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Vol. III.

JUNE, 1871.

No. 8.

THE CANADA
Journal of Dental Science.

ISSUED MONTHLY.

EDITED BY

W. GEO. BEERS, L.D.S., *Montreal.*

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THIRD VOLUME.

THE CANADA

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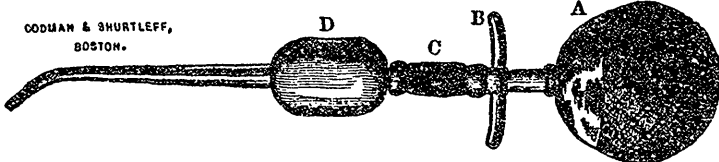
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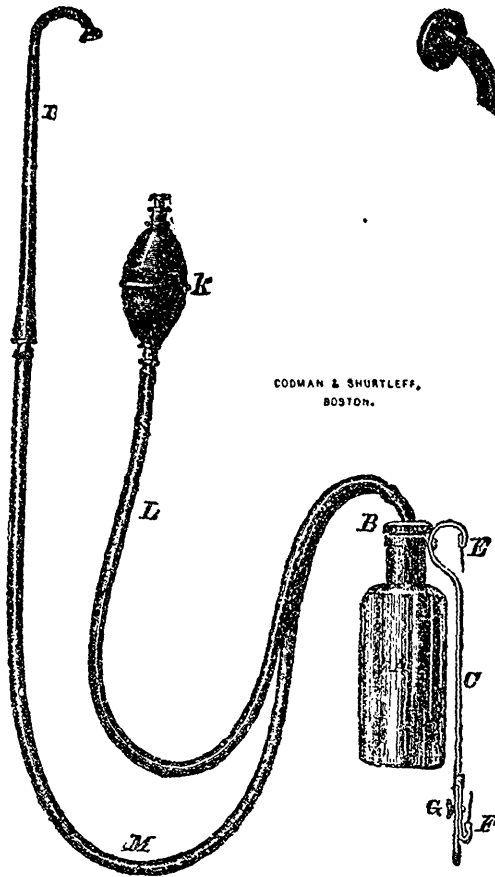
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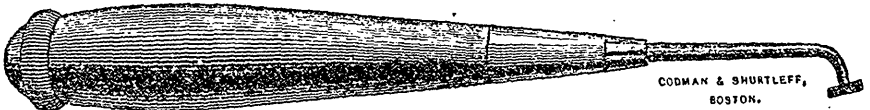
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Vol. III.]

June, 1871.

[No. 8.

ORIGINAL COMMUNICATIONS.

NOTES ON OPERATIVE DENTISTRY, No. II.

(Continued from page 130.)

BY F. G. CALLENDER, L.D.S., TORONTO

In connection with my previous remarks on the subject of Operative Dentistry, I will try and show some of the benefits to be derived from the use of the os artificial in the restoration of the natural teeth to health and usefulness.

It is most deplorable that with so much sacrifice and suffering, the teeth, under almost every stage of decay, are condemned and removed as worthless by the ignorant charlatan, (and too often by many who make greater pretensions), and replaced by artificial substitutes which are so ill adapted in size and color, as to be noticed even by the most careless observer.

Now I do not claim that all teeth can be permanently saved, but it is certain that a large majority of them may for years of usefulness, and I respectfully submit that even a few years' use of the natural teeth will amply repay for the trouble of restoration.

In dealing with frail shells of teeth the most important point is to secure support, and for this purpose I have found os artificial most invaluable. I first remove, as thoroughly as possible, all disintegrated dentine, syringe well with tepid water, in order to a most perfect cleansing of the cavity to be filled; or what is better still, to facilitate the work of cleansing, is the repeated washings with a rubber ball syringe; (an instrument I would hardly know how to do without during the process of excavating or drilling,) dry with sponge or lint perfectly. Mix the os to the consistency of thin paste, and introduce a small quantity to the bottom of the cavity, spreading it over the surface thin with

a ball of bibulous paper, pressing the paste to all parts of the cavity; the paper will at the same time absorb all the superfluous fluid. Repeat this process until the lost portion of the tooth is fully restored, and protected from moisture until hard.

I prefer to dismiss my patient for a few days, and sometimes even weeks or months, in order that sufficient time may elapse to fully test the strength and value of this support, and in case where disease had existed, and successfully treated, to give ample time for the recuperative powers to restore to a normal condition the part affected.

For this it is necessary that the filling from the commencement until perfectly hard should be completely protected from moisture. The most difficult, yet most important point, is the portion next to the gum. I am convinced that to neglect in this particular, the filling at that place never becomes hard, and when used as a protection to an exposed or nearly exposed pulp, is the cause of very many failures.

I have used as a protection to the pulp, during the past twenty years, everything which has been recommended by the journals, and many which have not been noticed, metallic and non-metallic; having success and failures with all; some from thermal irritation, some from want of medication, some, no doubt, from over-medication; some from want of time and proper medication; and probably as many from a want of a removal of devitalized portions, and small particles of dentine, and some, also, from pressure of fillings on the cap becoming an irritant, especially when the pulp has become enfeebled from long exposure.

For the past few years I have had the best success, from the use of a slight coating of gutta percha dissolved in chloroform, a cap of tin foil or lead very thin, and os artificial. With this protection very little if any pain is experienced unless from too great pressure in filling.

The protection of an exposed pulp, I deem important, according to the age and health of the patient, and the condition of the pulp itself, whether the exposure was of recent date, or had continued for some time a source of trouble, passing at times to a more or less congested, and not unfrequently to the suppurative stage, devitalizing the crown portion, and if not arrested, also destroying the fang portion, extending its influence to the periosteum, alveolus and gums. It can not be questioned that something is very much needed to enable young practitioners to diagnose correctly, and this can only be obtained through a thorough course of instruction, or by many years of experience.

The varied success of many who, during the past few years, have been making special efforts in this direction, are undoubtedly attributable to a want of proper information and practical training.

Others more successful have not only been encouraged themselves at the results, but have stimulated a large portion of the profession to meet the demands of an intelligent public, anxious for advice, and what is of more importance, practical proof in this attainment, which will ever secure their utmost confidence, and bring its richest reward.

Since writing the above, I have with great pleasure, perused articles in the *American Journal of Dental Science*, on inflammation of the dental pulp, which I trust is the beginning of a work very much needed on Dental Pathology.

DISEASE OF THE ANTRUM.

BY C. S. CHITTENDEN, L.D.S.

On the 30th August, 1870, a stout, sturdy Englishman called on me to have the roots of the left superior second bicuspid extracted. The face was most fearfully swollen, the swelling commencing about the orbital edge of the malar bone and extending downwards to a point a little below the alæ of the nose, and puffing out in the centre, much as if the half of an egg, cut latitudinally, had been placed under the skin. The surface was very hard and intensely red, the appearance being unlike anything I had ever seen before. I made a good many inquiries, from which I gathered that the swelling first commenced about seven years before, and had given more or less trouble ever since, but had never been as painful or as badly swollen as when he came to me. I also learned that on three or four occasions he had consulted physicians, who had opened the enlargement in the cheek, from which, so far as he knew, there had been no discharge but blood.

The gums were perfectly healthy, there being no inflammation about the roots of the bicuspid even. Suspecting disease of the antrum, I plied him with the usual questions, but failed to elicit anything from him that would lead me to decide positively as to whether that cavity were affected or not, and as I could see no other cause for the trouble, I decided to make an opening into it. For this purpose I extracted the roots, which were removed without difficulty, and then attempted to pass a small drill through the socket of the palatal root, but as it caused him a good deal of pain I desisted for a moment, and then inserted the drill into the socket of the buccal root and gave it two or three turns, when I found it had passed entirely through the bone. I withdrew the drill, expecting to see it followed by a discharge from the swelling; but, as nothing came away, I took a small probe and passed it through the opening made by the drill, and pressed it up till he asked me to stop, when I found on

measuring, that it had passed up an inch and a half from the edge of the gums. Still there was no discharge. I then took a fine excavator, the shaft of which was bent at an angle of forty-five degrees, and passed that up nearly as far as I had the probe, and rotated it sufficiently to break up any saccular formations within its reach, when fully half a tea-cupful of very offensive matter was discharged. When all had passed out that would do so, I injected tepid water into the cavity several times till it seemed to be pretty well cleansed, when I threw in a mixture of iodine and carbolic acid, and placed a tent, saturated in the same mixture, into the opening and requested him to call the next day.

August 31st.—Patient called according to appointment. Found the cheek distended nearly as badly as at first. On removing the tent nearly as much matter was discharged as on the day before.

I filled the cavity with the same mixture, placed another tent in the opening, and requested him to call next day, which he did. I continued to treat in the same manner for some time, with very little improvement. On probing the cavity carefully, I found that the external wall of the antrum was almost entirely eaten away, so that he could, by sucking, draw the cheek into it, leaving quite a depression on the outside.

On the 8th of September I resolved to try nitric acid, very much diluted, as an injection. Accordingly, I put three or four drops of the acid into a tumbler of water, which diluted it so much that there was only a slight sour taste to it, and injected a syringe-ful into the cavity every day for a week. From that time he improved rapidly, and in two weeks I discharged him cured. The opening into the nose was evidently closed, and he positively refused to allow one to be made there. So I could only do the next best thing, form an artificial one into the mouth, which I did.

HÆMORRHAGE. CASE IN PRACTICE.

BY W. H. WAITE, D.D.S., LIVERPOOL, ENG.

Two weeks back a lady presented herself for advice concerning severe neuralgic pains through the facial region on both sides. Examination of the mouth revealed the presence of a gold plate in each jaw, bearing a number of substitutes. All the roots remained underneath. The plates had not been removed for many months, and the accumulation of filth about them can be better imagined than described.

A thorough clearance of the diseased roots having been decided on as the best treatment, commencement was made with the lower jaw, right side.

Profuse hæmorrhage followed the removal of the first three roots, the blood not only jetting up from the bottom of the alveolus, but oozing from the free edge of the gum around each place. After a reasonable time had elapsed, and as no sign of abatement appeared, the remedy so highly recommended by Dr. Garretson, in his valuable book on "*Oral Surgery*," (pp. 237,) viz., a *strong solution of alum*, was resorted to, first to rinse the mouth, then each empty alveolus was carefully packed with cotton soaked in alum water, and the blood still weeping from the gum, a compress of lint saturated in the same fluid was secured in place, and in a very short time the bleeding ceased. A few days afterwards, another batch and, ultimately, all the remaining roots were removed, the operation in each case being attended with similar results, only that the subsequent hæmorrhage was modified by antiphlogistic treatment meanwhile.

The solution used was in the proportion of a good teaspoonful of powdered alum to about a tumbler of water. Its action appears tardy, in comparison of the more powerful caustic remedies, but in twenty operations, there was no recurrence after the bleeding had been once checked. A remedy so simple, and so entirely unobjectionable, is certainly worth an experiment, and it possesses this advantage, that the patient may be trusted to use it without any evil results.

COMPLETE NECROSIS OF EIGHT TEETH FROM A BLOW.

BY W. GEO. BEERS, L.D.S., MONTREAL.

A little over two years ago, a vigorous young friend of mine, aged twenty, received a severe blow directly under the nose, while in the act of shouting to a fellow player during a game of Lacrosse. The upper lip was considerably cut, and the crown of the left superior central incisor was broken transversely with the pulp chamber, leaving the pulp hanging partly out of the cavity. As he insisted upon continuing the game, I improvised a barbed brooch by jaggng the sides of a common pin with a penknife, and then crooking its point, and succeeded in extirpating the pulp entire, with little or no pain. I observed, as something unusual, that the projecting portion was not at all sensitive to the prick of the pin, while that situated higher up in the cavity was extremely so, and actually reflected a shooting pain along the branch of the nerve. The adjoining teeth did not present any appreciable indications of serious results from the blow, and only the remaining portion of the broken tooth and the adjacent lateral incisor were at all tender to the tap of an excavator,

while there was no inflammation of the gums, and the cut lip occasioned more pain than the broken tooth.

The second evening after the accident there was a slight tumefaction over the fractured tooth, and both it and the lateral were more tender at the root than the previous day. I applied two leeches to the gums, and the third day all pain had completely subsided, and at the expiration of three weeks, I ventured to insert a pivot tooth to replace the one broken; taking the precaution,—which I considered to be necessary—to prepare the root one day and pivot a few days afterwards. Up to the last day I saw him, he had never had a moment's pain or soreness in this root, but had intermittent pains of a few days duration in the adjoining lateral for over two months, feeling, as he described it, like the knitting of a fractured bone.

About a year ago he came to have his teeth examined before going to Chicago, where he had decided to settle with a newly married wife. I found the pivoted root sound; the troublesome lateral perfectly comfortable. I filled two large cavities with gold in the first inferior molars—the only fillings he had ever had—and after carefully examining the front teeth, I felt justified in prophecying for them a long lease of life. Last January he returned to Montreal, and judge of my surprise to see him come into my office nearly edentulous. The pivot tooth and root, and the adjoining lateral, perfectly free from caries, were easily moved about with his tongue and lip; the cuspids were both loose; the right lateral and the two right bicuspid had actually dropped out of the alveoli. The superior molars and all the teeth of the inferior maxillary were perfectly firm and sound, otherwise I might have suspected mercury, though there were none of the special indications of mercurialization then present; and my patient assured me on his word of honor—which was perfectly reliable—that he had never to his knowledge taken a grain of medicine in any shape or form for the last twelve years, and that he had never had any venereal disease. His parents were both hale and hearty Highlanders, and I would not consider his constitution to be one as easily irritated as some systems are.

The gums and alveolar processes had receded from the necks of the teeth, but it was very clear that the cause did not lie there. There was no perceptible discharge of pus, no pain, no tenderness. The pulps were dead, but the teeth had not assumed the dark hue noticeable in many cases of necrosis.

The alveoli had exfoliated where the lateral and bicuspid had dropped out.

I extracted the lateral and two centrals, and found, as I had antici-

pated, complete necrosis; the fangs denuded of living periosteum, and covered with little grey and green nodules, similar under the microscope, to salivary calculus. The change in the appearance of the cementum from its normal condition was very striking. A section of dentine of the lateral incisor, under the microscope, revealed the calcification of the dentinal fibres.

I must confess to have been sorely puzzled about this case, presenting, as it does, peculiarities seldom observed in the one mouth, and, what seems to me to be, contradictory characteristics in the course of the disease, and being marked by a complete absence of pain, and no perceptible effusion of pus. I would not have been greatly surprised to have found periodontitis and suppuration from the pivoted root, or even the wounded lateral; but I was shocked to witness the complete destruction, without the barest possibility of cure, of eight teeth, seven of which a year ago were free from decay, and presented fair appearance of a long life. Had inflammation of the periosteum supervened from the blow, the usual indications would be expected, but there were comparatively none of the simplest, and absolutely none of the most marked. The very idea I had in extracting the pulp at the time of the accident was to prevent an extension of the inflammation through its reflecting media to the surrounding membrane, and I think the rather remarkably favorable condition of the parts afterwards, may be attributed to this reason, though it is a question with me now if it might not, perhaps, have been better to have extracted the fractured tooth.

FRACTURE OF THE LOWER JAW RESTORED.

BY J. NEELANDS, L.D.S., LINDSAY, ONT.

A young man, an English emigrant, by the name of Samuel Jones, while working on the extension of the Midland Railroad, in the month of January, 1870, met with a serious accident, which nearly proved fatal. He was engaged with some other laboring men in cutting down trees, when one, in falling, struck him. He was, at first, supposed to have been killed, as he was insensible for some time. One of his legs was badly broken, several of his ribs were fractured and his lower jaw, and four of his inferior incisor teeth detached. The accident occurred late in the afternoon, and I was requested by Dr. Benson, who attended the case, to go and see him after he was brought home, and to take some fine wire for ligatures, in order to retain the teeth and jaw in proper position.

When I arrived it was almost dark. We first arranged his leg, which had been broken, into proper position. It had been set near where the accident occurred, and he was brought home in a sleigh. We next proceeded to bandage the ribs; and lastly, to set the teeth and jaw into position. On examining the jaw we found that the four lower incisors with a portion of the inferior maxillary bone, were completely detached with the exception of a slight fleshy attachment on the lingual surface. The four teeth and the portion of jaw adhering were thrown back against the tongue. We had very little hopes of it ever being restored to its original condition. We thought of cutting away the portion of flesh retaining the teeth and putting in artificial teeth to replace the natural ones. We attempted to replace the teeth in their natural position and set them firmly with ligatures of wire, but did not succeed. By this time it had become quite dark, and with lamplight it was difficult to adjust the ligatures, besides the patient was bleeding profusely. I concluded to take an impression and construct a splint of hard rubber, as it was the only feasible way that I could devise of retaining the teeth and jaw in position. The following day we inserted the vulcanite rubber splint, which answered the purpose splendidly. It continued gradually to improve, and in about two months the teeth had become reunited to the jaw again. The treatment was similar to most other fractures. I have had several opportunities of seeing him, and, on examining his mouth, found the teeth were as firm as ever they had been, and the gums looked healthy and natural. The only possible defect observable, is that there is a slight space of about one-sixteenth of an inch between the left lateral incisor and the cuspid.

No person would suspect, for a moment, that any injury to any serious extent had ever occurred, as far as the appearance of the teeth and mouth are concerned.

FIVE TEMPORARY TEETH AT FORTY.

BY H. G. KENNETH, L.D.S.

About a month ago a lady called upon me, aged about forty, to consult me with reference to the looseness of three upper and two lower teeth. They had been perfectly firm all her lifetime until within the last month.

Upon examining I found the loose teeth, the two laterals and the left cuspid in the upper, the two centrals in the lower jaw, to be temporary teeth. There had never been any teeth extracted since she was a mere child. There was no presence of the permanent substitutes. I extracted the teeth, and found the usual indications of fang absorption, though the fangs had an older, yellower appearance than when thrown out in childhood.

IMPRESSION CUPS.

BY X. Y. Z.

Without a good impression of the mouth, frequent misfits and occasional failures must ensue in making artificial teeth. Those who depend altogether upon wax, and even those who principally use plaster, will find frequent advantage from splitting the sides of the ordinary cups, in several parts of the sides, so as to allow of their being bent in to suit a depression, or out to suit a prominence. Before using, solder another thickness of tin plate to the bottom of the cup, to prevent it bending, as the cutting of the sides weakens that part. One other advantage with the cut cup in using wax, is, that the wax catches in the cuts, and does not "draw" as easily as in using the ordinary cup.

In very difficult cases, I take an impression as well as I can with wax or plaster, and then vulcanize a cup of black rubber to suit it. Some of the leading mechanical dentists of the neighboring country do this in every case.

In high arches I invariably use a lump of hard wax in the centre of the cup, placing the soft wax over it. Sometimes I put the wax into the mouth with my fingers, adapt it around the parts, and then put in the cup and complete the process.

I also cut niches at the posterior part of all my cups, to prevent the *drawing away from that part*; which it frequently will do.

THIN AND THICK VULCANITE.

BY J. LAUDER.

There is one point in vulcanizing rubber which I have observed, which, I think, has a good deal to do with the strength of the set; viz., that a comparatively thin plate is proportionately stronger than one four times its thickness, and that a thick plate reduced thin is never as strong as one that is vulcanized thin. The thicker the rubber in vulcanizing the less dense and hard the centre of the body.

The moral, then, is, to make your pattern plates the exact thickness required, and to take every precaution possible to have your rubber plate come out of the flasks thin.

A NEW WAY OF MAKING GOLD PLATES.

BY W. G. B.

It is well known that the process of hammering a gold plate on the male die, defaces the die to a considerable extent.

I had a plate to strike up the other day, and it occurred to me that I might, perhaps, get as good a fit by screwing it up between the dies in a press; and having that used for the Pyroxyline base in the office, I tried the experiment and found it to work admirably, without defacing the rugæ of the mouth, which were very prominently defined on the die.

In difficult cases, the plate might be struck up as usual, annealed again, and then screwed up in the press between new dies.

APRON FOR USE WHEN EXTRACTING TEETH.

BY W. G. B.

When extracting a number of teeth, especially for ladies, every precaution should be used to avoid soiling the patient's dress. When under the influence of an anæsthetic, the blood flows without control on the part of the patient, and expectoration is frequently so indiscriminately wide of the spitoon that the dress is soiled. At all times this is exceedingly annoying to a lady, and ought to be equally so to the dentist. I find nothing better for an apron than a piece of rubber-cotton cloth, cut out to fit the neck, fold down the shoulders and fasten behind. It should be long enough to go down to the patient's feet, and wide enough to cover the dress. It can be washed in an instant with a sponge. A nice clean soft sponge, to wipe the face of the patient, ought to be indispensable in every dental office.

PROCEEDINGS OF DENTAL SOCIETIES.

ONTARIO DENTAL SOCIETY.

We call attention to the notice on page 23 of our advertising sheets, of the Annual meeting of the above Society, to be held in the City Hall, Toronto, on the 20th of next month.

We are not exactly informed of the programme, but we have assurance that very particular business will be brought forward, in the consideration of which every Ontario dentist should share. It is expected that this meeting will be the most important and useful one yet held. With so long a notice, no one can have reasonable excuse for absence.

MONTREAL DENTAL SOCIETY.

BY L. J. B. LEBLANC L.D.S. SEC'Y.

The regular monthly meeting was held at the office of Dr. Alloway on the 5th of June, when Dr. Alloway, in lieu of a paper, which he had

not quite completed, gave a very interesting verbal report on the uses of "Aluminum in mechanical dentistry," showing its advantages and its faults. A discussion ensued on the subject.

It was decided, that in order to check the prevalent habit of a class of dead-head patients who prey upon the profession, a "Black Book" be opened with the Secretary, in which each dentist may record the name address, business, &c., of his "Bad pay patients," from which book every member would be permitted to copy. A class of persons make a business of swindling professional men, and in the course of time go the rounds of the profession. This record will be of use in guiding members from their imposition.

The question of show-cases has at last been finally settled, by a mutual agreement to abolish them forever. The society has contributed largely to effect this result.

The next meeting will be held (July 3rd) at the office of Dr. Trestler & Bro., when voluntary Essays, Readings and Discussions will occupy the evening.

EPITOME OF THE PROCEEDINGS OF FOREIGN SOCIETIES.

MAINE DENTAL SOCIETY, FEB. 21.—"Rubber Plate Poisoning," a subject which has excited the public mind by articles condemning rubber, published in the various journals in the State, was taken up. Each gentleman rendered his experience and observation. The summary conclusions were—that the percentage of inflamed mouths is not so great as when silver was used, and a little larger than gold produces; that most of the cases are *local*, and due to lack of thermal change in rubber and to ill adaptation; that strong atmospheric pressure, gained by flexible edges, ridges, and deep chambers, is a productive cause and an injurious fit; that an idiosyncratic patient very susceptible to the influence of mercury, which is generally the result of a mercurial treatment, may be constitutionally affected by wearing the red rubber, and it may be corrected by the use of black rubber, which is superior in strength, and does not possess the objectionable properties of the red; and the choice of color of the plate in any case is but very little advantage, excepting when exposed to view.

The propriety of capping the pulps of teeth with oxychloride of zinc was discussed, and the general opinion was that, on account of its anti-septic properties and its non-conductibility, it may be successfully used in teeth with slightly exposed pulps which have not ached, if carefully manipulated, and the teeth have received proper treatment; also when

the pulp has only a thin lamina of dentine over it, to cover as a protection, with oxychloride of zinc previous to filling; further than that, like all remedies heretofore used, it failed to save the pulp; that it frequently causes much pain, sometimes of several hours' or days' duration; that although there may be no after-trouble, and the teeth usually retained a lifelike appearance, upon examination the teeth will be found dead, the pulp being generally atrophied and the canals dry. On account of these conditions, it was suggested that the use of oxychloride of zinc might be the best practice to try and save the pulp, and if it failed as a preservative, that, perhaps, it might be the best devitalizer.—*Cosmos*.

SELECTED ARTICLES.

NEW THEORY IN DENTAL HISTOLOGY.

The possibility of the offspring of those who have lost their teeth early being born without teeth or edentulous.

BY S. P. CUTLER, M.D., D.D.S.

Read before the New Orleans Dental Society.

Two theories have been advanced as to the determining cause of inherited forms, the older writers, such as Wolfe, in his "Theoria Generationis," laying the foundation of the latter hypotheses of Lamark and Michel, of laws of descent and adaptation, through modifying influences. Similar views have been advocated by Geoffrey St. Hilaire, Bonnet, Robinet, Milne Edwards in his "Recent Progress of Zoological Sciences," and by the still more recent developments of Darwin, in his "Origin of Species by Natural selection;" by Claude Bernard in his "Recent Progress of General Physiology," and Herbert Spencer's developmental or evolution hypothesis. To these may be added the researches of Lereboullet and M. Dareste, on "Embryology and "Teratology," and also those of Prof. Huxley.

Now, should the theories adopted and advanced by the above-named authors prove to be true, my hypothesis, presented in this communication, will have a valid foundation.

On the contrary, should the doctrines advanced by equally distinguished names, such as Cuvier, Owen, Agassiz, and many others, adopting the idea of the fixedness and unchangeableness of types depending on predetermined plans of archetypal primordial cell germs, then my hypothesis has no good foundation.

As extremes must compromise on middle grounds, there will, at least, be some foundation left for me.

As instances of illustration, I will mention the fact that on the Isle of Man there are species of cats without tails more than an inch in length. It is believed that the ancestors of these cats, from generation to generation, had their tails cut off by their owners, from a whim or custom, until ultimately the protoparous or offspring came without tails. I have seen many of these cats. There is a species of small French dogs without tails. I have seen these dogs. I am not familiar with their tradition. Their ancestry, no doubt, once had tails.

Now, suppose we were to cut off all the tails of all the dogs and cats in the country for generations, the result would be, beyond a doubt, caudatulous, or tailless dogs and cats; at least many of the offspring would have no tails, from a law of necessity based on habit.

Here is the point I wish to argue. When an animal is maimed in any not over-vital part while quite young, there is, from necessity, a weakening of nerves and vessels running to such part, or as an atrophied condition; as the animal grows, the development in that direction is defective, in consequence of less vitality.

Now, if there is any truth in the modifying influence of habit, which has been sufficiently and repeatedly demonstrated within the last fifty years, may not the same rule hold good in that of the wholesale extraction of teeth, more especially those of the female when quite young, and repeated from generation to generation? The influence on the female might be supposed to be greater than on the male.

In the removal of all the teeth, let it be remembered that there has been removed from the maxillary organs several hundred millions of nerve fibrils or filaments, more or less, together with, their blood-vessels.

From a law of necessity, the nerve trunks and vessels running into the maxillary bones to the teeth must become more or less atrophied, and a less amount of vital force is even demanded by the organism, at least minus the amount previously needed to sustain those organs.

As the cosmical universe is made up of cycles and epicycles, or greater and lesser cycles, the organism forming a part of the cosmos, these same cycles equally exist in the organism, and, by dismembering any part, there is a change or disturbance in the cycles of such region. May not the cycles so modified, in the course of generations, impart their impress on the fœtus? Is it not more reasonable to suppose the above condition than that a monkey, by curtailing his tail, becomes ape, then

man, from the fact that when he became man he had no longer any use for a tail? Hence the offspring were minus their tails.

Let us again look at mother-marks, or *nævus maternus*, and see what influence the mind has on certain regions of the body of the *fœtus* in utero, in some cases changing the entire being into a monstrosity. (See "Treatise on Teratology.")

Longing on the part of the *enceinte* female for certain articles of food leaves or imparts the mental influence on some portion of the child's body, showing the influence of mind over germinal matter at certain stages of development.

Frights, and other sudden and powerful emotions, impart certain changes in *fœtal* development.

All the above named influences are reflex action through the neural forces of the mother, which are continued through the *fœtal* organization. Sometimes such influences cause complete arrestation of *fœtal* development; in other instances, deficiencies in one region and protrusions beyond the normal boundaries in other regions—in other words, changing the normal type.

What do such facts prove, or how do they apply to the subject?

In the first place, we will suppose that the rubber dentist, who is wholly incompetent to save teeth, constantly advises his victimized patient to have all her teeth removed, as they cannot be saved, or are not worth the trial; and her constant declaration that she wished she never had had any teeth at all, as they had always been troubling her.

These very assertions and influences of the mind over the nutrition of these organs may ultimately so arrest normal nutrition as to render the teeth less resistant to outside influences. Supposing these influences are uppermost in the mind during gestation—what effect might not be produced?

There are well authenticated cases where domestic animals, having had limbs removed by accident, have brought forth offspring similarly maimed, and those offspring have done so in turn for a number of generations.

These are all striking proofs of my position.

We find bad teeth and certain peculiarities connected with the forms of jaws hereditary in certain families; so much so that, unless prevented by favorable crossing, they expect their children to have equally as bad teeth as themselves; and they are not generally disappointed.

Hereditary peculiarities in dental conformations are constantly presented to the dental practitioner. Peculiar features of certain teeth in

the mouths of parents are often recognized in the third generation, and we do not know how much farther off.

Harelips and badly fissured palates are frequently handed down in uninterrupted succession in some of the offspring, while others of the offspring are exempt—though in these cases of exemption outcroppings are frequently noticed in their children.

Kyllosis, or club-foot we see hereditary from the female side only, owing or depending on position of fœtus in utero, never being transmissible from the male side unless through his daughter, in case his mother was of that class, the cause being dependent on peculiarity of pelvic form of the female.

Many other cases in confirmation of my position in relation to teeth might be given, if necessary.

Again : supposing all the teeth of the grandmother, mother, daughter, granddaughter, great-granddaughter, and so on for many generations in succession, were extracted while quite young from defective development, what would be the probable ultimate consequences? In all probability the offspring would be born edentulous or toothless.

The same rule will also apply to the male parentage to a great, but not likely to the same, extent as to the female.

We sometimes meet with persons that never had any teeth at all, or even rudiments. On the other hand, we meet with persons having supernumerary teeth, though they are generally small or otherwise imperfect. We sometimes meet with persons having cut their third set more or less complete.

In the latter cases there is an excess of vital formative force repeated late in life. Whether these teeth had their germs developed in fetal life or not, is an unsettled question, as we have not sufficient data on this subject. I have seen a number of cases where several teeth had made their appearance after all the others were either out or decayed off. I saw an old lady who had cut a tooth in the anterior portion of the upper maxilla, near the mesial line, resembling a canine, lying nearly horizontal with the ridge. She has one upper molar only, and about half of the under set, quite sound. She had worn a gold plate many years.

There is no doubt in my mind but that organic structures are susceptible of important modifications from force of habit alone, by artificial means continued in one direction for a considerable length of time.

I have seen one edentulous case, a judge, who never had any teeth in his mouth. The well-known Keith family, of South Carolina, from generation to generation back, have been born without any teeth at all,

even when marrying out of their own immediate family. The peculiarity in this family is very noted and persistent. Atavism we often notice where a saltus has been made past one or more generations, then cropping out again, as in many of the above-cited cases.

Now, the point I wish to argue is this: that if this theory should prove correct, we may reasonably calculate on the dentist's occupation being gone for lack of material to operate on. I do not pretend that children will be born with rubber or any other kind of plates in their mouths, but that they may be born without any tooth germs.

In furtherance of the above hypothesis, I will copy an article published in the *New Orleans Times*, Nov. 13, 1870, which goes far to confirm my views:

"*More about Hereditary Deformities*:—An intelligent observer, in a pleasing note to the editor of the *Times*, gives a very interesting case of accidental and hereditary distortion; some persons think so very singular as to doubt its truthfulness. In a scientific point of view this case is a most interesting instance of the doctrine of natural selection in the modification of species, but not as Dr. Darwin and the ingenious Mr. Wallace discuss the alluring hypothesis. These gentlemen urge that such variations of species is a natural law. So uniform is this law from their standpoint, that they dignify it with the imposing name of natural selection.—*Cosmos*.

THE PERKINS HYATT BASE.

Several inquiries have come to us relative to the above new introduction, and we cannot answer them better than by giving a few extracts from the pen of Dr. W. H. Eames, the editor of the mechanical department of the *Missouri Dental Journal*. Dr. Eames does not hesitate to announce his disappointment and want of confidence in the new base.

"We find the new base to be a compound of collodion (made by dissolving gun cotton in camphor), with gum copal, or some other vegetable substance, to prevent the shrinkage.

In comparing the material we received with the statements made in the circular respecting it, we find first, that while it is a little lighter than rubber it is *not* as strong, being unfit on this account for partial cases, of one or two teeth. Secondly, its color, reddish pink, is very little better than that of rubber. It may not change color on being worn. Thirdly, it is not entirely free from all unpleasant taste to those who dislike the taste of camphor; some patients undoubtedly will not object to its use on this account. Fourthly, it may not be injurious to any mouth not sen

sitive to the effect of camphor ; in our own case the effect is decidedly unpleasant. Fifthly, it *can* be manipulated as easily as rubber. Sixthly, we question the assertion that it is more pleasant to the wearer than plates made of *any* other material. We do not find it as pleasant or comfortable to wear, as either gold or rubber. Seventhly, the assertion that a set of teeth can be made with this base, in from one-third to one-fourth of the time required for working rubber, is simply *not* true. The manipulation of this base being precisely that of rubber, except the packing and vulcanizing, will of course require the same time. To pack and vulcanize a rubber case will require from fifty minutes to an hour. To thoroughly dry the moulds preparatory to packing the Perkin's base, especially in the solid flask sent us, will require at least thirty minutes ; to heat up the oil and pack the case, twenty minutes, making fifty minutes, the time it takes to pack and vulcanize a rubber case, or nearly.

The odor of boiling sweet oil, combined with that of camphor, is quite as unpleasant as that of sulphur from the vulcanizing of rubber. It may be considered neat, clean and a perfect luxury to some persons to work this base, but we have no desire for such luxuries. It may prove superior to any known artificial teeth, but we are not prepared, from what we have seen of it, to admit it.

It will undoubtedly do very well for temporary work, for full sets, or of eight or ten teeth, but for partial sets of scattering teeth it does not possess the requisite strength to make it of any value.

An important item seems to have been overlooked in the circular. No mention is made of the mode of repairing this work. Any base to compete with rubber must be as easily and readily repaired. We doubt if the Perkins base possesses this quality.

We think that a base will yet be produced from collodion superior to rubber but do not think it has yet been reached. This base may be a step in advance—we hope it is.

We have seen one case, a full upper set, which has now been worn two weeks with perfect satisfaction. The patient was an old lady, who had been wearing a badly fitting rubber plate, and who had been in the habit of making great use of the spirits of camphor. As this plate fits nicely it is certainly an improvement on the old rubber one, and the taste or smell of camphor is no objection in her case."—*Missouri Dental Journal*.

DENTAL EDUCATION.

BY H. SCOTT.

It is a matter of pride to every dentist who loves his profession, to know that so much is being done to enlarge and popularize dental science.

The efforts to this end are seen in colleges for the special preparation of the mind and hand for professional duty; in the extent and ability of dental literature; and in the formation of national, state, and district co-operative and mutual aid societies. In the van of all these movements are men of high mental and educational ability. We have also with us a large amount of inventive genius. The plan of education for dental colleges is broad. A man can not graduate in any of our institutions of learning, with less than a respectable acquaintance with anatomy, physiology, chemistry, pharmacy and therapeutics, in addition to a thorough knowledge of all the specialties of dental theory and practice, besides being a respectable English scholar. He must also show in the laboratory a respectably constructive and manipulative ability, and withal fill the measure, pretty nearly, of a gentleman in his sphere of life. This is the high stand our colleges have taken, and is all well and right. With every meeting of societies, as also with the monthly and quarterly appearance of our periodicals, new lights are emitted. Some new and better methods of doing things have been found by the pioneers of the profession, and with few exceptions, are contributed to the common stock. And thus, within a little more than a quarter of a century, has the profession of dentistry come up from obscurity and almost contempt, to rank with the learned and popular institutions of the age. There is no movement of the nineteenth century that has equalled ours in the rapidity and value of discovery, and successful practical application to the comforts and requirements of man. These are the facts that stimulated and encouraged us all to still greater and more useful achievements. This is all well; but are we not delinquent in plans for the required

EDUCATION OF THE MASSES?

How this is to be done, is the question to be talked over. We might prepare and publish for the people such facts as they are most interested in understanding, and the knowing of which would render the dentist's professional intercourse, intellectually and mutually agreeable, besides lightening his labors, and at the same time, increasing the pecuniary interests. The truth is, that with the exception of one or two in one or two thousand, the people know less of their teeth, physiologically, pathologically or remedially, than of any subject that concerns their welfare; and this is true of large numbers of both sexes who, upon almost every other question are well informed. How many can any operator find among his patrons, even the best educated and most intelligent of them, who can tell for their lives what the teeth are made of? Where will you find one who knows that every tooth has a nerve, and an artery, and a vein entering at

the point of every root, through an opening sometimes too small to be seen with the natural eye, and all sheathed with an exceedingly delicate and sensitive membrane, and that these widening out in the crown, form the pulp or nerve of the tooth, as it is common to say. A very great many people, otherwise intelligent, believe to-day that every tooth has a worm in it, which causes toothache by biting, or perhaps, by wiggling its tail. We often hear people speak of the worm in their tooth. It is due to every body that has teeth, that they should be instructed in the anatomy, physiology and pathology, as well as cures of the teeth; and also, that being connected with the general system by deriving their nerves from the same trunks that send branches to the ear, face, scalp and other parts, morbid conditions of them often induce severe pain in remote parts, by nervous sympathy. They should also know that inflammation of the investing membranes is sometimes the cause of the most intense pain. Who that has been a dentist a few years has not been almost daily enlivened with the following and similar questions: "*Doctor, do you know anything that is good for aralgry?*" You examine the mouth and find the source of the "*aralgry.*" But that can't be possible, "*the tooth has never ached,*" and before you can arrive at an understanding, and do what the case requires, you will have consumed as much time as you should consume in relieving two, or half a dozen cases. And then "*I don't think its toothache; I think I have taken cold.*" And, "*why doctor, how can a tooth ache when it has no nerve in it?*" One will insist that he never shed his first teeth, another that he has double teeth all round, and occasionally you find one that *has his third set.*" Well, this is all excusable, for none of us know anything till we have learned it.

A liberal and general special education of the whole people, on all matters concerning the teeth and their cures, would also sooner and much more effectually rid society of incompetent and mere mercenary operators, than any laws can do. I rather doubt the ultimate success of laws regulating medical or dental practice. We shall see in time, but my observation has been, that a majority of the common or non professional people have been inclined to regard all such legislation as partial and intended to favor the few. I take it for granted that every body is aware that the people, as a rule, are impatient of legislation conferring special privileges on societies or parties. Of one thing I think I am sure, that there are as many quack dentists to-day as there were before the existing dental law was passed, and I know of no way on earth to make them less, other than starving them out. Dentists can not become informers, for that would be jealous persecution. The people will not present them, but they would let them alone if they could duly and intelligently understand that their personal interest would be served in doing so.

I have sometimes thought that a dentist who would keep in the straight and narrow way, should attend not less than two methodist camp meetings each year, if he would not fall from grace, or, on the other hand, that he might be converted over again as often as he lost his religion. It is less than a week since that a lady called at my office with her two daughters, of 15 and 13 years respectively. I have had charge of this lady's teeth, as well as those of her husband, for more than twenty years, and could as easily have conceived of any event in the world transpiring, as that they would have taken their daughters to any office other than mine to have their teeth filled, or for any advice concerning them. I had a right to feel and believe so, for they have always spoken of me as a friend, and have counseled their friends to come to me for professional services. What was my surprise and mortification, as well, on finding that the girls had been thirty miles from home attending school, and had found a dentist who assured them that amalgam was far better every way to fill teeth with than gold, and actually, with the approval of their father, had some incisors with small cavities filled with an imperfectly prepared amalgam, which was already of an inky color. I felt then, and so expressed myself to the mother, that self-respect would require me to withdraw from my profession in very shame, and never touch another tooth while I lived, but better thoughts have since prevailed. And there are many such trials of patience. I could write a volume about them. A lady, whose teeth I filled thirty years ago, sent her daughter recently to have two incisors filled. She would not allow the file used. Somebody had told her that the file would break the enamel.

I spent a reasonable length of time in trying to satisfy her that the ragged and crumbling borders must be trimmed back to ensure successful filling, but I could not overcome her prejudices, and was obliged to dismiss her, though she was above twenty years of age. I suppose every dentist has his share of such experience. It must be to an educated people, at last, that we are to look for the final success of our profession; and let us see finally how such education can most effectually be secured.

Every educated dentist could write out the very lessons important to be learned, but how could they be printed and placed in the hands of every family? Newspapers will not, and should not publish such matter without pay, and who can afford to pay for so much printing out of his own pocket. But suppose such literature were distributed gratuitously, how is its study to be insured while *Bonner's Ledger*, the *New York Weekly*, and hundreds of such sheets, are sent off by the car load to fill every house in christendom with cheap reading. It would be almost a marvel to-day, if a single house could be discovered, where these frivolous, if not

directly demoralizing sheets do not constitute the greater part, if not the entire family reading, while sensible books, including the sacred volume, are peacefully corroding away on the shelf. The infatuation for this fictitious and low literature is appalling, and disreputable to an enlightened people. Think of our women chiding their husbands and sons on account of their tobacco and lager, and then think of their minds being chained down to the low thoughts and caricatures of human nature, that make up about the sum total of the cheap literature of the day.

If any good is to be done in the way of elevating the public mind up to an intelligent understanding of the advantages of dental science, and its practical utility and application to the requirements of the mouth I apprehend that it must be accomplished through the instrumentality of our common school system. As the world is now, men and women have no time to devote to useful study. The acquisition of money requires all the time of nearly every person, leaving just interval sufficient for sleep and the reading of the *Ledger Weekly*, etc. Men and women ought to be educated in the art of taking care of their bodies, and of preserving the best physical health; for without sound organisms, there can scarcely be sound and vigorous minds. The public funds should pay for the public education, and this should include the study of the teeth and their diseases and remedies. In no other way does it seem possible that this end can be accomplished, and the study may become a part of common school education. Dental associations should work to awaken the attention of legislatures.—*Dental Register*.

METHODS OF CONSOLIDATING GOLD FILLINGS.

BY S. G. PERRY, D.D.S., NEW YORK.

Read before the New York Odontological Society, April 13, 1871.

In considering the consolidation of gold, I shall be obliged to give some attention to the preparation of cavities, and to the kind of gold used. Without discussing the principles involved, or considering the methods adopted by others, I can only give the conclusions at which I have arrived through my own experience. Perhaps this can be done in fewest words by a simple description of my own method.

The *best* operations I ever performed were made with adhesive gold, packed with small-pointed, finely-serrated, nearly straight instruments, in cavities easy of access, free from under-cuts, and in teeth around which the rubber dam could be used. Here, then, I have a criterion. If their perfection was due to nearly parallel walls, straight instruments, adhesive gold, and the rubber dam, then all other operations, when possible, must be performed in the same manner. This I accept as a general rule,

though such a great variety of cavities occur that it will not do to generalize too freely.

What I most desire from gold is *strength* and *adaptability*. Strength I get from adhesive gold, and adaptability by cavities prepared to admit the use of nearly straight pluggers, and—backache! The strain upon the nervous system in packing adhesive gold is enormous, but I know of no “royal road” to permanent success of any kind. The gist of what I can say, then, on this subject of the consolidation of gold is, *small-pointed, nearly straight instruments, and the lead mallet in my own hands*. This for all cavities, large or small, when the rubber dam can be used; and it can nearly always be applied to all except the wisdom teeth,—and sometimes the second molars before the wisdom teeth are erupted,—and in most cavities anterior to the second molars straight instruments can be used. I use the mallet myself that I may better control the force of the blow and better conduct the operation generally. Particularly do I find this true in contour fillings.

In packing gold by this method, of course I prepare my cavity with it in view.

I first decide from which side, or from what direction, I will fill, and then cut from that direction, as much as possible, with nearly straight chisels, so that when ready for filling, a straight plugger will reach every part of the cavity.

In approximal cavities of the incisors, for instance, I was taught, when a student, to pay little attention to the shape of the cervical wall, but to depend on the lateral walls and distal extremity for support. I reverse this now entirely. I leave no retaining point at the distal extremity of the cavity, unless it is unavoidably so shaped by decay, and I can fill it with a straight instrument and mallet. I want the support for my filling in the base of the cavity, and along the lateral walls for a little distance from the base. With this in view, I excavate at the cervical wall until I get a firm foundation, leaving, if possible, no undercut at the distal extremity, nor under the lateral walls for some distance from the distal extremity. At the base I excavate in conformity with the naturally oval outline of the cavity, or I cut the base at right angles with the lateral walls, as may seem best. In either case I drill a small retaining-point in the most acute angle of the base. This I do that I may mallet the first piece of gold firmly in the place where it belongs. Then, having both hands at liberty, I can carefully mallet every mat of gold that goes into the cavity. Proceeding in this way I feel more sure of the foundation than by holding the first few mats in place and using only hand-pressure. These retaining-points are small, and are intended

to give support to the gold only during the process of filling, and not to the plug at large after the operation is completed.

A cavity prepared in this manner can, of course, be filled with a single straight instrument, and the gold be consolidated entirely from one direction.

In packing the gold I hold the plugger in the left hand (which I seldom move from its support on the patient's face or chin), and alternately introduce the gold, and use the mallet with the right. The gold I anneal, if necessary, and convey to its place in the cavity on the point of a small instrument used as a spear, or by delicately-pointed pliers. The points of our ordinary pliers are too large, they rapidly absorb the heat from the flame and cause the gold to be unevenly annealed. Retaining this heat, they cause pain in applying the gold.

I pack the gold as full as I desire it to be, while going on with the operation, so that the last mat is put on at the distal extremity of the cavity. The foot-shaped instruments I use only for condensing the surface and margins, either during the process of filling or after the gold is all introduced. The burnisher I seldom use except at the margins—never after the file and stone. If the gold is not condensed by the plugger so as to file or stone down perfectly smooth and free from pits or flaws, the burnisher cannot remedy its defects.

In approximal cavities in the incisors, when strength is not desired, I use gold No. 5, soft—it is called soft, and yet is sufficiently adhesive to pack well—No. 4, adhesive, and Nos. 20 to 60, rolled. This latter I use a great deal, though not so much as formerly, having learned from a pretty thorough trial where I can and where I cannot use it to advantage. The low numbers I fold in ribbons, and cut to suit the case.

I fill in this manner all cavities that can be protected by the rubber dam, and that are sufficiently in the anterior part of the mouth to allow the use of straight instruments. Such parts of approximal cavities in the bicuspid and molars as cannot be easily reached by such instruments, I fill with pluggers bent at nearly a right angle, using the mouth-glass and hand-pressure.

The *exceptions* to this method are approximal cavities in the incisors, already so badly decayed as to render it impossible to prepare them without under-cuts that extend under thin walls; approximal cavities of the same kind in the bicuspid, and very often cavities in the grinding surfaces of molars and bicuspid, having small openings, and yet showing considerable decay interiorly. Such cavities I excavate thoroughly, and fill with oxychloride—more recently with Guillois' cement. After it has set, I cut portions of it away, shaping the cavity as if decay had

never gone beyond its margins, and fill with adhesive gold, packed, as before described, with straight instruments and the mallet.

This, I suppose, will not be considered quite "orthodox" by some members of the profession, especially those who are in the habit of using non-adhesive gold in cavities in the grinding surface. But, if oxychloride can be left in a cavity where it has been put as a capping for an exposed pulp, why may it not be left in any part of any cavity where a straight plugger will not reach? That it will prevent decay we all very well know, and when protected from the action of the fluids of the mouth it seems to me to be the best material with which such cavities may be filled. It has also the advantage of being a non-conductor, so that nearly exposed pulps must be less endangered.

If oxychloride is too white to put under the enamel of incisors, Guillois' cement is darker and less objectionable than the yellow color of gold, and not so liable to discolor.

When the rubber dam cannot be used, and the operation must be performed quickly to avoid the fluids of the mouth, I know of nothing better than sponge in approximal, and soft gold in grinding surface cavities, introduced and condensed by hand-pressure, aided, if possible, by the mallet. Operating as I do without an assistant, in such cases I use Salmon's automatic, the points being finely serrated, and patterned after those I use with the lead-mallet, though somewhat larger. Such fillings are generally unsatisfactory, though of course better than none at all. I formerly operated almost entirely with the automatic, but found it having too much lateral motion, too liable to check the teeth from the sharpness of its blow, and not so obedient to the brain as one's own hand. In fact, it is *too* automatic.

Using oxychloride in badly-shaped, inaccessible cavities, it is unnecessary for me to say that I very seldom use cylinders.—*Dental Cosmos*.

BIBLIOGRAPHICAL NOTICE.

THE MEDICAL COSMOS. Vol. I. No. 1. A monthly abstract of Medical Science and Art, Editor and Proprietor Geo. J. ZIEGLER, M.D. Philadelphia. \$1 a year.

This addition to medical journalism is designed to afford a résumé of the latest developments in *practical medicine* representing the advanced ideas of the age from all parts of the world. It has the character of Braithwaite's Retrospect, only on a smaller and more compendious scale.

Dr. Ziegler has for some years had charge of the periscopic department of medicine and general surgery in their relation to dentistry, of the *Dental Cosmos* and has shown great aptitude for the specialty of selection, which he intends to assume more independently in the *Medical Cosmos*.

CATALOGUE OF ARTIFICIAL TEETH, DENTAL MATERIALS, INSTRUMENTS, TOOLS, FURNITURE, MANUFACTURED, IMPORTED AND SOLD BY CLAUDIUS ASH & SONS, 7, 8 AND 9, BROAD STREET, GOLDEN SQUARE, LONDON, ENGLAND, 1871.

We have received a copy of this very handsome Catalogue of 201 pages, containing a very fine list of the Dental necessaries and luxuries, sold by the Messrs. Ash, and which is embellished with a large number of wood-cuts, as well as a frontispiece showing the manufactory in Kentish Town.

The first thing that must strike dentists on this continent in looking over this catalogue is, that so far as instruments, tools and dental furniture are concerned, our brethren in England are far behind us. Most of the operating chairs are very clumsy in appearance; the forceps bear no comparison to those of American makers for adaptation; some of them look like hens after they've had their necks wrung by the kitchen maid. A rather novel automatic mallet is represented on page 90, reminding one of the pictures of the battering rams used in ancient warfare.

This much we will say, however, and that is, that in apparatus, &c., to be used in connection with nitrous oxide, in great strength and density of artificial teeth, and some other particulars, we in America are far behind. The difference between dentistry in America and England is mainly this; that we are more practical, they more theoretical; and that the fine arts in dentistry is carried to greater perfection on this continent than anywhere else in the world.

Messrs. Ash exhibit an enterprise in England, which Dentists in America can best appreciate.

THE "CANADA LANCET."—A Monthly Journal of Medical Science, edited by J. FULTON, M.D.; co editors, U. OGDEN, M.D., and J. W. ROLPH, M.D., Toronto, Ontario. \$3 per annum.

A very excellently conducted periodical, for which we should judge there is plenty of scope in Canada. Every medical practitioner, and, indeed, every dentist, should subscribe to such a journal.

EDITORIAL.

THE APPOINTMENT OF DENTISTS TO HOSPITALS.

Although it may be rather premature to establish independent dental hospitals and dispensaries in Canada, we do not see why it would not be proper, but indeed highly desirable, to have a dental department in connection with all general hospitals, to afford to the poorer classes gratuitous advice and surgical aid in all diseases pertaining to dental surgery. It is not to be expected that these institutions can afford to pay the same attention to manipulations on diseased dentures as on diseased eyes; or that the various ills the teeth are heir to, will receive a like conservative consideration with those of organs more vital. The loss of all of the teeth is insignificant compared to that of an eye, but no reasonable person can assume this insignificant difference to be any argument for the sacrifice of the former.

It needs little argument to convince the commonest understanding of the importance of the teeth in the economy; and that proper treatment, whether applied to their salvation or removal, are matters involving no mere modicum of personal comfort, appearance and general health.

It is quite certain that the great number of teeth annually extracted in all general hospitals where a dentist is not attached, are not treated according to the golden rule, or the first principles of dental surgery. Hospitals do the best they can with the existing arrangements, and make no pretensions or attempt to preserve decayed teeth. Patients are well aware that the only relief offered is extraction, and as they are most frequently bad diagnosticians of their own trouble, hundreds of teeth are, no doubt, drawn, that might be saved. And even for this "*dernier resort*," hospitals are deficient in means and appliances. The stock of instruments is generally limited to a key of Garegeot—fell destroyer of alveoli!—and a few poor forceps. With such instruments the wonder is, not that teeth and alveolar processes are sometimes badly fractured, but that accidents are not the invariable rule. The sets of extracting instruments put up for medical men are not adapted at all for the most difficult and the most painful of extractions—that of decayed stumps of teeth—and in cases of urgency and desirous of relieving the agony of the sufferer, attempts are made to remove roots of teeth with instruments which were never intended to be used when the crowns had broken away, and the case is left, still more difficult, for a more painful operation by the dentist.

Unnecessary suffering is inflicted; a simple operation is surrounded

with dread and fear, and the hospital receives no small amount of discredit. One trial of hospital tooth extraction seems to satisfy many who are otherwise very courageous.

We are aware that the Montreal General Hospital almost invariably send difficult cases of tooth extraction to a dentist; and that the Montreal Dispensary has for some years given a sort of informal appointment to a dentist, the latter being the only connection of the kind in the country.

The great misfortune in most hospitals is, that medical students have come to regard the extracting of teeth as a legitimate part of surgery, which they may enter upon without tuition and without proper instruments; and that they are extended an amount of license with aching teeth presenting at the hospital, which would not be permitted for an instant with other diseases of the body, however slight. And it must be remembered that a patient will sooner excuse a tooth fractured by a dentist, whom it is known possesses the best adapted instruments, than by a medical student or even an old medical practitioner who makes no pretensions to skill in dental surgery.

We might enlarge further upon this subject, and illustrate the great advantages to the poor and to an hospital by a dental appointment, from the success attending the experiment in nearly all general hospitals in Europe. For many years regular established dentists have been appointed in British hospitals, who not only extract teeth, but aim principally to save, by scaling salivary calculus, conservative treatment of exposed pulps, treatment of alveolar abscess, &c. Filling is done to a considerable extent, where subscriptions have been liberal, but only by letter of recommendation from a subscriber or a governor. The extraction of children's teeth for regulating purposes has also formed an important part of the operations performed. Medical students have also received much valuable information by witnessing clinics, and receiving instruction in treating conditions of toothache which do not prognosticate extraction.

By the appointment of dentists to hospitals, these institutions are relieved of a share of labor and made more complete; and an important profession are enabled to contribute their experience and skill for the benefit of the poorer classes of the community.

We would urge the consideration of this subject by the governors of our hospitals. Any respectable dentist would, we are confident, be glad to give a portion of his time gratuitously to the good work; and in every locality in Canada where an hospital or dispensary is to be found, there are sufficient reputable dentists to divide the week between them, and each give an hour or so a day.

B.

"AXES TO GRIND."

When men are doing their best and giving time and thought for the honor and elevation of their profession, how refreshingly encouraging to be told that they have "axes to grind." When hours that should be occupied in that diversion which is necessary to maintain the equilibrium of body and mind, are spent in labor for professional interests, and the auxiliaries of progress which have done so much to raise the standing of dentistry abroad, are attempted to be engrafted here, when every energy, and every ambition are brought to bear for the sake of the profession, what an immense incentive to learn, that some who appear to aid, assert behind your back that you have "axes to grind."

There are some men so intensely selfish and narrow-minded that they can neither be disinterestedly liberal themselves, nor believe in the honest sincerity of those who are. An egg is not more full of meat than they of suspicion. Doing nothing for the common good, except that by which they at the same time serve themselves, they have not the shade of a shadow of faith in one who asserts his work to be a labor of love. They detest egotism in others, but they will launch out the personal pronoun "I" in all its self-sufficient applications, and retire to rest, refreshed with the highest opinion of themselves. Whatever little aid they gave to the progressive movement in the profession, was done patronizingly, and they have the vanity to believe that, like the fable of the fly on the axle-tree of the chariot wheel who thought *he* raised all the dust, their little assistance was the only thing that secured success. Their whole thought is centered in themselves, and progress clashes with their private interests. Nothing restrains them from meeting fair competition by quackery and puffing, but the fact that public opinion is more advanced than even five years ago, and that there are too many dental quacks already. They owed the germ and growth of their own practice to the very means which in others they now despise; that humbugging dental man-trap the show case, contributed mainly to build up their business; fences were plastered with their posters, and the columns of the daily newspapers lied for them by contract at so much a line.

As public opinion changed, and professional elevation began, they abstained from open bragging, after the persuasion of friends and confreres, only, however, to break out again at spasmodic intervals. They appear to share in the work of reform; but stab progress in the dark. Perhaps they attend the meetings of the societies, but they take little interest in the real work, and are jealous of those who do. Possibly they keep aloof, thinking they will help to make efforts appear paltry by their absence. Those who see good likely to issue

from association, and who are active in organization, have "axes to grind." Glad to share in the benefits of reform, they are careful to avoid its toils; they pretend to approve of certain measures, which they secretly deride; they slight overtures made to them to cooperate, and then scoff at the best intention or the worthiest result in which they had no share. If the honor of the profession had depended upon their mental or bodily aid, it would have still been begging for disinterested resolution to win it a name. Analyze the motives of those who put their shoulder to the wheel when the time had come for dentistry in Canada to be elevated and honored, and the motives of those who sneer at every little or great effort to create an associative interest, and we have the truth in small compass. Posterity will give both their reward.

When a narrow minded man has nothing bad to say against a worker or a cause, and wants to say something which will have its flavor, he generally resorts to the sneer, the scoff, and the orthodox remark "he has axes to grind." It would be well for us individually and as a profession, if we would resent with indignation any attempt in private, which dare not be done in public, to malign a man who is zealous, and a cause which is good. A little more charity and a great deal higher sense of the moral obligation of every dentist in the land, to assist and not to ignore the various acts and agencies designed to dignify and educate our profession, would do some croakers an immense deal of good. There are a few such, between Fort Garry and Gaspé, who would be healthily improved by a daily course of Turkish bath and choking. What under the sun they were born for, except to grumble, must remain a mystery. It would be some consolation to read their obituaries, but for the reflection, that the evil a man does in his life time lives after him, and that his discontent and narrow-mindedness is contagious and sure to re-appear. Would not the philosopher surely immortalize himself, and make his name dear to all generations to come, who would discover a specific for the gloomy grumblers whose jealousy cankers the best feelings of their hearts, and who, true dogs in the manger, hate to see others take up the work they have scorned, and carry it to a successful issue?

They say that reformed thieves always want to become policemen, and we will generally find that those who cry "axes to grind" behind one's back, are the very ones who have made the most selfish use of any position they held, and who only point to the weakness of others, the better to turn away attention from the axes they want to grind themselves.

LATE.

Owing to our greatly increased circulation, having now subscribers in every state of the American Union except three, in England, Scotland, Ireland, France and Germany, and to the attention necessary to be given to our own private practice, we could not avoid several delays in the issue of this Journal. Next year (Vol. 4) we will endeavour to have the publishing part of the Journal in the hands of a firm accustomed to it. We have no apologies to make. Dead heads will please spare their tears.

NEW YORK COLLEGE OF DENTISTRY.

Sins of omission will sometimes happen with the best conducted Journals. When too late to remedy the matter, we found we had omitted to state, that among the best of Dental Colleges flourishing, is the *New York College of Dentistry*, which held its annual commencement on the 4th of March. We acknowledge the receipt of the Annual Announcement from the Dean.

PERSONAL.

We had the pleasure lately of a visit from Prof. L. D. Shepherd, of the Harvard University, Dental Department, Boston, who had been getting sun-burned in a run down from Niagara to Montreal, and the sunshine of whose countenance is a decided consolation to those who think dentistry and sallowness synonymous. May the shadows of his *compagnon de voyage* and himself never be less! B.

CORRECTION.

In a late number we noticed the published Proceedings of the "Illinois State Dental Society," for 1870, and we stated that the Society was "a small one, having at its last meeting only twelve members present; and we proceeded to give due praise to the Society for the amount of labor performed. The Secretary, Dr. Smith, informs us the Society actually numbers 60, and at the last meeting there were from 40 to 50 present. Sixteen new members were admitted. Our mistake arose from taking the published list of members who answered to their names at roll call at the opening of the session, as the list of members actually present at the meeting.

This explanation of a mistake does not, however, detract one whit from the credit due to the praiseworthy associative zeal of the members of the Illinois State Dental Society.

TRAVELLER'S ACCIDENTAL INSURANCE COMPANY.

The above institution is one that should commend itself to every one, especially to those who travel. Some time ago we took out a policy, and a few days afterwards had an accident from a lancet, which disabled the right hand for nearly two weeks. The company paid us nearly double the amount we gave for the policy, while, of course, the latter holds good for any number of similar or other accidents during the year. Our friends would do well to examine into the system.

Since writing the above our assistant has had his right hand disabled by the bursting of a retort while making Bitrous Oxide gas. The Company promptly recognized his claims.

 OBITUARY.

We are requested by the family of the late Dr. Preterre, to insert the following obituary.

Died in the city of New York, October 30th, 1870, Peter Preterre, M.D., D.D.S. Dr Preterre was a graduate of the Pennsylvania College of Dental Surgery, and had practiced dentistry since the year 1847.

 MISCELLANEOUS.

 WONDERFUL WORK OF SURGERY.

MANUFACTURE OF A HUMAN FACE.

The Canton (Illinois) *Register* of a late date had this account of a wonderful surgical operation :

"There lives in this city a young lady named Lizzie Twineham: Some years ago, when she was but a young girl, she was attacked with an ulceration of the face, which entirely destroyed her nose, upper lip and nearly all the adjacent bones. By the time the ravages of the disease were arrested, she was the most hideous-looking being that was ever gazed upon. Her eyes and forehead were visible, but in the place of her nose and mouth there was nothing but a large unsightly hole, in which the raw and purple flesh was visible away into the throat. None could look upon her without turning away in horror. Her parents were poor, and she was compelled to leave home. She sought labor, as she was able and willing to work, but her presence was so disagreeable on account of her terrible affliction, that she could not obtain a situation. About four years ago she found herself out of employment, and with no home. She was advised to go to the poor house. Despair and wretchedness seemed to be her lot. Shunned as she was by society, and abandoned by all, her sensitive nature was racked with torment, and she seriously contemplated

suicide. Just at this time, a friend suggested that probably Dr. Wright, of this city, might be able to remedy her deformity and improve the appearance of her face. With tears in her eyes and with but faint hope, she called upon him. At first the doctor thought it was a hopeless case, but the despondent and despairing condition of the girl's mind induced him to take the case under serious consideration. He consulted with Dr. J. H. Rainey, dentist, in regard to the feasibility of supplying teeth and the upper jaw, which had been entirely eaten away. After examination, Dr. Rainey thought he would be able to supply the deficiency. Dr. Wright then determined to enter upon the work of making a new face for the young woman.

The first business was to supply an upper lip. This was an exceedingly difficult and delicate operation. The disease had not only destroyed the lip, but it had resulted, in the healing process, in connecting the flesh of each cheek to the stub of the upper jaw bone in an unnatural manner. It was necessary to cut the flesh loose from the bone upon the inside. After this was done, and the wounds healed, a piece of flesh was taken from the back part of the cheek and transplanted to form a lip. This was a most extraordinary operation, but was completely successful.

The lip being formed, the next step was to supply a nose. This required several operations. A piece of flesh was taken from the forehead in such a manner as to scarcely leave a scar, and brought down and made to grow where the nose should be. Other pieces were taken from each cheek, and applied in the same manner.

"It was necessary that months should intervene between each operation, that the parts might become perfectly healed. The different operations were eminently successful, and the work is now complete. Dr. Rainey has supplied the teeth and a bridge for the nose, which holds it out in the natural manner. A stranger now meeting her would never imagine that she was once without nose or upper lip. She would pass in company without special observation on account of any deformity."

ANÆSTHETICS—THEIR RELATIVE SAFETY.

Professor E. Andrews gives, in the *Chicago Medical Examiner*, the following estimate of the relative danger from different anæsthetics, in 209,893 cases:—

Sul. Ether	1 death to 23,204 administrations.
Chloroform	1 " to 2,723 "
Mixed Chloroform & Ether	1 " to 5,588 "
Bichloride of Methylene ...	1 " to 7,000 "
Nitrous Oxyde.....	no death in 75,000 "

GUILLOIS' CEMENT.

In response to frequent inquiries, we are now prepared to furnish this Cement.

There are four shades, Nos. 1, 2, 3, and 4, indicated by a sample attached to each package. No. 1, bluish; No. 3, bluer; No. 2, yellowish; No. 4, yellower.

From a communication to the *British Journal of Dental Science*, by Charles James Fox, M.R.C.S., L.D.S., we give the following extract:

"I have been for some time expecting to see some communication respecting this cement, recently introduced, as every one who tries it expresses privately extreme satisfaction with it. When this is the case, I think it is only fair to say so publicly. It is of the same nature as that commonly called osteoplastic, but it differs from it in this particular, that it can be mixed to a consistence much resembling putty, and in that state can be manipulated for some minutes without setting irretrievably. If you mix the other osteoplastics as thick as this, they set rapidly or crumble; if you use them in a thinner condition, they run about on the gums and teeth. When once set it is so hard, if it has been properly manipulated, as to turn the edge of the instrument, should it be deemed requisite to remove it. As to its durability, it is of course impossible to say much, seeing that it has only been introduced into England for a few months; but this much may be said, that, taking four months' experience with other cements, and four months' with this, I have found it so superior that I have entirely discarded all other osteoplastics, amalgams, &c. In small cavities in the incisors, or in shallow cavities where osteoplastics would wash out in a short time and dissolve away, Guillois' Cement remains at the end of four months as good as when it was put in. I cannot tell what further experience may prove, but so far—and only for four months' experience do I speak—I have not had one failure, which is more than I can say of any other."

Put up in one-ounce glass-stoppered bottles—the liquid in a drop-bottle—directions accompanying. Postage free.

Price, per box..... \$5.00

CEMENT PLOMBE.

(THE CELEBRATED GERMAN CEMENT FILLING.)

This cement is very highly recommended by those who have used it.

There are four shades, Nos. 1, 2, 3, and 4. No. 1, light; No. 2, cream color; No. 3, yellow; No. 4, dark blue.

Put up in one-ounce glass-stoppered bottles, the liquid in a drop-bottle.

Price, per box..... \$3.00

CEMENT LAC OR VARNISH,

FOR PROTECTING THE FILLING WHILE HARDENING.

Price, per bottle..... \$1.00

SAMUEL S. WHITE,

Philadelphia, New York, Boston, Chicago.

NEW AMALGAM.

A beautiful and excellent preparation for filling teeth. For this new combination of metals (chemically pure) for dental purposes, great superiority is claimed over ordinary Amalgams. It will remain bright for years, and, *when used according to directions*, will preserve teeth more perfectly than any article in use, except gold; and under many circumstances can be successfully used for the permanent preservation of teeth when gold would prove a failure in the hands of a large majority of operators.



The process of combining and purifying the metals is such as to guarantee comparative freedom from the tarnish of fillings, or discoloration of teeth, so often observed from the use of ordinary Amalgam. Ten years' experience with it in the hands of some of the most skillful members of the profession has proved its excellence. The increasing demand for a reliable Amalgam has prompted the introduction of this article, with the confidence that it will give entire satisfaction to those who use it rightly.

To manufacture a superior Amalgam, always uniform in quality and texture, at a moderate cost, it is necessary to make it in large lots, and by the aid of machinery. It is also necessary that each lot be thoroughly tested by a competent Dentist before offering it for sale. The inventor has made such arrangements for its manufacture as to enable him to guarantee the reliability of every package.

To meet the wants of different operators, two grades of the New Amalgam were manufactured (fine and medium coarse).

Hereafter but one grade will be put up, which will consist of the two grades combined, and will be put up in *quarter, half and one-ounce* packages, with circular of instructions accompanying each, with trade-mark of manufacturer on each package and circular.

Retail Price, per oz..... \$4.00

Manufactured by Dr. B. F. Arrington.

All orders, wholesale or retail, will be filled by the undersigned, at his Depots.

TOWNSEND'S AMALGAM.

Price, per oz..... \$2.00

TOWNSEND'S AMALGAM, IMPROVED.

A very Superior Article, put up in 1oz., ½ oz., and ¼ oz., packages,

NONE SOLD IN BULK,

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LAWRENCE'S AMALGAM.

Price, per oz..... \$3.00

WALKER'S EXCELSIOR AMALGAM.

Price, per oz..... \$4.00

All the above will be supplied to dealers at Manufacturers' rates.

SAMUEL S. WHITE,

Philadelphia, New York, Boston, Chicago.

Gold Foil.

Our Adhesive Foil, (in Brown Envelopes,) is more popular than ever with the profession, and its manufacture receives our unremitting care. We, however, call ESPECIAL ATTENTION to our Non-Adhesive or SOFT FOIL, (in Carmine Envelopes,) which has recently been very greatly improved. By annealing it, any desired degree of adhesiveness can be obtained, and an unusually excellent Adhesive Foil secured.

We make Nos. 3 4. 5. 6. 10. 20. 30. 60. 120. SOFT and ADHESIVE FOIL at FIVE DOLLARS PER BOOK, Thirty-Eight Dollars per Ounce. Also No. 2 ADHESIVE at TWENTY-FIVE CENTS per Book Extra

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Depot, 816 Broadway, N.Y.

M. M. JOHNSTON & CO.'S

Cleansing Paste

FOR THE HANDS,

DEPOT, 816 BROADWAY, N. Y.

Vulcanizer, Rubber, Plaster, and all Laboratory Stains are more speedily and easily Removed from the hands by this preparation than by any other. It contains nothing corrosive, but will keep the hands soft, white, and free from chapping.

PRICE. FIFTY CENTS.

FOR SALE AT ALL DENTAL DEPOTS.

1,000 FINE ADHESIVE AND SOFT GOLD FOILS

UNITED STATES ASSAY OFFICE, NEW YORK, May 8, 1869.

This is to certify that I have assayed some scraps of "Dentists' Gold Foil," submitted to me by M. M. JOHNSTON & Co., of this City, and I find the same to be absolutely pure gold - 1,000 fine.

JOHN TORREY, U. S. Assayer.



BROWN Envelopes indicate ADHESIVE FOIL

CARMINE Envelopes indicate SOFT FOIL

M. M. JOHNSTON & CO.,

Dental Depots,

816 Broadway, N. Y., and 20 Fulton Ave., Brooklyn, N. Y.

LAWRENCE'S AMALGAM.

THE BEST IN THE MARKET.

Tried and found Reliable.

THIS Amalgam was invented by DR. AMBROSE LAWRENCE, of Lowell Mass., in 1847, and has been used by him and many others since, with entire satisfaction. The metals of which it is composed are combined in such proportions as, after many experiments, have been found to afford the best results; and the fact that for many years it has received the favor of almost the entire Dental profession in this country, and, to a large extent, in foreign countries, also, renders any labored praise of its qualities unnecessary.

Its reputation is already established; a result of its working qualities, apparent in the act that it makes a very uniform paste,—so tenacious that it can be readily adapted to the most difficult or irregular cavities—that from its great density it is not permeable to the fluids of the mouth, and will neither crumble nor wear away in mastication.

If used according to directions in cavities *properly prepared*, it will tarnish very little, if any.

N. B.—Dealers, as well as Dentists, should bear in mind that our Amalgam is never sold in bulk, nor in any other than our LITHOGRAPHED ENVELOPES, with our MONOGRAM TRADE MARK, on the lap.

⚠ This caution becomes necessary in consequence of some unprincipled parties offering worthless amalgams, of their own make, using our name to insure a sale. No one has our recipe nor the right to use our name in the manufacture of amalgams. "A word to the wise is sufficient."

Directions for using Lawrence's Amalgam accompany each Package.

RETAIL PRICE, \$3.00 PER OUNCE (TROY).

FOR SALE AT THE DENTAL DEPOTS.

And by the Proprietors (and only MANUFACTURERS.)

DRS. A. & G. W. LAWRENCE,

No. 9 John Street, Lowell Mass.

BIXBY & STEVENS,

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MANUFACTURERS OF

ARTIFICIAL TEETH,

AND DEALERS IN ALL KINDS OF

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Cash orders will receive prompt attention.

From recent improvements in the preparation and manipulation of our materials we claim (on the testimony of those in the Dental Profession qualified to judge) the strongest combination of Porcelain in Artificial Teeth ever attained and by comparison with other manufactures (on our own authority) a satisfactory appearance, with a variety, that the demands for our goods is compelling us rapidly to increase: which we are offering at the following.

RETAIL RATES:

GUM TEETH, 14 CENTS. PLAIN TEETH, 10 CENTS

Large discount on bills of \$50 & \$100.

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AT ALL

DENTAL DEPOTS.

Other goods at lowest cash prices.

C. H. HUBBARD'S TORONTO DENTAL DEPOT,

ESTABLISHED 1860.

THE MOST EXTENSIVE FURNISHING ESTABLISHMENT
IN CANADA, AND

GOLD FOIL MANUFACTORY.

Having greatly increased my stock of Dental Materials, I am now prepared to furnish Dentists with everything needed in the practice of their profession, including Operating Chairs, Instrument Cases, Lathes, Vulcanizers, Nitrous Oxide Gas Apparatus, Cabinets, Works on Dentistry, Anatomical Preparations, etc., etc.

A full and complete Stock of S. S. White's Celebrated, and all other makers of

PORCELAIN TEETH,

At Manufacturers' prices. Would also invite the attention of the Profession to my

IMPROVED GOLD FOIL.

Present price \$3.50 per $\frac{1}{4}$ oz.

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DOUBLY REFINED ADHESIVE GOLD FOIL,

To which I would respectfully invite comparison with the best in the market.

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Agent for Canada Journal of Dental Science, also, Agent for S. S. White's Dental Cosmos. Gasometers, and other Nitrous Oxide Apparatus, and Nitrate of Ammonia.

All the Dental Text Books, recommended by the Boards of Ontario and Quebec supplied.

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BETWEEN YONGE & BAY STREETS.

☞ The Highest Price paid for Old Gold and Silver Plates, Scraps, &c.

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OXYCHLORIDE OF ZINC.

This article has been in use for the last eight years; the call for the same increasing as its availability as a Medico-Mechanical agent has become known. Similar articles have been brought to the notice of the profession under the names of Os-Artificiel, Osteoplastic, Bone Filling, &c.

We quote from the *Materia Medica* compiled by James W. White, and published by Samuel S. White, of Philadelphia :

" This preparation has been extensively tested as a capping or temporary filling over freshly exposed pulps, and with results which are represented as highly gratifying. For this purpose the solution should be diluted with water so as to be only just strong enough to cause the mixture to set. On its removal, months after, the subjacent-pulp has been found healthy, and even protected by a deposit of secondary dentine. The success which has attended its use gives hope of relief from the necessity of extirpating exposed pulps, when they have not taken on a highly inflamed condition. The cavity having been cleaned, creosote should be applied to the exposed pulp, and the oxychloride introduced in a semi-fluid state. The pain experienced varies in intensity. It is generally of short duration, but may in exceptional cases continue for an hour or even longer. The permanence of this material greatly depends on its being perfectly protected from the fluids of the mouth till it becomes quite hard (requiring about half an hour), which may be assured by any of the methods deemed most advantageous for preventing the ingress of saliva ; the rubber-dam, in this connection, as in the insertion of gold, proving a most valuable appliance. It is best to introduce a surplus of material, to admit of trimming to proper shape, which may be done at once, although it is advisable to cover it with a layer of gutta-percha in chloroform, and allow several days to intervene, for the more thorough solidification of the cap prior to the removal of the excess of material and final insertion of the metal stop-
ing.

" There is another direction in which oxychloride of zinc proves a most valuable adjunct in efforts for the preservation of teeth, viz., in filling the bulk of cavities in treated teeth. By this method many advantages accrue, among which may be mentioned the saving of time and expense, with an equally durable result ; the diminution of the risk of periodontitis, so liable to supervene upon prolonged violence ; the avoidance of risk of fracture in frail teeth, and the equal support insured ; the obviation of the yellow color when the enamel is thin ; and, in the event of subsequent trouble, the comparative ease with which its removal may be effected. The gold must of course leave no portion of the oxychloride exposed.

" This material is likewise employed for securing the effects of chloride of zinc in the hypersensitiveness of dentine,—used as a temporary filling, and allowed to remain until, in the judgment of the operator, its effects are induced. Should tenderness recur in excavating, a second and even a third application may be found advantageous."

It has the entire confidence of many of the best men in the profession as a thoroughly reliable article. It is manufactured with great care and with uniformity, and is believed to be the best preparation of its kind in the market. It is now put up in larger sized, glass-stoppered bottles, giving double the quantity that it formerly had.

For sale by all the principal dealers in dental materials throughout the United States and Europe.

Price, per box, \$1.00.

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The oldest and most extensive Establishment of the kind
in the Dominion.

I AVAIL myself of the opportunity afforded by the *Canada Dental Journal* to express my thanks for the liberal patronage I have heretofore enjoyed from the Dental Profession, and trust by promptness and attention on my part to merit increased favor in future.

Being a Practical Dentist of over twenty years' experience, gives me facilities for purchasing and selecting goods to thoroughly meet the requirements of my customers.

My Stock consists of a Large Assortment of all

Instruments, Furniture & Material

used by the Dental Profession.

The Catalogue of any Manufacturer or Dealer in Dental Goods may be used in ordering from me, and all goods will be sold as low as can be obtained elsewhere.

DENTAL GOODS

AT WHOLESALE AND RETAIL.

A large Stock of White's, Corfield's Justi's, Johnson and Lund's and other makers' Teeth always on hand.

Constantly on hand a good Stock of all the most popular makers,

GOLD FOILS,

AND OTHER

Gold Preparations for filling, and at Manufacturer's prices.

I wish the Profession to distinctly understand that I intend always to be up to the times, in all the new inventions and improvements in all things pertaining to Dentistry.

Every article sold by me is warranted as represented, and in all cases, if not in accordance with the order, will be exchanged or the money refunded.

Dentists about commencing business, as well as those replenishing, are requested to call and examine my Stock.

☞ All orders addressed to S. B. CHANDLER, Newcastle, Ontario, will receive prompt attention.

(Patented May, 1870.)

TRY THE
EUREKA GOLD FILLING.
 SOFT, TOUGH AND ADHESIVE.

The superiority of this form of gold for filling is universally endorsed by the Profession as a better article than foil, it being tougher, softer, and at the same time adhesive. It is softer than the softest foil, and its adhesive qualities are perfect. The gold is chemically pure, and these essential qualities are produced solely by my principle of manufacture, whereby I preserve its crystalline structure unbroken and uniform. By its homogeneous condition I can guarantee its being uniform for

THE QUALITY CANNOT VARY.

It is sold in a very convenient form for manipulation, and each box contains a description of the gold and how to use it. For sale at all the Dental Depots.

PRICE, \$5 PER 1-8 OZ., \$38 PER OZ.

Agents and travellers will receive a liberal discount.

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 The superiority of Doherty's Rubber is so well known that commendation is unnecessary.
 To be had in all the Dental Depots throughout the States.

RETAIL PRICES.

Dental Rubber, No. 1..	\$2 50 per pound.	Flexible Rubber.....	\$2 75 per pound.
" " No. 2...	2 50 "	Gutta, Percha.....	2 00 "
Black Rubber.....	2 50 "		

TO THE MEMBERS OF THE DENTAL PROFESSION!

BEAUTIFUL COMBINATION

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Elegance, Strength, Naturalness, and Adaptation.

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MANUFACTURERS OF

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PORCELAIN TEETH,

Address, 909 Market Street,

WILMINGTON, DELAWARE.

We are now manufacturing teeth equal to the best of White's or Just's. We sincerely believe them more beautiful than the former and stronger than the latter. They are far superior to any ever sold at the same rates, in this or any country.

As an inducement to Dentists to try our teeth, we will sell them at the following extraordinary low prices, for first class teeth.

GUM TEETH.

1 to	20 sets,	\$1 96 per set,	or 14 cts. per tooth.
20 to	50 sets,	\$1 68 per set,	or 12 cts. per tooth.
50 to	100 sets,	\$1 40 per set,	or 10 cts. per tooth.
100 to	500 sets,	\$1 12 per set,	or 8 cts. per tooth.
500 to	10,000 sets,	\$0 98 per set,	or 7 cts. per tooth.

PLAIN TEETH.

1 to	100 sets,	\$1 25 per set,	or 9 cts. per tooth.
100 to	5,000 sets,	\$0 84 per set,	or 6 cts. per tooth.

Gum Plain Teeth and Plain Plate Teeth at the same rates as Gum and Plain Teeth above.

REASONS FOR THE ABOVE STATEMENT.

During the last year we have spent large sums of money in experiments, and in the study of chemical affinities, until the eye and tests demonstrate our teeth to be as beautiful and strong as any now manufactured.

PINS.—Our pins enter the teeth well, having a good head inside. They are longer than those used by most manufacturers. The first complaint is yet to be made of their pulling out of the teeth. The heads of the pins outside of the teeth are put on by a revolving stamp, an invention of our own, which spreads the head equally in every direction from the centre.

MOULDS.—We have constantly employed a mould cutter, who ranks only second in the country in his line, who cuts the finest moulds from patterns as well as originates new designs.

BURNING.—Our burner has had an experience of sixteen years, and is unsurpassed in his department.

For these reasons, as well as many others we could give, we are well satisfied that our teeth are equal in mould, style, finish, adaptation, &c., &c., to any made by the leading establishments in America or elsewhere. We speak unto wise men in their profession, judge ye what we say, by using the teeth.

Dentists will see by ordinary large quantities at one time the teeth are much lower in price. Sent by express B. C. D. to any address.

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SOFT, TOUGH AND MALLEABLE,

Can be made as ADHESIVE as desired by re-annealing. Receives our personal attention in refining.

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H. C. CORFIELD,

Manufacturer of Porcelain Teeth.

Having removed to the commodious building, No. 37 North Tenth Street, one door above Filbert, we are now prepared to furnish the Profession **TEETH** of superior quality, and in great diversity of form and shade. They are fully equal to any manufactured, and at

Much Lower Prices than asked by other Manufacturers.

Our Vulcanite Teeth, Gum Sections and Plain, are all fitted with Double-Headed Pins, or Pins with a head on each end.

Our Upper Central Blocks have each Five (5) Double-headed Pins, and the Lower Central Blocks each Four (4).

We have a full and varied assortment of all kinds and styles of Teeth in use, embracing

Gum Blocks or Sections for Rubber Base.				
"	Single Teeth	"	"	"
Plain	"	"	"	Plate.
"	"	"	"	Rubber.

And being willing to share some portion of the profits with the profession, have concluded to offer them at the following prices, for cash only:

Plain Teeth \$1 12 per set of 14 Teeth.

Gum Teeth \$1 40 per set of 14 Teeth.

And by the quantity at such prices as may be agreed upon. We solicit trial of our teeth. Satisfaction guaranteed or the money refunded.

H. C. CORFIELD,
No. 37 North 10th St., above Filbert,
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TOOTH TABLETS.

An Improved form of Tooth-Powder.

Unlike the Tooth-Powders commonly in use, this article is made into neat, portable cakes, divided into little tablets each of the right size for use, not liable to scatter or be wasted, and therefore very convenient, especially for Travelers. There is no occasion for dipping the brush into the box, thereby soiling what is not used, but a single tablet, enough for one brushing, may be broken off and put into the mouth; thus, several persons can use from the same box with perfect neatness and propriety.

It is made of the materials that were most approved of in the discussions of the American Dental Association at their Annual Convention, and is believed to be the best preparation yet produced for the teeth and gums. It has received the hearty approval of many leading dentists, to whom the formula has been submitted. The following certificates are submitted to those of the profession who have not had an opportunity of testing it.

CERTIFICATE OF THE DENTISTS.

This is to certify, that, being personally acquainted with I. W. Lyon, D.D.S., of New York City, and having been informed by him of the precise ingredients composing the Dentifrice known as "DR. I. W. LYON'S TOOTH TABLETS," and having ourselves used the same, we do unhesitatingly commend it to the public as the best and most convenient Dentifrice now extant :

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Price, per dozen boxes..... \$3.50

A larger discount by the Gross. A liberal discount to the trade.

Each box contains 120 Tablets. Retails at 50 cents per box.

Or sent by mail for 65 cents.

Sold at all the Dental Depots, and by the Proprietor,

I. W. LYON, D. D. S.,

No. 37 Vesey Street, New York.

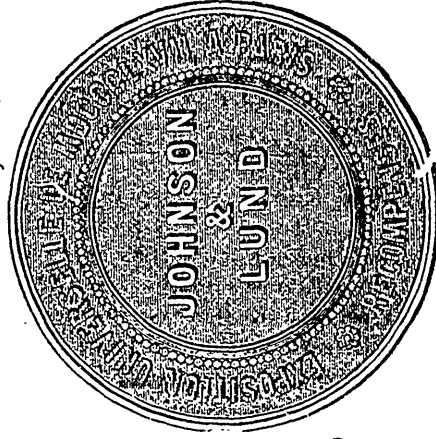
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WORLD'S FAIR,
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ARTIFICIAL TEETH,

TO

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MANUFACTURERS AND IMPORTERS OF

DENTISTS' MATERIALS.

DEPOTS, 27 North, 7th Street Philadelphia,
74 and 76 Madison Street, Chicago.

Weston's Metal for Dental Purposes.

THOROUGHLY TESTED FOR THREE YEARS.

Warranted superior to anything of the kind ever offered to the profession. Produces as sharp and perfect casting as any copying or type metal known. With care and experience plates may be cast so light and smooth as entirely to dispense with the use of burs and scrapers. For accuracy of adaptation, it is equal if not superior to any material in use.

It is tasteless and cleanly, and will positively keep its color in the mouth equal to the finest Gold or Platinum.

It is particularly adapted for full lower plates. For upper and lower parts of sets it has many decided advantages over the different cheap materials so much in use. In contact with aluminium there is no perceptible galvanic action or change of color. It receives a brilliant polish with very little labor.

Parties using this metal are not required to purchase a license. No additional apparatus required.

In 1 lb. packages.....	\$6.00
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Each package accompanied with full instructions. Manufactured and sold by

H. WESTON, Dentist,

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AND AT ALL THE PRINCIPAL DEPOTS.

Opinions of the Profession.

The following resolution was unanimously adopted at a regular meeting of the Bradford and Susquehanna Dental Association :

"That the members of this Society express themselves as more than pleased with the use of 'Weston's Metal,' in place of rubber, and feel themselves under lasting obligation to Dr. Weston for enabling them to throw off the oppressive yoke of the Rubber Company."

216 North Sixth Street, St. Louis.

Dr. Weston :—Your metal is used and recommended by the Missouri Dental College to its students.

Respectfully yours,

HENRY S. CHASE,

Professor Operative and Surgical Dentistry.

OFFICE OF PERRINE & FRANKLIN, No. 115 W. 31st St.,

New York, March 1st, 1870.

Dr. H. Weston :

DEAR SIR :—We have given your metal a trial, and are pleased with it and the results. We believe for partial under cases it is superior to any other substance known to the profession. We can get a more perfect adaptation with it than with rubber, and all delicate points acting as supports, are stronger and more reliable than rubber. We have seen cases that have been in daily use since September last (now seven months ago), that show no evidences of oxidation—an important quality, and one that at first we had fears your metal did not possess.

The great facility with which your metal is manipulated into plates renders it an important adjunct to our list of materials out of which to construct dental plates, and other dental apparatus.

We shall take pleasure in recommending its use to our professional friends. You will please accept our thanks, and we doubt not you will receive the thanks of the profession for your successful efforts in bringing out so valuable a com-

pound, and the liberality with which you offer it to the profession is in striking contrast with past experience.

Yours truly,

GEO. H. PERRINE, D.D.S.
B. W. FRANKLIN.

(From American Journal Dental Science.)

We have tested this metal in the case of entire lower sets, and are inclined to the belief that it is superior to anything of the kind which has yet been brought to the notice of the profession. We advise a trial of it by those who object to rubber. There is no doubt but that it is stronger, and will keep its color better in the mouth than any of the cast plates in use.

(From Missouri Dental Journal, May number.)

We have been using this metal for the past six months or more, with much satisfaction. It is undoubtedly one of the best substitutes for Rubber of which we have any knowledge. It is tasteless—does not discolor, or has not in any of the cases which have come under our observation; is more lasting than Rubber, and a plate of this metal will be found to fit the mouth as nicely as a Rubber plate can be made to do.

(From Missouri Dental Journal, Nov., 1869.)

This metal has been considerably used in this city for making both upper and under dentures, and has given very great satisfaction.

(From the same Dec. number.)

The cry, "What shall I do?" still comes to us, as some poor victim of the Rubber Co., who has been overlooked, is hunted up, and the strong arm of the law is raised to annihilate him. In reply, we say, try Aluminium—and Weston's Metal for partial or lower sets. We are induced to recommend Weston's Metal in preference to that known as Adamantine, (Moffit's Metal,) or the Walker's Excelsior Base, because, from the tests we have made of these bases, this seems to us to promise the best results.

Compared with Rubbe., this is superior in point of strength and durability.. The Weston Metal has thus far proved as tasteless as Rubber. Patients who have tried Rubber, and been obliged to give it up on account of its effect upon the mucous membranes, causing inflammation and even sloughing of the soft parts, are now wearing plates of Weston's Metal with perfect satisfaction. So far as we have been able to judge, Weston's Metal is not affected by the secretions found in the oral cavity. It does not materially change color. It may, with care, be cast almost as thin as an ordinary gold plate.

WESTON'S FLASKS—ESPECIALLY ADAPTED TO CASTING PLATES.

Being longer than the ordinary Flask, it gives more room for the reservoir posterior to the plate, which is the whole secret of casting perfect plates. The Flask is closed with a spring steel clamp, and stands on feet to facilitate pouring the metal.

PRICE. \$1.00

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PRICE OF FOIL Reduced to \$4.75 per Book, \$36 per oz.

ONTARIO DENTAL SOCIETY.

THE ANNUAL MEETING

OF THE

ONTARIO DENTAL SOCIETY,

WILL BE HELD IN THE

CITY HALL, TORONTO,

ON THURSDAY THE 20TH OF JULY, AT TWO O'CLOCK, P.M.

Circulars will, in due time, be sent to all the licentiates in Ontario, and it is to be hoped there will be a full attendance: as matters of vital importance will be brought before the Association, affecting the interest of the profession at large. Members are requested to bring specimens of irregularities, deformities and peculiarities—indeed anything that will tend to interest the meeting.

Essays will be read by some of the leading men of the Profession.

G. V. N. RELYEA,

President Ontario Dental Society.

BELLEVILLE, (Ont.) May, 1871.

HARVARD UNIVERSITY.

DENTAL DEPARTMENT, BOSTON, MASS., 1871-72.

Fourth Annual Session.

FACULTY.

CHARLES WILLIAM ELIOT, LL.D., PRESIDENT.

NATHAN C. KEEP, M.D., D.M.D., Professor of Mechanical Dentistry.

OLIVER W. HOLMES, M.D., Professor of Anatomy and Physiology.

HENRY J. BIGELOW, M.D., Professor of Surgery and Clinical Surgery.

JOHN BACON, M.D., Professor of Chemistry.

THOMAS B. HITCHCOCK, M.D., D.M.D., Professor of Dental Pathology
and Therapeutics.

GEORGE T. MOFFATT, M.D., D.M.D., Professor of Operative Dentistry.

THOMAS H. CHANDLER, A.M., Adjunct Professor of Mechanical Dentistry.

LUTHER D. SHEPARD, D.D.S., Adjunct Professor of Operative Dentistry.

NATHANIEL W. HAWES, Assistant Professor of Operative Dentistry.

EDWARD A. BOGUE, M.D., University Lecturer on Pathology & Therapeutics.

IRA A. SALMON, D.D.S., University Lecturer on Operative Dentistry.

SAMUEL F. HAM, D.M.D., Demonstrator of Mechanical Dentistry.

CHARLES B. PORTER, LL.D., Demonstrator of Practical Anatomy.

Attention is called to the changes which have been made in the manner of instruction and the time of the commencement of the Session. Instruction will be given by lectures, recitations and practical exercises. New and thoroughly-appointed laboratories for practical instruction in mechanical dentistry, chemistry and physiology, have been provided with separate desks and benches for each student. The Infirmary, which has been established in connection with the Massachusetts General Hospital, remains open throughout the year, and offers to students unsurpassed facilities for acquiring practical knowledge and dexterity.

The Session will commence on the LAST THURSDAY, (28th) SEPTEMBER, and continue nineteen weeks.

Matriculation Fee	\$5.00
Full Course of Lectures, including Demonstrators' Tickets	110.00
Graduation Fee.....	30.00

For further information address

DR. THOMAS B. HITCHCOCK,

Acting Dean,

222 Tremont Street, Boston, Mass.

CHARLES ABBEY & SONS,

MANUFACTURERS OF

DENTISTS' FINE GOLD FOIL,

No. 230 PEAR STREET,
PHILADELPHIA, PENNSYLVANIA.

OLD FASHIONED, (SOFT OR NON-ADHESIVE,)

FINE GOLD FOIL,

ADHESIVE FINE GOLD FOIL.

For nearly fifty years our OLD-FASHIONED GOLD FOIL has been before the Profession, and has received the unqualified approbation of most of the best Dentists. Our

ADHESIVE GOLD FOIL

While possessing all the properties peculiar to that particular article, is free from the objectionable harshness or stiffness that characterizes so much of the Gold Foil that is offered as Adhesive. All our Gold Foil (Old-Fashioned and Adhesive,)

Is Made From Absolutely Pure Gold,

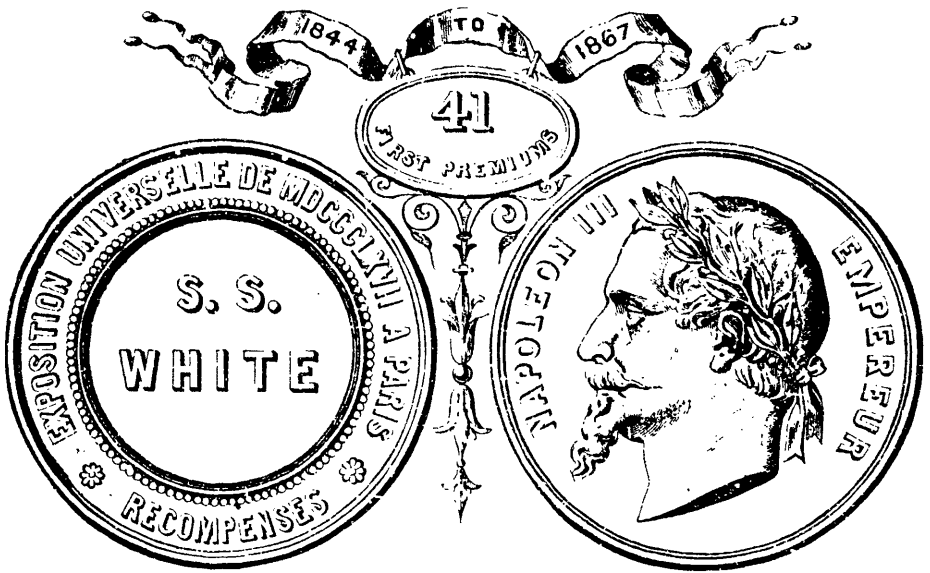
Prepared with great care by ourselves, and warranted to be as represented,

Free from Alloy or Impurities of any Kind.

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AT THE PRINCIPAL DENTAL DEPOTS.

OR ORDERS MAY BE SENT DIRECT TO US.



DENTAL INSTRUMENTS.

AT THE FAIR OF THE AMERICAN INSTITUTE, NEW YORK,
(EXHIBITION OCTOBER, 1869).

THE FIRST PREMIUM

WAS AWARDED TO US FOR

SUPERIOR DENTAL INSTRUMENTS.

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(EXHIBITION NOVEMBER, 1869).

A GOLD MEDAL

WAS AWARDED TO US FOR

EXCELLENCE OF DENTAL INSTRUMENTS.

Extract from the Report of the Committee on Instruments of the American Institute.

"We have carefully examined the Dental Instruments exhibited by S. S. White, and find them of superior finish and excellent temper. We would particularly mention the perfection with which the bars and the serrations on the points of the filling instruments are cut: the shapes of the various kinds of filling instruments are admirable. In accordance with the wish expressed by the Board of Managers, we were very particular in testing the temper of these instruments, to ascertain if this important point had been attended to with the same care and skill as were evident in the other parts of their construction, and we found that in this particular their manufacture had been as carefully conducted as in the other parts, and that the instruments had the varieties of temper best suited to the purposes for which they were constructed. And we pronounce them to be the best we have ever seen produced by any manufacturer of Dental Instruments."

SAMUEL S. WHITE,

PHILADELPHIA, NEW YORK, BOSTON, and CHICAGO.