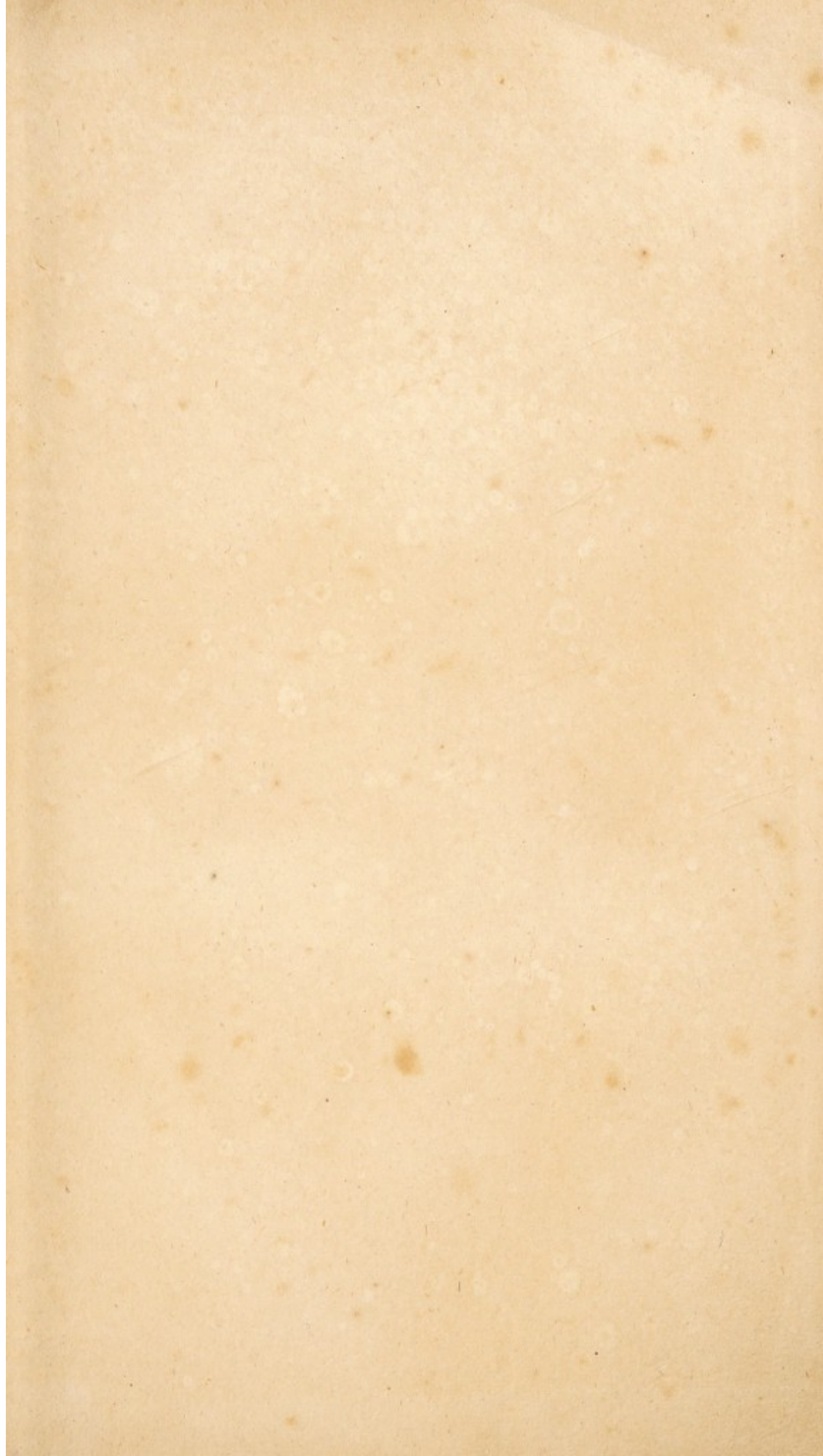
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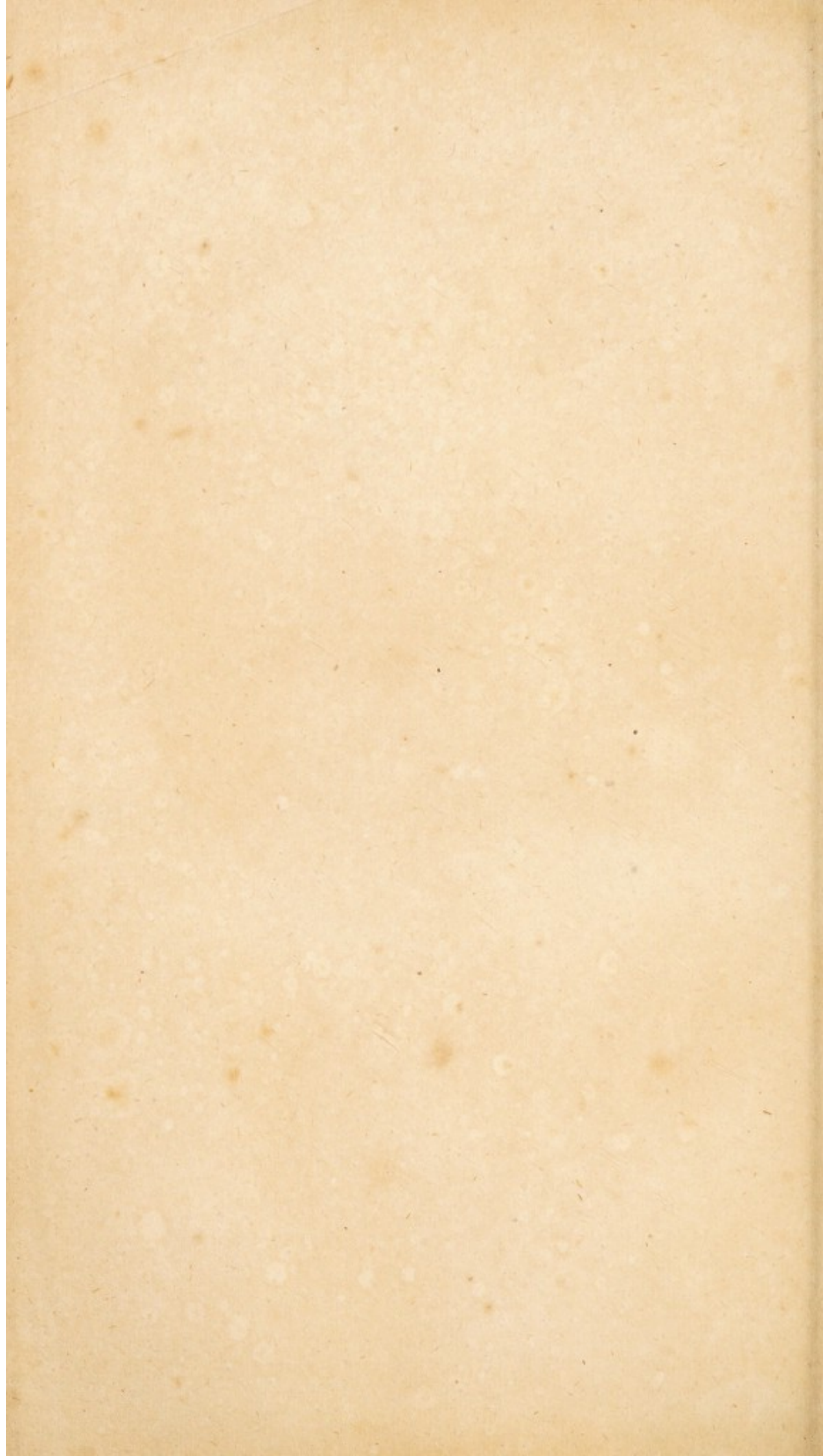
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DUBOIS DE CHEMANT, Nicolas

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*Gravé par P. Bonde d'après un Tableau du Ch<sup>r</sup> Dupréaux*

N<sup>LS</sup> DUBOIS DECHÉMANT, CHIRURGIEN,

DENTISTE INVENTEUR DES DENTS DE PÂTE MINÉRALE.

*Ces perles d'une si belle eau,  
Qui dèz notre plus tendre enfance,  
Germent déjà dans le berceau,  
Pour parer notre adolescence,  
C'est le secret du Créateur,  
Et le rôle de la nature;  
Mais après cet unique acteur,  
Vivat CHÉMANT pour la douleur.*

*Le grand point toujours réservé  
Au seul artiste incomparable,  
C'est bien CHÉMANT qui l'a trouvé,  
Il joint l'utile et l'agréable,  
Quand la faux du temps a détruit  
Du palais la brillante armure,  
Avec la sienne, on mange, on rit;  
Vivat CHÉMANT pour la douleur.*

*Couplets du Général C<sup>te</sup> de Martange.*



A  
DISSERTATION  
ON  
**ARTIFICIAL TEETH;**

EVINCING THE ADVANTAGES OF  
TEETH MADE OF MINERAL PASTE,  
OVER EVERY DENOMINATION OF ANIMAL SUBSTANCE.

TO WHICH IS ADDED

**Advice to Mothers and Nurses,**

ON THE  
PREVENTION AND CURE OF THOSE DISEASES WHICH  
ATTEND THE FIRST DENTITION:

**BY N. DE CHEMANT, ESQ.**

No. 2, FRITH STREET, NEAR SOHO SQUARE,

*For which he has obtained Royal Letters Patent from their Majesties  
the Kings of England and France.*

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FIFTH EDITION.

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LONDON:  
PRINTED BY JOHN HAINES, MARGARET STREET,  
AND MAY BE HAD OF THE AUTHOR,  
AND OF BOSANGE AND MASSON, GREAT MARLBOROUGH STREET,  
AND 100, NEW BOND STREET.

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1816.

Price Five Shillings.



A  
DISSERTATION  
ON  
ARTIFICIAL TEETH;

SHOWING THE ADVANTAGES OF  
THEIR USE IN THE  
TREATMENT OF MINERAL PASTE,  
AND THE BENEFIT DERIVED FROM ANIMAL SUBSTANCE  
IN THEIR CONSTRUCTION.

BY  
J. H. WELLS, D.D.S.

AND THE  
ADVANTAGES OF THE  
USE OF THE  
ARTIFICIAL  
TEETH  
IN THE  
TREATMENT  
OF THE  
DISEASES  
OF THE  
JAW.



PRINTED BY JOHN HARRIS, MARGARET STREET,  
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\*\*\* MR. DE CHEMANT begs leave to inform those persons who may desire to consult him on the subject of his mineral paste teeth, that he would be obliged to them if they would, on the preceding day, make their appointment, else they will be liable to be detained a considerable time before it would be in his power to wait upon them.

Mr. De Chemant also begs leave to state, that he may be consulted every day (Sundays excepted), on the surgical part of his profession, from ten o'clock till twelve; and that from twelve until two he devotes to the business of his artificial teeth.



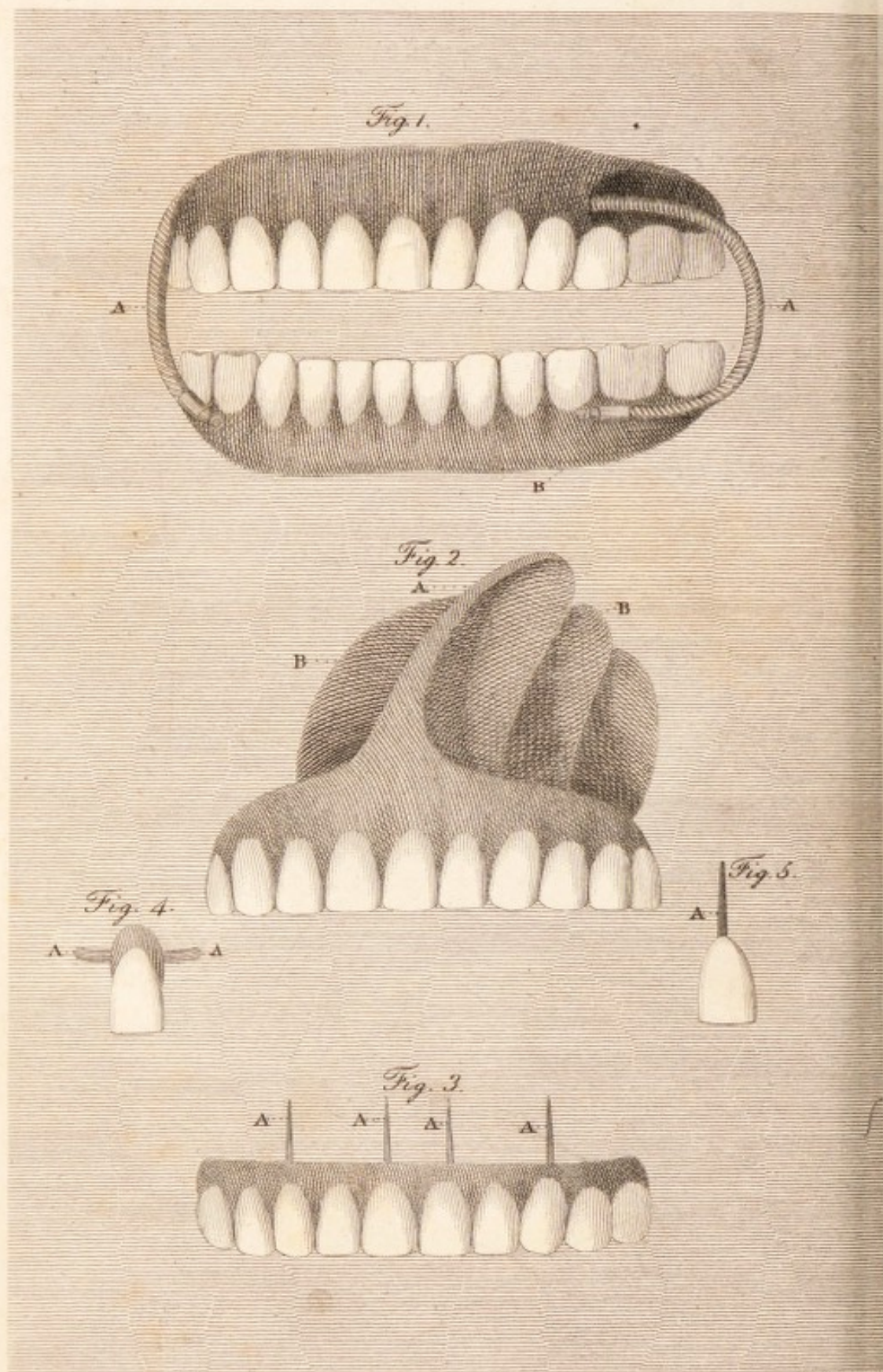
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obliged to them if they would, on the  
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artificial teeth.





# MINERAL PA





# STE TEETH

Fig. 6.

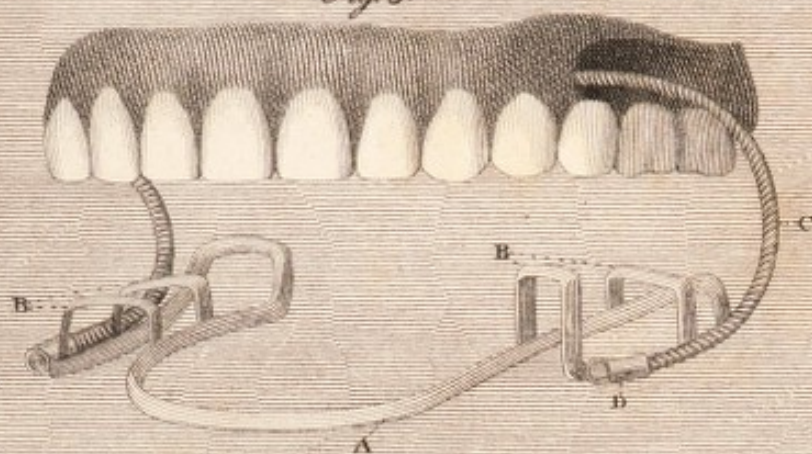


Fig. 7.



Fig. 9.

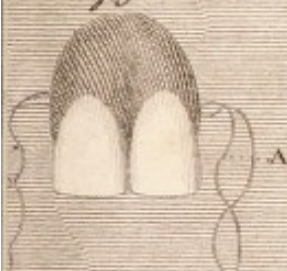


Fig. 10.

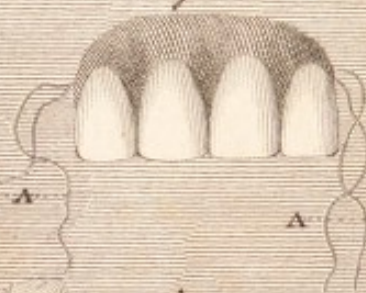


Fig. 8.







## EXPLANATION OF THE PLATE,

*Representing the different methods of fixing the teeth,  
and sets of teeth, made of mineral paste.*

Fig. 1. A complete set of teeth with gums. A. The springs. B. the place of their attachment in that part resembling the gums.

Fig. 2. A palate, to which are added the incisors, canine teeth, and small molars.

Fig. 3. A Row of teeth with a part of the gums. A A A A. four pivots by which they may be fastened to stumps remaining in the jaw.

Fig. 4. A single tooth to be fixed by means of a small plate of gold marked A A.

Fig. 5. A single tooth with a pivot.

Fig. 6. An upper row of teeth, with the method of fixing it when the teeth of the upper jaw are lost, and the under teeth remain. A. a band of gold which passes



on the internal side of the under teeth, and rests upon them. B. a kind of faddle which passes over one or more teeth. C. the springs which support the artificial teeth. D. the moveable hinges which receive the springs.

Fig. 7. A row of teeth with gums for the upper jaw, fixed by means of two elastic plates of gold marked A.

Fig. 8. A row of teeth with gums for the under jaw, fixed by means of two elastic plates of gold marked A.

Fig. 9. Two teeth in one piece, with a small portion of gums, to be fixed with silk ligatures. A A. the ligatures.

Fig. 10. A row of four teeth with the gums, to be fixed by ligatures. A A. the ligatures.

## INTRODUCTION.

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MANY persons having expressed themselves concerned at not finding in the former editions of this Dissertation, any account of the circumstances which led me to the discovery, which I again have the honour of presenting to the public; I am induced to satisfy the curiosity of the reader, by relating, in this place, the following particulars.

In 1788, when I exercised the profession of a surgeon, I was consulted by a lady who had fallen into such a state of weakness as produced confi-



derable fears for her life. On approaching her I perceived a tainted odour, which I thought proceeded from her lungs or her teeth, which were black. I examined her mouth, and was struck with the bad state of a set of human teeth implanted on a base of the tooth of the hippopotamus. This set of teeth being removed, I perceived her mouth to be almost entirely covered with small ulcers, and I had no doubt but that her disease was the effect of the putrid exhalations which proceeded from the set of teeth, and which corrupted the air she breathed; what confirmed this conjecture was, that after having laid these teeth aside, her health improved in a few days. Perceiving that this

lady could not do without artificial teeth, I advised her to have several sets of teeth at the same time, so that she might change them often, after having washed them and let them dry. She did so, and her health became perfectly re-established in the course of some months.

But as teeth of this kind require to be renewed frequently, they occasion a very great expence, and even, notwithstanding their frequent renewal, they always produce a bad smell. I was induced from that time to reflect on the possibility and the means of making teeth and sets of teeth of durable and incorruptible materials. I examined almost all the



substances of the mineral kingdom, and at length composed a paste, which, when it is baked, has every desirable advantage.

This is what I propose to prove in this Differtation, and which the experience of fifteen years has generally demonstrated, on more than twelve thousand persons, who now make use of teeth of that composition.

DISSERTATION  
ON  
ARTIFICIAL TEETH.

---

*Necessity of Artificial Teeth.*

OF those parts which enter into the composition of a beautiful person, there can be no doubt but that the first place belongs to the teeth and the eyes; and if these latter are denominated the mirror of the soul, the teeth may be considered as the thermometer of health, and the principal ornament of the face. He who should be so happy as to discover an infallible means of always preserving them healthy and beautiful, would certainly make a discovery infinitely more valuable to mankind than that which is now offered to the public: then, the number of evils which precede, accompany, or follow the loss of the



natural teeth, would disappear from the catalogue of complaints which afflict the human race.

But unhappily all the researches that have been made on this subject have hitherto remained fruitless, because in the present state of our knowledge we cannot foresee the disorganisation of the teeth. There are, however, two general causes which contribute to their destruction: latent predisposition to disease, and negligence. In the former case we can neither determine when, nor on what, to turn our attention; in the latter, the calcareous incrustations with which the teeth are covered, and the alimentary particles which lodge and putrefy in the interstices, diminish the irritability of the gums, which become soft and liable to bleed, and recede from the teeth; the air then acts upon the uncovered parts of the teeth, and the suppuration of the gums, added to the putrefaction of the alimentary particles which lodge between them and the teeth, are not only the

cause of the caries which affects the teeth, but also of diseases of the sockets, and of the fetid odour which is always the consequence\*.

\* The loss of the teeth may always be prevented when it proceeds from diseases of the gums, which are destroyed by the slightest scrofulous or scorbutic affection. In order, on this subject, clearly to convey what I mean, notwithstanding the impropriety of the similitude, I shall compare the gums to the skin of which gloves are made. When a skin is put into water it changes into a jelly; but if to this water some *tannin* be added, the skin is converted into leather, and will then resist the action of the water. In like manner, gums which are soft and liable to bleed, become healthy and firm when the mouth is washed with those substances which neutralize the agents of their destruction. I have consulted the most skilful medical chemists, and have made considerable sacrifices to engage them to discover a substance which would act upon relaxed and spongy gums as tanning upon skin. I have collected their labours, and combined their ideas with my own experience, and have at length composed a spirituous and antiscorbutic essence which perfectly accomplishes what I desired: viz. to cure the greater part of the diseases of the mouth, to strengthen the gums as well as to keep the teeth firm in their sockets, to prevent caries, and stop its progress in those teeth affected by it; in fine, to preserve the teeth white and healthy without having occasion to employ any powder, the frequent use of which is hurtful and dangerous, especially such as is sold by quacks and ignorant persons.



The alveolar processes are also affected with diseases which cause the loss of the teeth, although they may otherwise be very sound. But the object of this Dissertation being only to demonstrate the absolute necessity of replacing lost teeth by such as are incorruptible, I shall not enter here into any account of the diseases which affect the mouth. This will be the subject of a Treatise which I propose to publish at some future period.

The health depends, perhaps, more upon the trituration of the aliments in the mouth, than upon the choice of them. The author of nature, in providing man with teeth of different forms, has doubtless had in view the furnishing him with the means of dividing and grinding the food before it is introduced into the stomach. The incisor teeth divide it, the canine teeth penetrate and tear it, the molares grind it as in a mill. These actions prepare it for a most easy digestion and perfect nutrition. When the teeth are lost, it is im-

possible to make use of solid food, and if the stomach is then loaded with pieces without being masticated, the person is exposed to the most distressing indigestions. The stomach loses its power of contraction, and it becomes weak in proportion as it no longer digests. We can only then remedy that state of languor which is the consequence, by replacing teeth in lieu of those which are lost. Nature, which makes nothing in vain, would not have provided us with teeth if they had not been essential to us.

Although the gums, after the loss of the teeth, may, with some persons, to a certain degree, become hard; as the natural position of the jaws only permits the alveolar edges to touch, the aliments can only be slightly and difficultly pressed between the gums; in vain, in eating, the jaws attempt to meet, there is nothing but useless efforts, attended with contortions and grimaces which, by degrees, disfigure the face. Artificial teeth prevent all these inconveniences, and those made of mi-



neral paste serve for mastication as well as the natural.

Teeth are essential for the formation of articulate sounds; those who have lost their front teeth speak with hesitation, or lisping; artificial teeth remedy also these inconveniences, and likewise those involuntary jets of saliva when one speaks with volubility.

Nature which is as fertile in effects as she is œconomic of causes, makes use of teeth as an embankment against the overflowing of the saliva, phlegm, and other humours with which the mouth is often filled: without them, persons who have the under lip more or less falling, and who want teeth, would let the saliva escape, a circumstance as distressing to themselves as it is disagreeable to those who approach them. Artificial teeth alone can protect us from this disgusting inconvenience.

It is not without foundation that it has been said, that artificial teeth cause the loss of the natural ones. This we may always expect

to happen when they are replaced by teeth made of corruptible materials, whilst those made of mineral paste, preserve the teeth which remain ; in fact, ivory, the teeth of the sea-horse, and those of all other animals being composed of phosphate of lime and gelatine are always destroyed by the continued action of the saliva. Excepting in the use of boiling water, it is impossible to unite more causes for their decomposition, than are to be found in the mouth ; it happens that artificial teeth made of these materials soften, the gelatine is separated from them and putrefies, this putrefaction injures the gums and the natural teeth, and causes their destruction ; the diminution of volume, in the corruptible artificial teeth, acts mechanically ; the consequence is that the artificial piece becoming daily smaller, leaves spaces : the drawing of the ligatures, tending to pull the natural teeth closer to the artificial pieces, makes them become loose and at length fall from their sockets.



There exists another cause which adds to this inconvenience. Often, inexperienced Dentists, in their artificial teeth, place the holes which are to receive the ligatures, too high: these threads slip under the gums, inflame them and injure them, as also the membrane which lines the socket, and the root of the tooth. All these circumstances contribute to the loosening of the tooth, and finally produce its loss.

The incorruptible teeth of my invention, not being subject to any of the inconveniences of which I have just spoken, support and fix the natural teeth, between which they are placed, and by this means preserve them, instead of hastening their loss; fifteen years of success prove this statement to be correct.

When the gums have been affected with those diseases, in which they become spongy, liable to bleed, and are removed by the process of absorption, no one before me has been able to hide the deformity which is the result, I make gums to which I give the appearance

of nature ; they are, like the teeth of my invention, made of an incorruptible substance, and unalterable by every agent excepting such a degree of fire as would even produce vitrification. \*

What I have just said, proves that a mechanical art will always be insufficient to prevent the diseases of the gums and the teeth ; their becoming loose and their consequent loss. Sometimes these diseases occasion injury to the jaw bones, the destruction of the sockets and the gums, and even very often abscesses are formed, which cause ulceration through the cheek, and sometimes they extend down to the neck. It is then highly improper to attribute to the mechanism of art the defects of nature, or the impossibility of preventing the causes of disease.

\* The confidence with which the public honour me, the suffrages of learned societies, and the major part of the physicians and surgeons of this capital, the most complete success on more than twelve thousand persons, excuse me from entering into any other detail, in order to answer the trivial objections of some jealous dentists, and which I have refuted in the former editions of this work.



These accidents are always the effect of negligence in the patient, or of ignorance in the surgeon, who, instead of extracting the teeth or stumps which are the cause of the disease, bring the abscess to point externally, where they open it with a lancet, and believe they have put an end to the disease ; but this is bad practice, for at the end of some time, the abscess forms again in the neighbourhood of the former opening, they then recommence the former mode of treatment, which causes new openings, producing cicatrizes, that are often taken for the effect of scrofula. I have often met with persons in this situation, who have been recommended to me by celebrated physicians and surgeons, who have been acquainted with my principles on this subject. It has always happened, that after having extracted these teeth or stumps the abscesses have entirely disappeared.

*Inconveniences which arise from the use of  
putrescible Substances for Artificial Teeth.*

WE are not acquainted with the practice of the ancients in the art of artificial teeth: the industry of the moderns has been constantly confined to the forming them from animal substances, such as the teeth of the sea-horse, the elephant, the bones of oxen, calves, &c. and even human teeth. These substances are composed of phosphate of lime and a gelatinous matter. The saliva consists of water, gelatine, some acid property and several of the neutral salts. Assisted by the heat of the mouth, the saliva acts upon and dissolves the gelatine of the artificial teeth, this softens their surface, which then putrefies and gives out phosphorated hydrogen gas and carbonate of ammonia, a mixture which forms the most putrid and offensive odour.

Sewers and miry marshes which convey to great distances, the seeds of infectious putrid



diseases and death, only give out the same effluvia mixed with sulphurated hydrogen gas. We may cease then to be surprised at the diseases of consumption, which so frequently affect those who have the mouth filled with their own decayed natural teeth, or artificial ones made of animal substances.

The caries of the natural teeth (when it is almost general) has the same odour, and communicates the same diseases; both of which I can prove by several facts. From the great number which I can produce, I shall only state those which might be verified, without offending the delicacy of any one whatsoever.

#### CASE I.

I extracted in the presence of Sir Walter Farquhar, twenty-eight stumps and bad teeth, from a lady of quality, whose thinness, livid and yellow complexion, frequent complaints of the stomach and continual uneasiness, seemed to presage her approaching end. Her teeth were so decayed that the crowns of them were

entirely destroyed, and there proceeded from them an insupportable odour; the discharge had corroded the internal parts of the sockets so that the teeth had all become loose. The desire to get rid of this distressing malady produced sufficient courage in this lady to submit, though contrary to my advice, to the extraction of twenty-six stumps at one sitting, and two the next day. Some weeks after, the fetid smell of the mouth and the symptoms of disease went off, and in two months more she had acquired the embonpoint and complexion which were natural to her before the decay of her teeth; because I made for her a complete set, with which she could eat as if she had preserved her natural ones.

#### CASE II.

Amongst the many patients who were introduced to me by the late celebrated Mr. John Hunter, one of them experienced violent pains in the stomach, his breath was so offensive that it was impossible to remain near him. He wore two partial rows of teeth, made of



the sea horse tooth, placed between some natural ones which remained; having attentively examined them, I perceived that they were the cause of his indisposition: two days after they had been laid aside, his mouth exhaled no offensive smell, and his health which had suffered, began to improve.

#### CASE III.

Being called in consultation with M. Vicq. d'Azyr, physician to the queen of France, to examine the mouth of a lady, who felt herself gradually declining by a slow fever, we found that the artificial teeth of animal substance which she wore, were black and fetid; as her complaint had obstinately resisted every remedy, we thought that the fever might be occasioned by the putrid miasma of these corrupted teeth, they were removed and the fever ceased in a few days after.

#### CASE IV.

M. Geoffroy, physician of the faculty of Paris, in 1790, sent to me one of his patients, the fetor of whose breath was insupportable;

he had a complete set, composed of human teeth fixed upon a base of ivory, which he had worn for two years, and they had fallen into a state of decay. Soon after he had left off their use, he got well.

## CASE V.

The immortal Jenner, amongst the number of persons whom he has addressed to me, to have my artificial teeth, about seven years ago brought to me a lady, who was sickly on account of the bad state of her mouth. In his presence I removed from this lady sixteen or seventeen stumps, decayed even into the socket. I made for her a complete set of teeth, and in a little time her health was much recovered.

## CASE VI.

I have lately extracted in presence of Dr. Blane and Mr. Home, twelve bad teeth from a Nobleman. The caries and the morbid discharge, had made so considerable a progress, that not only the breath was considerably tainted, but they even occasioned a con-



vulsive motion in the muscles of the cheek. Abscesses had formed in his gums, which gave reason to fear that the jaw bones were affected. After having removed from this nobleman these teeth and a row of artificial teeth made of sea horse, which he had worn about a year, and which was equally decayed, the disagreeable taint of the mouth and the convulsive motion of his cheek ceased; and now that he wears a partial set of my invention, placed between some of his natural teeth, which still remain, but without being tied to them, he eats and articulates perfectly well, which he could not do before this operation.

I preserve the material proofs of these facts, and of many others similar to them, in the remains of sets of teeth, made of different animal substances, for which I have substituted the teeth of my invention: all bear the marks of decomposition and corruption, which are the inevitable consequences of their nature.

From what has been said, it must be evident, that the advantages resulting from re-

placing teeth, before my new discovery, were by no means equal to the evils they have occasioned. It may be truly said, that until my time, this art has been frequently more injurious than beneficial: and that were it not for a spirit of coquetry which arises from our state of civilization, this art, such as it was, would have sunk into an oblivion, from which it ought never to have emerged, if it had not been the means of furnishing me with the idea of the perfection to which I have brought it.

If what has been already said, should produce fear and disgust in those who feel the consequences of it, what will it be, when I shall have related the other dangers to which persons are exposed, when they submit to the criminal and unnatural operation of transplanting teeth, taken either from a living person or a dead body ?



## INOCULATION OF PARTICULAR DISEASES

*Which have been the consequence from the cruel operation of the transplanting of human teeth, whether they be extracted from the living subject or taken from the dead body.*

I SHALL not endeavour to trace the origin of that unnatural and dangerous operation of the transplanting of human teeth, recently extracted from unfortunately poor persons, believed to be healthy, whose necessities being taken advantage of, are mutilated in order to contribute to the vain gratification of others in affluent circumstances. Neither shall I attempt to state when the disgusting use of the teeth of dead persons commenced. I shall confine myself to expose the absurdity of the

opinions of those who transplant them; and some of the diseases which they inoculate, which will prove that this horrible method is far more dangerous than that of making teeth of the other animal substances of which I have already shewn the great inconveniences.

Notwithstanding what may have been said by some practitioners, and received by great numbers, I think I can state that transplanted teeth can never recover life. Being placed in the sockets, they always remain there as extraneous bodies which can never take root. In order that they should partake of that principle of life which preserves the natural teeth, it is necessary that the nerve, the artery, and the vein, which belong to the teeth which are extracted, should exactly meet the vessels of those which are transplanted, so as to restore in them the circulation of the blood and the nervous influence. But this is impossible, because a contraction of the vessels takes place immediately after the extraction of the tooth. Experience proves that transplanted teeth, being



thus deprived of all nourishment, are more liable than all others to fall into a state of disease, either in becoming carious, or turning yellow or black. The examination which I have made of teeth which have been transplanted for six months, has convinced me that there has been no union of nerve to nerve, of artery to artery, or of vein to vein. I have cut several through, both in length and breadth, without discovering the least trace of vessels in the cavity. Transplanted human teeth are therefore very inferior to teeth made of sea-horse, ivory, &c.

Mr. John Hunter, who used to be consulted on the diseases occasioned by artificial teeth, and of whom I have already spoken, thought, at one time, that transplanted natural teeth might be substituted for those which are decayed: he recommended, and was present several times at this operation, and it was not until after he had observed that these transplanted teeth inoculated diseases, that he renounced this cruel practice, and became, I

may take the liberty to observe, an enthusiast to my discovery. In his treatise on the venereal disease, he relates the following six cases.

The first case is that of a lady who had one of the bicuspidati transplanted, which fastened very well. \* About a month after, she danced till five or six o'clock in the morning, caught cold, and had a fever in consequence, which lasted near six weeks. In this time, ulceration in the gum and jaw took place, though it was not then known; and when she was beginning to recover, it was found that not only the gum and socket of this tooth were diseased, but also those of the tooth next to it. The two teeth were taken out, and the sockets of both afterwards exfoliated; but the parts were very backward in healing. This gave rise to various opinions,

\* When Mr. Hunter says that "transplanted teeth fastened very well," it is to be presumed that he saw them during the time that the swelling of the gums contributed to hold them in the sockets; because he acknowledges that when this inflammation and swelling ceased, the teeth became loose, and at length were taken out.



the principal of which was, that it was venereal.

The second case was also in a young lady; the transplanted tooth fastened apparently well, and continued so for about a month, when the gum began to ulcerate, leaving the tooth and socket bare. The ulcer continued, and blotches appeared upon the skin, and ulcers also in the throat. The disease was treated as venereal, the complaints gave way to this course, but they recurred several times after very severe courses of mercury; however she at last got well.

The third case was of a gentleman, where the transplanted tooth remained without giving the least disturbance for about a month, when the edge of the gum began to ulcerate, and the ulceration went on till the tooth dropped out. Some time after, spots appeared almost every where on the skin; they had not the truly venereal appearance, but were redder, or more transparent.

The fourth case was that of a young lady, who had a tooth transplanted, and about the same distance of time after it, as mentioned in the former cases, the gum began to ulcerate, and the ulceration was making considerable progress. The surgeon who was consulted, desired mercury to be given immediately. I was afterwards desired to see her, and advised that mercury should not be had recourse to, that we might ascertain the nature of the case, but to extract the tooth. The tooth was drawn, and the gum healed up as fast as any common ulcer, and has ever since continued well.

The fifth case was that of a young lady, eighteen years of age, who had one of the incisores transplanted, which fastened tolerably well; but six or seven weeks after the operation an ulceration of the gum took place; the tooth was immediately ordered to be removed, and the bark was given without any other medicine, and she got well in a few weeks.



The sixth case was that of a gentleman, aged twenty-three, a native of the West Indies, who had the two front incisores transplanted, and about the same time after the operation as in the former cases, an ulceration of the gum took place, which increased to a very great degree, and the edges of the gum sloughed off. An eminent surgeon was consulted, who ordered the bark; and the patient, without taking any other medicine, got well in nearly the same time as the ladies in cases four and five, who had their teeth taken out. The gums recovered themselves perfectly, but were considerably shorter.

To these cases I could add a number of others, related by different practitioners; but the preceding will, without doubt, suffice to convince the reader of the danger of transplanting teeth. Indeed, if all the symptoms or accidents mentioned in those cases were produced by healthy teeth, taken from persons who had never had any venereal or scrofulous

affection, it is then certain, that there exists in some constitutions hidden seeds of disease, which we can only discover by the effects they produce; and also, that irritation alone might, in this case, produce inflammation of the gums, in the throat, &c. and caries in the socket; for a tooth newly transplanted produces greater irritation, as it is impregnated with different blood. If then, it be proved that the transplanting of one or several teeth may communicate the venereal poison, or scrofulous infection which existed in the mass of the blood of the person from whom the teeth were taken, it is clear that we ought for ever to banish from the profession of the dentist the dangerous practice of transplanting human teeth, and even the use of them in any other manner, whether with pivots or otherwise.

It may be easily thought that those who have not made the human structure their particular study, may have been made to believe that teeth recently extracted, of the requisite



size, might unite with the sockets into which they were inserted; but it seems difficult to conceive how any one can conquer the aversion caused by the disgusting and horrible idea of ornamenting the mouth with the teeth of dead people. I should pardon this attempt if these were not, like those made of corruptible materials, liable to putrefaction, and even to inoculate diseases, as the following case proves.

A dentist of Paris had the opportunity of obtaining such teeth as he wanted from the persons who died in the hospital called the Hotel-Dieu. One day he took the teeth of a young man who had died of the small-pox; these teeth were washed, and infused in spirit of wine; they were afterwards fixed upon a base made of the sea-horse tooth; but notwithstanding these precautions, these teeth inoculated the small-pox to the baroness of W. The disease was particularly violent about the mouth, which disfigured her so much that she could scarcely be recognised.

The use of dead teeth can only be attributed to ignorance or cupidity, because they do not require that skill and dexterity which is requisite to prepare artificial ones.

In the Introduction I have already stated what led me to the invention of teeth of mineral paste. The opinion of several learned societies in France, and also of some of the most eminent physicians and surgeons of this capital, may add to the confidence which fifteen years of success ought to inspire. I ought to relate here what some of them have said, so as to leave no doubt of the extreme utility of my discovery: their Reports will be preceded by a recapitulation of the inconveniences which arise from all kinds of artificial teeth made of substances susceptible of putrefaction, and of the advantages of teeth of a mineral paste which is incorruptible, and can be acted on by no other agent but the fire of a furnace or glass-house.



At the end of this recapitulation I shall state some other uses of my mineral paste, not less essential than that of making teeth; and of the mechanism of the springs which I use in all cases.

RECAPITULATION OF WHAT HAS BEEN ALREADY SAID; OR, PARALLEL BETWEEN TEETH OF ANIMAL AND MINERAL SUBSTANCES.

*Danger arising from teeth made of animal substances.*

1. They are corruptible, and always occasion an insupportable smell, both to the person who wears them and those to whom he speaks.

2. They wear out in a short time and decay. Their little solidity and durability make it necessary to renew them often, which occasions reiterated expence.

3. Their substance being bony, it is necessary to manufacture them with a file and graver, whence arises several inconveniences. They can never take the shape of the gums,

*Advantages of teeth made of mineral substances.*

1. They are incorruptible, and never occasion any bad smell.

2. They are extremely solid; a complete set of teeth will last a man his life-time, without wearing out.

3. The substance of these being at first a paste, it can receive the impression and the form of the edges of the sockets and the gums, so that the artificial teeth, and the sets of teeth whe-



they occasion continual pain, they unite so ill to the gums that particles of food lodge in the spaces, and cause a fetid odour.

4. The loss of teeth causes the sinking down of the gums, proceeding from the absorption of the alveolar processes: from this arises deformity of the mouth; it is not possible perfectly to remedy this with teeth of animal substance, since gums of a natural colour cannot be added.

5. When they corrupt and become decayed, they separate from the pivots, because the holes which serve to hold them become too large; the teeth often fall out in eating and pass into the stomach with the food; the pivot sometimes remains in the tooth thus swallowed.

ther partial or complete, occasion no pain by their pressure, and leave no spaces, in which particles of food can lodge and become offensive.

4. With the mineral substance, we have the double advantage of being able to substitute artificial gums, and to give to them a durable colour resembling nature.

5. In the teeth of unalterable mineral materials, the holes which receive the pivots are square, and cannot become larger, which renders them very firm; and besides as they are rivetted, they can never separate from the teeth; I can even solder them to the artificial pieces when it is necessary.



6. Although they are at first very white, they soon become black, and form a striking contrast with the neighbouring teeth.

7. If one or more of these teeth be tied to the natural ones which remain, the sides corroding fall into a state of decay, and thus they become smaller and displace those to which they are tied, and soon after cause them to fall from their sockets.

8. At first, if they are used dry, the moisture of the mouth makes them swell, and thus becoming larger, they separate and force the natural teeth to which they are fixed, which accelerates their loss, by the inflammation which they occasion to the membranes and the gums.

6. To these a colour is given corresponding to that of the neighbouring teeth, which cannot be changed by any of the articles of diet.

7. These being incorruptible, can never wear out by corrosion or friction; their polished surface cannot undergo any alteration, neither from moisture or food, and they preserve the natural teeth to which they are tied, always firm.

8. Those being of a solid substance, not porous, cannot swell, nor be affected by moisture; on this account, they never separate the teeth to which they are tied, and so far are they from causing them to become loose, that they preserve them firm in the sockets without producing any inflammation.



9. With these animal substances, we cannot make artificial palates which will exactly fit the cavities occasioned by loss of parts of the roof of the mouth.

10. Finally, Sets of teeth of animal substances require to be taken out every night, in order to clean them, and remove the particles of food which remain about them, and which becoming putrid occasion an offensive smell.

9. With the mineral paste, we can make artificial palates which will fit exactly to the roof of the mouth and the edges of the sockets, &c.

10. There is no necessity to remove the teeth and sets of teeth of mineral paste, every night, because particles of food cannot stick to them, and produce neither putridity nor bad smell.

## OTHER USES OF THE MINERAL PASTE.

WITH this paste, as has already been said, the loss of parts of the bony palate and of the gums may be repaired; also parts of the face which have been disfigured or destroyed.

To prove this, I shall content myself with relating some cases, to the truth of which I can call a great number of persons, who have either been witnesses or the subjects.

Case the first: The daughter of an English physician lost by the violence of the small pox, the under lip, the chin, and several teeth. I repaired these defects under the inspection of Dr. Poignand and Mr. Thomas Young.

Case the second: The celebrated Default, principal surgeon of the Hotel-dieu at Paris, sent a patient to me who had worn an artificial palate made of silver, and supported by a sponge. This person could no longer endure the tainted smell which this sponge occasioned, and the sounds of his voice were indif-



tinct. It was evident that the smell proceeded from the mucus which the sponge imbibed, because it was seldom cleaned, on account of the difficulty attending the taking out and replacing the palate, it being of an extraordinary magnitude. The taint of the mouth went off, the articulation became distinct and sonorous, as soon as I had replaced this palate with another made of my mineral paste, fixed and suspended according to my method. There are, however, some cases in which we must make them of gold, fine silver, or platina.

Other cases: Two patients were sent to me, one by Dr. Rowley, the other by Mr. Blair, Surgeon; the caries which had totally destroyed the bones of the palate, and a portion of the exterior edge of the jaw bone, extended even to the sinus. I was happy in being able, by artificial pieces of my paste, to remedy the deformity of these two patients, and to restore to them the power of speaking more distinctly.

I could relate many other similar cases of patients recommended to me by Sir George Baker, Doctors Turton, Reynolds, Carmichael Smyth, Mr. Heavyside, &c. but as they are of the same kind as those I have just mentioned, I shall not say any thing of them.

It was not sufficient to be in possession of a substance, convenient to the art of the Dentist. Not satisfied with the action of springs which only moved in one direction, and which caused a disagreeable and inconvenient resistance in the different motions of the mouth, I invented springs which united solidity to flexibility: they have a rotatory motion which the artists had not before been able to give them, and there is nothing complicated in their contrivance, for their extreme simplicity enables every body to be able to fix them. The praise bestowed upon them by the academy of sciences will be seen in their report.

This new mechanism is proper also for the fixing of artificial palates; it can support them



without being obliged to attach them to the teeth which remain. As I make every piece myself, I can give them a greater resemblance to nature than if they passed through different hands.

This dissertation cannot be better terminated, than by presenting the reports and approbation of the committees appointed by the Faculty of Medicine of Paris, and of the Academy of Sciences, and also those of many eminent English physicians and surgeons.

REPORT OF THE ACADEMY OF SCIENCES  
 CONCERNING THE TEETH, AND SETS OF  
 TEETH, OF THE NEW COMPOSITION OF  
 M. DUBOIS DE CHEMANT, SURGEON.  
 EXTRACTED FROM THE REGISTERS OF  
 THE ROYAL ACADEMY OF SCIENCES,  
 JUNE 10TH, 1789.

“ M. D'ARCET and I have been charged to examine the teeth, and sets, of a new composition, which M. Dubois De Chemant has presented to the academy, and to give in an account of them. The company has been able to judge as we have, that those teeth and sets very nearly imitate nature, as well by their form and colour as by the portions of artificial gums which support them, and to which M. Dubois De Chemant also gives a very great likeness to natural gums. But what merits for them a considerable preference beyond all those which have been composed hitherto, is, that they are of a hard substance,



upon which the saliva and the particles of food which remain in the mouth have no *effect*; whereas the others, made of animal substances, and little resembling natural teeth, are easily spoiled, acquire a dirty colour, and contract a smell as *offensive* as it is *prejudicial* to the health. The matter which M. De Chemant makes use of is a mineral paste, to which, after many essays, he has found means of giving a colour like to that of the teeth which he means to supply. He can mould it into any form so as to make whole sets, half sets, either for the upper or lower jaw; portions of sets, when there remain upper or lower teeth, which may be preserved, single, double, treble, or quadruple teeth, as necessity requires. The whole sets are put in motion by means of springs, of M. De Chemant's invention, which are very different from those used heretofore, and which not only separate the parts when the jaws are distended, but also allow the side motions. These springs are applied to both sets, even to the upper ones, in a manner as

simple as it is ingenious. A mechanism equally simple joins the parts of sets to the natural teeth which remain; and single, double, or treble teeth fit with the greatest facility, because M. De Chemant has found means of boring his paste so as to place pins in them, and to make any slides he pleases.

“ His manner of taking measure of the teeth which he intends to replace, adds greatly to the merit of his invention. His process is such, that each piece is moulded, as it were, for the place which it is to fill; and as for the whole sets, half sets, or any other portion whatsoever, their base receives and surrounds the edges of the gums, or the part on which they are applied, so as to render their position very solid, and to prevent the painful pressure they may otherwise occasion. By this process he can preserve, as long as he pleases, the moulds of all his pieces, and can take very exact and precise measures of persons at a distance whom he never saw; and provided he be informed exactly of the colour of the re-



maining teeth, he is sure to send pieces which will fit with the greatest exactness as well as if he had taken the measures and placed the teeth himself.

“ M. De Chemant’s paste is very solid ; it cannot be broken between the hands, without employing very great strength. The substance of it produces fire with steel ; it is not affected by acids. The weight of it is less than that of porcelain. M. Briffon, who has been pleased to determine it, found that a cubical inch of it weighed one ounce, two gros\*, and sixty-nine pennyweights ; whereas the lightest china of Seve, of the seventeen kinds which he tried, weighs ounce, three gros, and nine grains.

“ Having examined the teeth and sets of teeth made by M. De Chemant, after seeing the manner in which he takes his measures and forms his moulds, having inquired into the springs and the means he employs to adapt his pieces, in order to justify the confidence laid in us by the Academy, we thought proper

\* A gros is the eighth part of an ounce.

to see some pieces placed on; we therefore went ourselves to the houses of different persons who make use of them, and who have consented to be visited and to answer our questions. We have seen teeth of every kind. The persons to whom M. De Chemant conveyed us are all of a distinguished rank, and of course beyond all suspicion of any other views in what they told us than those of doing justice to truth. They assured us they felt no sort of inconvenience from the pieces they make use of, and that they became accustomed to them in a very short time, and with ease. They use them to eat, and find them of assistance in the action of chewing as well as of speaking, at the same time that they remove the deformity arising from the want of teeth. We have seen no person whose pieces have either lost their colour or received any other hurt, by any bits falling off; and though that should happen, and some scraps should mix with the food, we think we may affirm, that nothing dangerous could result from it, and that those particles



may be swallowed without any more danger than particles of bones of fish or any other animal, or any other hard substance which we are liable to swallow in eating. There is then nothing to apprehend from the teeth or sets of teeth made by M. De Chemant, which moreover possess all the advantages that can be desired.

“ The Academy will, no doubt, permit us to conclude, from what has been said, that the artificial teeth and sets of teeth, of M. De Chemant, deserve being approved by it, and that it would be proper that history should mention the happy application he has made of a hard and incorruptible matter to an end so useful as that of supplying the want of lost teeth.

(Signed) “ D’ARCET and SABATIER.”

At the Royal Academy of Sciences, June 10, 1789.

“ I CERTIFY the present extract is agreeable to the original, and to the judgment of the Academy.

(Signed) “ The Marquis De CONDORCET.”

Paris, June 21, 1789.

REPORT OF THE COMMISSIONERS, APPOINTED BY THE FACULTY OF PHYSIC OF PARIS TO EXAMINE THE NEW TEETH AND SETS OF TEETH, INVENTED BY M. DE CHEMANT, SURGEON.

“ Mr. DEAN,

“ WE have examined the new artificial teeth and sets of teeth, which M. De Chemant forms of a paste of his composition, which he hardens by the fire ; their hardness is so great that they long resist the hammer, and often produce fire, like flint struck with steel : no kind of acid can dissolve them ; a piece, representing the whole set of the upper jaw, may be thrown against the floor without breaking.

“ The sets for the upper jaws are of one entire piece ; the teeth are not separated by real interstices ; they are represented each according to its natural form, and a coloured shade seems to separate them. The gums



are also perfectly imitated; on the edges of these sets, are some inequalities which represent the upper extremities of the different kinds of teeth.

“ By the form which M. De Chemant gives his teeth, they perfectly resemble nature; he has also discovered the means of giving them the colour of the natural teeth, for which they are substituted, so that they cannot be distinguished from the natural teeth of the person who wears them: and as the substance of which they are made is incorruptible, it loses none of its properties by time.

“ The whole set composed of an upper and lower jaw, is united by a spring invented also by M. De Chemant, by means of which both jaws move with great facility, and without any troublesome or inconvenient resistance to the wearer, in their different movements. We have seen a person wear an upper set, which fitted perfectly, was no ways incommodious to the patient, who, whenever he spoke or laughed, seemed to have a beauti-

ful set of teeth. We have also seen several teeth joined together, in the mouth of a person, who may be relied on, and who assured us, he could eat with those artificial teeth, as well as he formerly used to do with his natural ones.

“ This invention of M. De Chemant’s seems to us to unite all the advantages, which persons who want artificial teeth can wish for. When he is about to supply the defect of one, or many contiguous teeth he takes with his paste, the length of the space to be filled, and the form of the edges of the gums, with the greatest precision ; he then forms a piece which fits so exactly as never to incommode the wearer. The hardness of the composition is such, that it never wastes by mastication, and its incorruptibility prevents it from being dissolved either by solid or liquid food ; as the teeth are not separated in their length, no parts of the aliments can remain amongst them.



“ Hitherto dentists had no other means of supplying the want of teeth, than by the bony substances of different animals, of which they formed either single teeth, or many teeth together, or whole sets of teeth ; they took a part of a bone to form the piece they wanted, and made use either of a file or a saw to work it ; when they intended to make a set for either, or for both jaws, they gave a piece of bone the proper shape, and then marked with a saw on the surface, a line to imitate the space which commonly divides the teeth from each other ; these teeth, particularly those of the fore part of the mouth, rather resembled the keys of a spinnet than real teeth, and had a considerable opening, as well at their upper end as in their whole length : parcels of food remained in them, fermented in the mouth, corrupted and exhaled an infectious smell, as noxious to the patients themselves, as intolerable to those to whom they spoke too closely.

“ We think it proper to observe, that the

file and saw employed to shape those teeth or sets of teeth, made of bone, by opening a great number of pores in them, where the juices of the mouth and aliments could penetrate, disposed them to corrupt in the mouth : it is a fact, that those bones softened, corrupted, and wore away in the mouth. We have seen on the same set, two exfoliated teeth, and we lay before the faculty an old set, which we received from M. De Chemant, which became soft and black in the mouth of the person who wore it.

“ M. De Chemant’s teeth have none of the inconveniences of those made of bone : they have the advantage of resembling perfectly the form of every kind of teeth, of representing the intervals without leaving any void space, of representing the gums, and fitting so exactly on the edges as never to be troublesome to the wearer. We therefore think that the faculty should admit the discovery of M. De Chemant, as an invention which does much honour to its author, and must be very



useful to those who are in need of the assistance of this new art.

(Signed)

“DESCEMET, BAGET, and PETIT-RADEL.”

EXTRACTED FROM THE REGISTERS OF THE  
FACULTY OF MEDICINE IN THE UNIVERSITY OF PARIS.

“IN the year one thousand seven hundred and eighty-nine, on Monday the second day of March, the Faculty of Medicine assembled at five o'clock in the afternoon, in its upper schools, after having heard the report made to them by M. M. Descemet, Baget, and Petit-Radel, whom they had charged to examine the artificial teeth and sets of teeth, proposed by M. De Chemant, Surgeon and Dentist, has been unanimously of opinion, agreeably to the said report, to approve the same artificial teeth and sets of teeth, composed of a paste which M. De Chemant hardens by fire, so that those pieces unite, at the same time, beauty, solidity, convenience, and salubrity, qualities acknowledged by the

Commissioners, as well by the trials made upon the specimens presented by the inventor, as by what they observed with persons who have made use of them, and I have concluded in approving the sentiments of the Faculty.

“EDME, CLAUDE BOURU, Dean.”

“ON the part of M. M. the Deans and Doctors Regent of the Faculty of Medicine of Paris, I have affixed the small seal, the 5th of March 1789.

(Signed)

“CRUCHOT,

“First Apparitor and Register Keeper of the said Faculty, in the University of Paris.”

LETTER OF M. SAGE, MEMBER OF THE  
NATIONAL INSTITUTE, AND DIRECTOR  
OF THE SCHOOL OF THE MINES OF  
FRANCE.

“Sir,

“EXPERIENCE confirms what I had the honour of saying to you, when you informed me that it had been asserted that the liver of sulphur had some action upon your artificial teeth of mineral paste.



“ I left two of those teeth during three days in a solution of liver of sulphur, from which, after I had taken them out and washed them, I found they had undergone no alteration.

“ I have preserved one of those teeth, which may be produced in case it should be again said, that the liver of sulphur has any action upon them.

“ SAGE.”

Paris, Hotel de Monnoies, April 2, 1790.

CERTIFICATE OF M. BRISSON, MEMBER OF  
THE NATIONAL INSTITUTE OF FRANCE,  
AND AUTHOR OF THE MOST ESTEEMED  
WORK ON THE SPECIFIC GRAVITY OF  
BODIES.

“ I HAVE weighed the tooth of the hippopotamus perfectly dry, and also when it had been soaked in water. When it is dry, the cubic inch weighs one ounce one dram fourteen grains ; when it has been soaked in water, the cubic inch weighs one ounce one dram fifty-four grains, which shows that it imbibes

forty grains of water in every cubic inch. If we compare this with the substance of the sets of teeth of M. De Chemant, of which the cubic inch weighs one ounce two drams sixty grains, we find that the weight of the tooth of the hippopotamus is to the substance of the teeth of M. De Chemant as eight to nine, or as sixteen to eighteen.

“ I have also weighed an under row of teeth made of the substance used by M. De Chemant. I certify it only weighed four drams thirty-four grains, the two rows together will then at the most weigh only nine drams. In testimony of which I have given the present certificate.

“ BRISSON.”

Paris, June 19, 1789.

I only insert these two certificates, for the purpose of removing the unfavourable impression which might be produced by the supposition inconsiderately advanced by some jealous dentists, that my teeth will not resist the action of all agents, and that they were



of a greater weight than the teeth of animal substances. I have proved, that at the same time that the substance of my teeth is more solid, I am not obliged to make use of so great a quantity, and that consequently my sets of teeth are lighter; besides they are not capable of imbibing the fluids of the mouth, like the teeth of animal substances, which give to the latter forty grains of increase in weight in every cubic inch. Moreover it must be observed, that it is precisely this imbibed moisture which is the principle of their corruption.

A LETTER ADDRESSED TO THE INVENTOR,  
 BY DR. WM. ROWLEY, M. D. MEMBER  
 OF THE UNIVERSITY OF OXFORD, THE  
 ROYAL COLLEGE OF PHYSICIANS IN  
 LONDON, AUTHOR OF THE RATIONAL  
 PRACTICE OF PHYSIC, SCHOLA MEDI-  
 CINÆ UNIVERSALIS NOVA, PHYSICIAN  
 TO THE ST. MARY-LE-BONE INFIRMARY,  
 &c. &c.

TO M. DE CHEMANT, SURGEON, NO. 2,  
 FRITH-STREET, SOHO.

“ Sir,

“ It is no less the duty of every  
 physician to be as circumspect in receiving  
 novel doctrines, as to be disposed, liberally, to  
 promulgate useful truths.

“ Having known from long observation,  
 that the substances with which artificial teeth  
 are composed, occasion a fetid breath inimi-  
 cal to the human constitution, I was happy  
 to be informed by some persons of rank, and  
 others with whom I have the honour to be  
 acquainted, that the artificial teeth, formed  
 of M. De Chemant's composition, were not



liable to many disagreeable inconveniences experienced from others, composed of sea-horse teeth, &c.

“ Not to be deceived, however, by first appearances, I waited two or three years, and examined from time to time some cases, where the artificial teeth, and coloured gums of M. De Chemant had happily and usefully supplied the loss of the natural, in persons whose honour and probity were indubitable.

“ In order, however, to be more perfectly satisfied of the nature of the composition, I procured some of M. De Chemant's artificial teeth, and immersed three pieces, separately, in the muriatic, vitriolic, and nitrous acid, where, after they had remained a considerable time, it appeared, that no effect whatever was produced on the composition, colour of the gums, &c. What the fluor acid might have produced, I had no opportunity of trying; but the above experiments were perfectly conclusive in all the points to which the examination was directed.

“ The result of these enquiries were :

“ I. That neither foods, drinks, nor foul expiration air, could affect the composition.

“ II. That the composition being moulded exactly to the shape of the deficiencies to be supplied, they are likely to fit more accurately than those manufactured from other substances.

“ III. That the imitation of the gums is a real improvement, which cannot be imitated by the common methods of supplying defects.

“ IV. That in colour and durability, they are quite superior to the common artificial teeth, and by not imbibing the moisture of the mouth, &c. they do not occasion a stinking breath, which is not only disagreeable with whomsoever the parties converse, but, in some degree, by the inspiration of a putrid air, the human constitution may be materially injured.

“ V. That, in general, the advantages expressed by the Academy at Paris, and by that learned and excellent surgeon, Mr. Sabatier,



whom I have had the honour to personally know, are not exaggerated, but strictly conformable to truth.

“ VI. That as indigestion and a number of stomach and other complaints may arise through the want of sound teeth to masticate the food, I consider the artificial supply of such defects to be very ingenious, and conducive to health, and the present improvement an important discovery.

“ From the decided conviction, therefore, that a series of incontrovertible facts can produce in the mind of a cautious enquirer, I must declare, that the invention of M. De Chemant is a real and useful improvement, and justly demands the attention and gratitude of society.

“ I am, Sir,

“ With the best wishes for the success of your invention,

“ Yours, &c.

“ W. ROWLEY, M. D.”

Saville Row, Nov. 7, 1796.

THE OPINION OF MR. THOMAS YOUNG,  
SURGEON, NO. 4, COLEMAN-STREET, ON  
THE INVENTION OF THE ARTIFICIAL  
TEETH OF MINERAL PASTE, BY M. DE  
CHEMANT, SURGEON-DENTIST, NO. 2,  
FRITH-STREET, SOHO.

“ Sir,

“ As I am of opinion you have accomplished what has long been a desideratum in Surgery, viz. the means of making and applying an artificial palate in cases of defect, which should possess the properties of the specimen I have had the opportunity to inspect, I cannot doubt but the public in general, and the afflicted in particular, will be pleased to hear of it, and receive an authentic testimony of its having been actually used with all the success, and even greater, than at the first view it seemed to promise. The case of Mr. ——— is in point; I have, therefore, sent you a simple narrative of facts as they presented themselves to me, to which (as it has relation to the same case) I have



subjoined a short testimony in addition to the many you already possess, of the superior advantages of your artificial teeth, which you have my consent to publish.

“ I am, Sir,

“ Your humble servant,

“ THOMAS YOUNG.”

Coleman-Street, May 6, 1796.

“ P. S. A young gentleman some time since consulted me, with M. De Chemant, on account of a large defect of the bony palate, and of the alveolar processes of the upper jaw, with a consequent loss of the front teeth, which they used to sustain. He some time afterwards called on me to shew me an artificial palate and teeth formed of one piece, which M. De Chemant had adapted to, and fixed in the part. By means of this contrivance, the hole in the palate was closed, and he was able to speak without that disagreeable lisp, and offensive nasal sound, which is usual in such cases, and he could swallow his

food without any portion of it getting into his nose, as it had before done. The defect of the other part of the upper jaw was filled up with a resemblance of natural teeth and gums, so that the functions of chewing, as well as of speech and of swallowing (which had been impaired) were restored to him. It was formed of a substance which M. De Chemant calls his mineral paste, and was secured in its place, partly by means of its shape, and partly by a ligature, which attached it to the adjoining natural teeth. The gentleman assured me, that he did not suffer the smallest degree of pain or inconvenience, but was able again to mingle in society, and take his share in the pleasures of conversation, from which he had for some time been excluded. I have had occasion to observe, in many instances, the superior advantages of M. De Chemant's artificial teeth, in the various points of view in which they have been so justly represented by the Academy of Sciences, and the Faculty of Medicine of Paris. But



there has appeared to me one circumstance which is not so strongly noticed as it deserves to be, viz. That a composition in the state of a soft and yielding paste like this, admits more perfectly than any other substance of being formed to any shape that may be necessary, whether to supply the defect of palate, gums, and teeth, in the case of a natural fissure; or in case of a defect of teeth only, by moulding it to the surface of remaining gums, to give an easier bed to their pressure; besides which, the natural projection and arch of the upper jaw may be correctly imitated, or even improved, which being lost, destroys the beauty of the finest set of features, causes the upper lip to fall in, and produces the appearance of old age in the youngest face."

LETTER FROM M. GEOFFROY, DOCTOR REGENT OF THE FACULTY OF MEDICINE OF PARIS, AND PRESIDENT OF THE ROYAL SOCIETY OF MEDICINE, TO M. DE CHEMANT, SURGEON.

“ Sir,

“ I PROMISED to give you a certificate of approbation, if, after having made use of the teeth of your invention, I found them to answer the expectations I had formed.

“ It is then with the greatest satisfaction that I certify, that during six months I have made use of one of your sets of teeth, with which I can eat and speak as I could before I lost my own teeth. I declare that the success is superior to my hopes. I further attest, that the teeth of sea horse, which I wore for only one year, had so much disgusted me, by the bad smell they gave to my breath, and the disagreeable taste they communicated to my food, that I had not only withdrawn myself from company, but even taken them out to be able to eat.



“ I no longer doubt, Sir, that my ill state of health proceeded from the putrid miasma given out by the bony substance of this set of teeth. It is a fact that experience has proved to me, for since I have laid it aside, and have used yours, my health is infinitely improved. I eat with more facility, which certainly arises from the exactitude and precision with which it is made.

“ By your discovery, you have without doubt rendered a service to humanity ; let us hope, that soon private companies and public places will no longer be infected by those sorts of substances. In order better to convey what I mean : suppose two thousand persons at the opera, there may be amongst them, at least, two or three hundred who have a small piece of sea horse tooth in the mouth ; collect in idea all these decayed substances, and you will form a skeleton of the bones of that animal, which, if it were placed upon the stage, would soon drive away all the spectators by the putrefaction and disgust it would occasion.

“ I ought also to inform you, that I have shewn my set of teeth to several dentists, particularly to M. Beaupreau and M. Bourdait, dentists to the King, who have told me with frankness, that they would have been very glad to have made your discovery ; in which, say they, is only one fault, that which refers to the benefit of the art : this is, that they are too durable ; for one might add, that if one set of teeth could fit all kinds of mouths, it might be left to the succeeding heirs. But joking apart, I am very much obliged to you, for the service you have rendered me. If my attestation can add to the success of your new effort, I beg you to make use of it in any way you please.

“ GEOFFROY.”

Paris, Feb. 13, 1789.

CERTIFICATE OF MR. MARCH, DENTIST.

“ I CERTIFY, that after having well examined the artificial teeth, invented by M. Dubois De Chemant, I have found them to



surpafs every thing which has hitherto been discovered, as well for durability, solidity, and incorruptibility, as for the portion of the gums, the colour of which is unalterable.

“ JOHN MARCH.”

Knightbridge, June 23, 1791.

FROM DR. POIGNAND, TO N. DE  
CHEMANT, ESQ.

“ Sir,

“ I HAVE already had many occasions to convince myself of the superiority of your mineral paste over all animal substances, which have been made use of until now to make artificial teeth. I had also considered the gums, and parts of the palate, that you join with them when necessary; the colour of which is as natural as it is durable, a degree of perfection that belongs solely to your discovery.

“ In consequence of these observations, I advised Miss ———, who had been much disfigured by the small pox, to try your in-

vention; yet, Sir, notwithstanding the good opinion I had of it, it was necessary I should see the chin, the under lip, and the artificial teeth that you made her, to judge how far it had been possible to remedy the accidents resulting from this illness.

“ I have remarked with great satisfaction, that you have remedied, in the most perfect manner, the infirmity and deformity with which she was afflicted; there could only be a substance ductile and solid, such as that of your invention, that could unite advantages so precious.

“ I have the honour to be,

“ Sir,

“ Your very obedient humble servant,

“ L. POIGNAND.”

Parliament-Street, January 8, 1797.



A LETTER FROM DR. DE VALANGIN, TO  
M. DE CHEMANT.

“ Sir,

“ I HAVE perused, with great attention, and with much pleasure, your French Dissertation on artificial teeth. Your observations on their utility are founded on the truest principles of physiology and pathology.

“ The inconveniency, and even the danger arising from artificial teeth being made of animal substances, or being applied by transplantation, must be obvious to every medical man. Your invention removes at once all those difficulties.

“ From my own experience, and the observations I have made on your mineral paste, I have had the most convictive reasons to admire it, as the best substance for artificial teeth.

“ It is durable and incorruptible, and, in its soft state, is susceptible of receiving the form adapted to fill up the chasm or cavity intended to be restored. After it is baked to

hardness, it is subject to no brittleness, and yet is so hard as to resist the strongest efforts without breaking. It has a peculiar toughness, which will not yield to the common mode of drilling glass or china.

“ In short, it is an invention which is superior to any means hitherto employed to repair the loss of natural teeth, and ought to be universally adopted by professional men and practitioners in that branch of surgery, and by every individual who requires their assistance.

“ I have the honour to subscribe myself,

“ Your most obedient humble servant,

“ BRAS DE VALANGIN.”

Fore-Street, May 10, 1797.

FROM SIR JAMES EARLE, TO N. DE  
CHEMANT, ESQ.

“ Sir,

“ I RECEIVED the favour of your letter, requesting my opinion concerning your mineral paste, in answer to which I have the pleasure to say, that several respectable persons, whom you have accommodated with artificial



teeth, have given me an opportunity of examining them, among whom I have permission to mention the archbishop of Narbonne, who has a complete set. The appearance of your teeth is certainly a beautiful and exact imitation of nature, they are worn with perfect ease, and from the testimony of the parties themselves, they perform the office of trituration extremely well.

“ Indeed, when I consider the properties which your composition possesses, that in its soft state it is sufficiently ductile to take an exact impression of the parts to which it is to be adapted, and when hardened, is capable of resisting the utmost force used in mastication; that it is incorruptible, and insoluble in any kind of aliment, consequently inodorous, clean, and pleasant in the mouth, and that it permanently retains the colour which you give it to represent the gums, and to imitate the natural teeth. In justice to your invention, and with a view to promote the health and comfort of mankind, I cannot hesitate to

add my suffrage to its merit, and to declare my opinion, that it is well calculated to supply the defects to which the mouth and teeth are liable.

“ I have the honour to be, Sir,

“ Your most humble servant,

“ J. EARLE.”

Hanover Square, May 20, 1797.

FROM SIR WALTER FARQUHAR, TO N. DE  
CHEMANT, ESQ.

“ Sir,

“ THE opinions of so many respectable professional men, both in France and in this country, with regard to the utility of your composition for artificial teeth, have been so very favourable, that you do not seem to want any more testimonies to recommend your useful discovery to the public ; however, as you wish I should say where I have seen the mineral paste useful, (which never produces any offensive smell or disagreeable breath) it is but justice to acknowledge, that I have



found your artificial teeth worn with perfect ease and comfort, and also the palates made by you of the same composition.

“ I am, Sir,

“ Your most obedient humble servant,

“ WALTER FARQUHAR.”

Great Marlborough-Street, June 5, 1797.

A LETTER FROM WILLIAM BLAIR, ESQ.  
SURGEON OF THE LOCK HOSPITAL AND  
ASYLUM, AND OF THE FINSBURY DISPENSARY,  
TO N. DE CHEMANT, ESQ.  
SURGEON, INVENTOR OF THE MINERAL  
PASTE, ARTIFICIAL PALATE AND TEETH.

“ Sir,

“ IN answer to your inquiries respecting the palate and teeth which you made about three years ago for my patient, it is mere justice to acquaint you that your endeavours have been crowned with the most complete success. I am not only satisfied, but have the pleasure of adding that you have restored the voice of a person, who, before he

used the artificial palate, was totally unable to articulate ; and whose powers of mastication are likewise surprisingly recovered by means of your contrivance. I might also mention, as a point of no small importance, that the natural form of his upper lip and nose, which were greatly distorted by the ravages of his complaint, are now re-established beyond what I should have conceived to be possible. When I last saw the patient, a few weeks ago, the apparatus had not evidently sustained the least injury by use, during so considerable a lapse of time.

“ I remain, Sir,

“ Your most obedient servant,

“ WILLIAM BLAIR.”

Great Russell-Street, Bloomsbury,

1801.



A LETTER FROM THE CELEBRATED DR.  
JENNER, TO NICHOLAS DE CHEMANT,  
ESQ. NO. 2, FRITH-STREET, SOHO.

“ Dear Sir,

“ I AM extremely happy in the opportunity you afford me of bearing testimony to the excellency of your invention; having witnessed its efficacy in many instances, not only where the loss of teeth has been partial, but in those unfortunate cases where the whole of the teeth have been lost prematurely.

“ The incorruptible nature of the mineral substance you employ, gives it, in my opinion, a decided preference over the animal substances which have been used for supplying these defects.

“ I remain,

“ Your obedient and faithful humble servant,

“ E. JENNER.”

Hertford-Street, May-Fair, July 30, 1803.

## CERTIFICATES IN VERSE,

*Adressés à M. Dubois de Chemant, Chirurgien,  
Inventeur de dents de pâte minérale, par le Général  
Comte de Martanges.\**

DE trente deux superbes dents  
Ma bouche étoit si bien armée,  
Avant que, par le laps de temps,  
La place fût démantelée ;  
Je la revois, grâce à CHEMANT,  
En meilleur état de défense,  
Que n'eût pu la mettre Vauban,  
L'Ingénieur par excellence.

\* The author of these verses having requested that they should be inserted in this work, in order to demonstrate his gratitude for the benefit which he experiences from the complete set of teeth which he has used for seven years, and also as making a continuation of the two Couplets which he has equally desired to be put at the bottom of the Portrait ; I have thought it my duty to yield to his intreaties. The reader will, without doubt, peruse them with the greater interest, when he is informed, that they are the production of a man of eighty-two years of age, who has not as yet lost any thing of the ordinary energy of his mind, nor of the elegance which has always appeared in his works.



Paroiffez, raves et radis,  
 Durs cornichons, ou verte olive ;  
 Osez franchir le pont-levis  
 Qui borde aujourd'hui ma gencive :  
 Présentez-vous, fiers artichauts,  
 Fuffiez-vous même à la poivrade.  
 Et vous verrez s'il y fait chaud ;  
 Frottez-vous à ma paliffade.

Ces perles d'une fi belle eau,  
 Qui, des notre plus tendre enfance,  
 Germent déjà dans le berceau,  
 Pour parer notre adolescence,  
 C'est le fecret du Créateur,  
 Et le rôle de la nature ;  
 Mais après cet unique acteur,  
*Vivat* CHEMANT pour la doublure.

Legrand point toujours réservé  
 Au feul artiste incomparable,  
 C'est bien CHEMANT qui l'a trouvé ;  
 Il joint l'utile à l'agréable.  
 Quand la faux du temps a détruit  
 Du palais la brillante armure,

Avec la fienne, on mange, on rit :

*Vivat* CHEMANT pour la doublure

Si jufqu'à la réalité

Il eût doublé l'adolefcence,

Ah ! comme je l'aurois chanté !

Que! hymne de reconnoiffance !

Mais, hélas ! à quatre-vingts ans,

N'eût-on que de vingt l'apparence,

On eft profcrit, malgré fes dents,

Et d'Hippocrène, et de Jouvence.



TRANSLATION, BY MR. MORTON.

I

TEETH thirty-two, a goodly fet,

This mouth of mine did whilom grace,

Ere time with his all-conquering hand

Dismantled and laid waste the place ;

Thanks to CHEMANT, in better ftate

And fortify'd it now appears,

Than had Vauban effay'd his fkill,

Vauban the prince of Engineers.



## 2

Plants of the garden or the field,  
 Ye turnips white, ye carrots red,  
 Ye cucumbers and olives green,  
 And artichokes with tow'ring head,  
 Approach and dare the drawbridge pass  
 That guards my mouth with double chain,  
 Downwards with ease descend your way,  
 But hope not to return again.

## 3

E'en helpless infants, whilst we press  
 The cradle, sprouts the pearly tooth,  
 And faithful to its trust remains  
 Throughout the holiday of youth.  
 But years advance, and teeth decay,  
 Thus mystic nature has decreed,  
 CHEMANT then brings a second set,  
 Long live CHEMANT, our friend in need.

## 4

Well vers'd in wisdom's lore, he makes  
 The *utile* and *dulce* meet,  
 It's his the highest pitch of art  
 To blend the useful with the sweet.

When time has stripp'd our armory bare,  
 CHEMANT steps in with subtle heed ;  
 New grinders and new cutters gives ;  
 With his we laugh, with his we feed,  
 Long live CHEMANT, our friend in need.

## 5

Ah ! could so far his art extend,  
 Could he with teeth our youth restore ;  
 The live-long day I'd chaunt his praise,  
 And as my guardian faint adore :  
 But ah ! these joys suit not fourscore ;  
 Backwards his flight Time will not wing,  
 And in spite of teeth, we are proscib'd  
 Perpetual youth, perpetual spring.



It is the first time I have ever seen you.

I have been in the city for some time.

I have been in the city for some time.

I have been in the city for some time.

I have been in the city for some time.

I have been in the city for some time.

I have been in the city for some time.

I have been in the city for some time.

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I have been in the city for some time.

I have been in the city for some time.

I have been in the city for some time.

I have been in the city for some time.

I have been in the city for some time.

TREATMENT

TO PREVENT AND CURE THE

*DISORDERS OF CHILDREN,*

OCCASIONED BY THE

CUTTING OF THE FIRST OR TEMPO-  
RARY SET OF TEETH.

THE first dentition ordinarily consists in twenty teeth. The Author of Nature has retarded the appearance of the twelve others till an age when, the body has acquired sufficient strength to endure the pain attending it. For the same reason, the first teeth do not all appear at the same time. Dentition begins in about six months after birth, and continues until the child is between two and three years of age. The first tooth which appears is an incisor of the lower jaw, and



in a short time after this is followed by a second. The two large incisors of the upper jaw come in two or three weeks afterwards, and almost always together. The other two incisors of the under jaw are the next which pass through, and in a little time afterwards, those of the upper jaw. The two inferior canine teeth come after the incisors, sometimes the two superior canine appear at the same time.

The eight molares usually appear during the course of the second year. This order in the cutting of the milk teeth is not always regular.

The manner in which the teeth are formed is known.

The bony part is produced by a soft pulpy substance, and the enamel by a membrane in which the pulp is contained. The teeth are composed of phosphate of lime, a small quantity of carbonate of lime and gelatine. They are the whitest, most polished, and hardest bones of the human body.

The teeth in their growth cannot increase without a dilatation of the sockets in which they are contained. This extension is produced by the continual pressure of the tooth against the internal parts of the alveolar cavities, in order to force them to separate and afford to the tooth a space which it requires. The nerve, the vein, and the artery which give the nourishment, are also confined and squeezed, which necessarily checks the circulation of the fluids. The teeth cannot increase in length without gradually passing through the gums which cover them. These different and simultaneous efforts occasion an irritation of the membranes, inflammation, swelling, a rupture of vessels; pain, therefore, is inseparable from dentition.

Unhappily this pain is too often followed by acute affections and distressing incidents, which cause the greatest grief to families. The symptoms usually attending dentition, are diarrhæa, vomitings, want of rest, fever, convulsions producing coma, eruptions, and



even some chronic diseases. The greatest part of these disorders are the effect of inattention or want of information among parents and nurses.

A favourable or painful dentition much depends on the good or bad nourishment of the child. If the milk of the nurse be pure, sweet, fresh, and of a good consistence, it will give sufficient strength to the child to enable it to cut its teeth without danger or much pain. If the milk be of a bad quality, it will be absolutely necessary to obtain another nurse or to wean the child, otherwise the blood and lymph becoming poorer every day, it will be exposed to perish in torments, weakness, and marasmus; the effects of a very difficult dentition.

Dentition is preceded by an itching of the gums and by an abundant flow of saliva. The infant may at this time be relieved from the pain, by whatever will afford it amusement; and this appears to be the chief use of the little toy with bells called the child's coral.

Considerable benefit will also be derived from putting into its hand a soft crust of bread, because in biting it, the teeth will be assisted in their endeavours to pass through the gums.

Of all symptoms, convulsions are the most frequent, especially during the cutting of the canine teeth. They commence by an agitation of some part of the head, a distortion of the eyes, a changing of colour, trembling of the limbs, &c. During these fits the infant requires a free air; the temples, nostrils, lips, and the back of the ears should be rubbed with vinegar, and much benefit is derived from frictions along the back.

The most common causes of convulsions are an accumulation of phlegm, which almost occasions the child to be choaked, a diarrhæa which emaciates it; or on the contrary, costiveness, producing irritation. To obviate these, some give medicines to the nurse instead of the child, but by this practice, they injure one without ever doing good to the other. The best medicine for children, when



labouring under any cause of irritation accompanied with fever and costiveness, is calomel to which may be added rhubarb or scammony. A gentle diarrhæa is beneficial as it tends to check the fever, but as it often arises from acidity in the stomach and bowels, it may be corrected by giving a little magnesia or powder of crab's eyes : emollients and laxative glysters, such as milk, decoction of linseed, &c. prevent constipation and also cure diarrhæa.

When the pains are acute, the gums should be washed with the decoction of marsh mallows, they may also be lightly rubbed with the finger, but particularly the mouth should be kept clean from the slime, which forms in it, with small pieces of soft linen or lint dipped in warm water sweetened with honey.

During dentition, as in the most part of the diseases of the teeth, the whole head becomes more or less affected ; it sometimes happens that the mouth is so much charged with the various secretions of the nose, the fauces, and

the glands, that the child may be in danger of being suffocated : a careful nurse will guard against this, by laying the child with its head raised, and placing it on one side.

When dentition is difficult on account of the resistance of the gums, the child is in danger of suffering much and for a long time, or even of sinking with the pain. When this is the case, we ought not to hesitate opening the gum by an incision ; it ought to be horizontal for the incisors, and crucial for the canine teeth or the molares ; this is the business of an experienced surgeon or dentist. The wound produced by this operation is slight, and soon heals without any remedy. The application of leeches to the temples or behind the ears offer a resource extremely advantageous. In difficult and dangerous cases, too much time ought not to be lost before a physician is consulted. The greatest number of children who die during dentition, perish through the mistakes of parents and nurses, and their want of judgment, in not



being able to distinguish complaints occasioned by the cutting of the teeth, from those which proceed from other causes.

The complaints arising from a difficult dentition have their principal seat in the gums; these parts are also very subject to disease during the various periods of life. They can be reduced to eight different kinds, viz. swelling, excrescences, abscesses, ulcers, fistulas, scurvy, gangrene, sphacelus. The indications and remedies are as follows :

1st. Swelling of the gums is caused by an accumulation of fluids which produces tension and enlargement. If this should not be dispersed, a rupture of the vessels will take place, and it will terminate in suppuration. This may be cured by washing the gums with a fine cloth or sponge dipt in warm water sweetened with honey.

2d. Excrescences are species of tubercles which grow out from the gums and are attached to them. They are produced by whatever irritates the gums. Pain, and often fever,

accompany them. They may degenerate into abscesses, even into ulcers. In an adult we may cut them off from the gums as close as possible; in an infant it is sufficient to scarify them, and bathe them frequently with some astringent lotion, or even with water containing alum.

3d. Abscesses of the gums are more or less deep, and contain an acrimonious humour capable of destroying the membranes, the nerves, and of producing disease in the jaw-bones. The causes of these ought to be removed, else a suppuration will always continue.

4th. Ulcers of the gums arise from some humour in the mouth. The cutting of the teeth is sometimes preceded by aphthæ, which are little ulcers. The dark coloured aphthæ are more dangerous than those which are of a lighter colour. They extend all over the inside of the mouth, and discharge a glutinous mucus. To cure them gargles should be used,



composed of honey of roses, a little vinegar, and tincture of myrrh.

5th. A fistula of the gums is an ulcer with a deep sinus and a small opening: to cure this, it should be dilated to the bottom, and then washed frequently with the above mentioned mixture.

6th. The scurvy is a complaint which attacks the mouth particularly, and manifests itself in the gums. This affection is often local, but in many cases the cause lies in the constitution. This disease sometimes affects children; many have it at their birth, others receive it from the nurse. When it is only local, it may be cured by scarification of the gums and astringent lotions, but when the constitution is affected, peculiar medical treatment is required, as antiscorbutics, &c.

7th. Gangrene in the gums is produced by an inflammation which swells them exceedingly, attended with great fulness of the vessels. The gums become exceedingly soft, brown,

and almost insensible, covered with blisters containing a yellow or reddish serum. In an early stage this may easily be cured by the same treatment as in ulcers.

8th. Sphacelus is an inveterate and confirmed gangrene. This can only be cured by extirpation. It may be known by the gums becoming livid, black, fetid, possessing neither heat, feeling, nor pulsation. This case requires the advice of an able surgeon-dentist.

The care of parents ought to extend to the preservation of the first set of teeth until the time of their being shed, and the appearance of the second set. This usually commences when a child is about six or seven years old. At this time those who have a true regard for their children should have their mouths frequently inspected, in order to remove those temporary teeth which appear to interfere with the right position of the permanent teeth. One ought even to sacrifice a new small grinder or a canine tooth, if the teeth in front should happen to be very irregular,



or if the jaw should not be sufficiently large to contain all the teeth in a proper state of regularity. \*

By these precautions, the teeth will neither be too much crowded nor irregularly placed. The former defect generally produces a caries, and the latter contributes to their becoming loose ; for, in meeting with those which are opposed to them, they reciprocally force each other by the various motions of the jaw ; so that they stand one before the other. From this arises a deformity which not only shocks the eye, but injures the pronunciation of words, and prevents the ability of keeping the teeth clean.

\* On this subject, I refer persons to a good work just published, by Joseph Fox, Surgeon-dentist of London, in which will be found some well executed plates.

THE END.





