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THE

CANADA JOURNAL

OF

DENTAL SCIENCE.

VOL. I.] FEBRUARY, 1869. [No. 7.

ORIGINAL COMMUNICATIONS.

EDITORIAL NOTES ON PRACTICAL SUBJECTS.

BY W. GEORGE BEERS, MONTREAL.

ATMOSPHERIC PRESSURE OVER THE ALVEOLAR RIDGE.

In spite of the most perfect impressions and every possible precaution, it is not uncommon to meet with rubber upper sets which drop down at the front of the mouth, in ordinary conversation. No size of palatine air-chamber seems to obviate the difficulty, and if adhesion is obtained at all, it is after considerable time, *and a perseverance* on the part of the wearer, which the majority of patients do not possess. We have had our share of trouble with these cases, and particularly of late. One case was that of a lady whose alveoli had absorbed with but little accompanying absorption of the gums. The latter remained soft, though healthy to all appearances, and two years after the insertion of the set of teeth there was no perceptible change. The set gave way in front, and dropped. The other case was that of a lady wearing an upper set made by a confrere, which he had perseveringly renewed three times in hopes of securing adhesion, but to no avail. The gums in this instance were hard, and the alveolar process rather more absorbed than usual—the front part being less than the sixteenth of an inch above the level of the palatine bones. We take these two cases as extremes of a condition of gums and alveoli, to which artifical sets are difficult to adapt.

In both these cases, as in all others which we afterwards tried, the

sets were wholly completed; and the following remedy was only used and is only recommended as a *dernier resort* in cases where sets drop.

In addition to the palatine air-chamber, we cut four separate round vacuums in the rubber immediately over the part which touched the alveolar ridge when the set was in the mouth. Commenced at the second bicuspids on both sides, and ended back of the centrals: the holes a little more than the ordinary depth of an air-chamber.

The result in every case so far has been almost immediate atmospheric pressure, and adhesion of the sets at the very point where they dropped. When the air was exhausted from the mouth, the suction was almost immediate; and by this means we have succeeded in obtaining perfect suction in several cases which previously were failures. In none of these cases has the mucuous membrane been rendered sore by being drawn into the vacuums, though we make our patients provide against this, by leaving their sets out for awhile, during night for instance, if the gums are at all tender.

We object to air-chambers in vulcanite sets if they can be dispensed with, but there are difficult cases now and then when even the ordinary palatine chamber is insufficient.

Would some of our friends who meet with difficult cases of the kind, try the means here suggested, and report to the *Journal*. We are aware that vacuums have been made over the alveolar ridge of the inferior maxillary for lower sets, but we never heard outside of our own experience of the application of the atmospheric pressure principle to that of the superior maxillary.

A LECTURE

Delivered before the Union Dental Association at Toronto, by WM. CANNIFF, M. D., M. R., C. S., *Eng., Prof. of Surgery, University Victoria College, and Secretary to the Canada Medical Association.*

PATHOLOGY OF THE TRIFACIAL, OR FIFTH PAIR OF NERVES.

In accordance with your specified wish, I will now proceed to consider in a necessarily brief manner, the Pathology of the fifth pair of cranial nerves. In doing so, I propose to refer to both Pathological Anatomy, and Pathology proper; to speak of morbid structure and morbid function.

You have had clearly set forth before you, the anatomy of this nerve; you have learned its place of origin; of its two roots; of its ganglion; of its course and relations; of its size; of its divisions, and of its distribution. You have acquired a knowledge of this nerve in a state of nature. It becomes my duty to endeavour to present to you certain facts relative to those changes which may take place in this nerve, in respect to its structure and function. These changes may exist at any point, all along the course of the nerve, from its origin to the most remote distribution. These morbid changes may arise in the substance of the nerve trunk, or in some one or more, of the adjacent tissues, with which the nerve trunk and its branches are in contact and relationship.

A Pathological state may be hereditary, or it may be acquired; it may be produced during the period of growth and developement; or it may be the accompaniment of later years.

The nerve may cease to grow—its supply of nourishment may be cut off, or its integrity otherwise be injured. On the contrary, the nerve may attain to an unusual size, being fed with an undue amount of pabulum. After having attained to its full developement, it may still become atrophied, or on the contrary hypertrophied.

This nerve, in common with other tissues, is subject to injury—to wounds and to crushing. Inflammation may arise in its substance, or extend to it by contiguity; and, then all of the results of inflammatory action may follow, both immediate and remote. A wound, by dividing the nerve trunk will cause paralysis, so may effusion from inflammation, by encroaching upon the nerve. Suppuration may ensue, as well as morbid thickening. Ulceration, that is, molecular death may likewise follow, or perhaps even gangrene.

Again, a morbid fibrous growth may present itself in connection with the nerve, having its origin in the nerve tissue or upon the nerve, constituting a neuroma, or the tumor may be in the tooth pulp;—sometimes like a polypus it sprouts through a cavity caused by caries or an accident to the enamel.

The morbid condition may reside in the adjoining structures.—Tumours of various kinds may grow so as to impinge upon the nerve. These tumours may be analogous, that is, like some natural tissue of the body, or heterologous, or unlike any of the natural tissues. Tracing the trifacial to the many periphery, many forms of diseased action may be seen to interfere with the well-being of the nerve. The

dura-mater may be involved, where the nerve pierces it. The petrous portion of the temperal bone is perhaps the site of inflammation; there may be caries, or necrosis of the bone, by which the Gasserian ganglion becomes affected.

Again, at the sphenoidal fissure a tumour is found encroaching upon the ophthalmic branch. The foramen rotundum, perchance, is partially closed so as to injure the superior maxillary branch; or this branch may be disturbed in its bed along the infra-orbital canal; or instead of either of those nerves, it is perhaps the inferior maxillary nerve which is found, upon examination, to be the subject of morbid action. Perhaps the inferior maxillary bone is inflamed or necrosed, that is dead; or it is the alveolus. Caries exists, or a tumour has become developed. Inflammation has resulted in an abscess, alveolar, or otherwise. There may be what is called a gum boil. Spasmodic contraction of the muscles, especially the masseter, a result of irritation of the nerve, will sometimes be followed by suppuration. The abscess opens upon the surface, and a fistula remains, which the constant motion of the part will not permit to close. Sometimes the abscess is within the antrum, which cavity may have become, larger, or smaller, by disease. Again, the dental foramen at some point, is partially obstructed, or the site of some other disease; there is often impaction of teeth, which, as they grow, create serious disturbance of the nerves by which they are supplied. Dentigerous cysts may have arisen from this impaction, "consisting of collections of serum or its modifications confined within the bone. Upon this subject I would respectfully recommend every Dentist to make himself acquainted with the teachings of S. James A. Salter, Esq., Surgeon-Dentist to Guy's Hospital, London.

Continuing to follow the several branches of the trifacial to their various periphery in the teeth, we learn of many further morbid changes. These morbid conditions are, in many respects, peculiar from the nature of the tissue involved; morbid action within the bone and the teeth, although analogous to that witnessed in the soft part, is nevertheless peculiar—and the tooth being more compact in structure, disease in it differs more widely than in the bone; in the same ratio as wear and tear, and nutrition in bone and teeth differ from that in the soft structures.

Disease, involving the several component parts of the teeth, is of the first importance to the scientific Dentist. Inflammatory action

affecting the teeth, or the nerves distributed thereto, may lead to grave consequences, or indicate present, and serious mischief. Apart from inflammation, various and important changes often take place in the pulp cavity of the tooth. I have referred to the polypus of the tooth-pulp of a carious tooth. "This formation is a dense gristly, purplish coloured mass." It "is always attached by a constricted base to the pulp in the canal of one or more of the fangs. The mass itself is usually more or less rounded," generally it fills the cavity.

Again there is a growth of the pulp after fracture from mechanical violence, attended with much sensitiveness. Heat or cold in such cases causes great distress, and under such circumstances the pulp frequently sprouts into a small excrescence.

Reference might be made to the subject of teething. If a child is healthy, and nothing disturbs the parts, nor the nerves, their teething will take place without distress. But the ailments of children are many, and the shedding of the temporary teeth, and the coming of their permanent successors are frequently attended with abnormal conditions in which the nerves are affected, either as cause or effect.

Then, there is the eruption of the wisdom tooth, which is sometimes attended with much pain. This is often due to insufficient room. It leads to much derangement of the nerves, causing spasmodic contraction of the masseter, and altered secretion; sometimes inflammation of the fauces.

We have now, cursorily it is true, taken notice of the various pathological changes in anatomy which occasionally present themselves in connection with the fifth pair of cranial nerves. In the next place I design to engage your attention relative to derangement of function of this nerve. And, almost any morbid change in the anatomy, such as I have enumerated, is likely to produce a change in the function.

In the first place, we must call to mind, for a moment, what are the physiological actions and condition of this nerve—what are its various duties. It is necessary to do this in order to properly comprehend any departure from a healthy state, and thus be enabled to fully discriminate between Physiology and Pathology, which is not always easily done. Oftentimes the abnormal action, although a departure from the natural is, notwithstanding, a physiological attempt to restore, on the part of nature.

THE FUNCTION OF NERVES.

We cannot here speak of the nervous system generally; it is too extensive a subject. We wish merely to speak of the nerve cords, which like telegraphic wires, are planted in every part of the body. No district is so unimportant that it is not supplied, no territory so remote that it has not a telegraph station.

The function of nerves generally, it is understood, is to carry messages to and from the central nervous power, or some ganglionic centre. These nerves are variously classified according to their function, as well as to their origin.

The efferent fibres convey a telegraph message to the nerve centre, that a certain part is in danger, or in want. The demand thus made is promptly responded to by another message, through the efferent fibres. Let us illustrate. The stomach wants food, and there is irritation of the nerves supplied to the coats of that organ. At once the mind takes cognizance thereof. Food is taken into the mouth, and instantaneously the saliva flows to mix with the food as it undergoes mastication; and when it reaches the stomach, gastric juice is supplied. Incidentally the hand or the foot comes in contact with a hot substance; as quick as the lightening's flash, the limb is withdrawn from the position of danger. Urine has collected in the bladder; its presence produces the amount of uneasiness necessary to secure evacuation. Now, in each of these cases there is a nervous communication, and a reflex action; this is all wonderful, beautiful, harmonious. Sometimes this combined action is under the influence of the will; the actions are voluntary, or they are simply reflex, or involuntary.

The Physiology of Reflex Action of the nerves was a splendid discovery. Its study is of vast importance. To comprehend it fully, demands close, earnest and continued attention. The Dentist as well as the Medical man will be benefitted by the investigation.

We learn that muscular action is due to the effects of the nerves, such nerves being called nerves of motion. There belongs to every part of the body a *sensibility*, more or less great; the nerves through which this is maintained are denominated nerves of common sensation. We have, in addition, nerves of *common sense*, that is, those nerves by which we smell (olfactory), see (optic), hear (auditory) and taste (gustatory); besides there is the sense of *touch* provided by the utaneous nerve, spread out with more or less abundance upon the

surface of the body. Finally, we have the Great Sympathetic system, consisting of ganglia and nerves of intercommunication with branches, and anastomosing with the spinal and cerebral nerves. Through this sympathetic action, as well as by reflex action, one part of the body takes quick and certain knowledge of any disturbance in another part.

With these general remarks upon the function of nerves, I will now refer specially to the one under consideration, the Trifacial nerve. The first fact to be noticed is that, it is a *compound* nerve; it is a nerve of *common* sensation; a nerve of *motion*, and a nerve of *special sense*. It furnishes the important nerve of *taste* by which we recognize what is palatable from that unpalatable, although its duty in this respect according to recent authority is shared by another, the glosso-pharyngeal. The gustatory nerve sustains most important relations, anatomically and functionally, with the organs of mastication.

Your anatomical instructions have taught you, not alone the distributions of the Trifacial, but likewise the particular anastomoses between its several branches, and of them with other nerves, including the sympathetic. You will not forget how extensive and varied is the distribution.

The eye ball, the lacrymal gland; the mucous lining of the eye and nose; the skin and muscles of the eye brow and forehead, as far as the occiput, are indebted to the ophthalmic branch. The integument of the side of the forehead, side of face, the molar, bicuspid and incisor teeth, gums, lining of antrum, inferior meatus, conjunctiva, muscles and skin of nose, the lips, mucous membrane of mouth, labial glands; these all are furnished by the superior maxillary branch.

Then, in connection with the nerve in the lower jaw, there are the teeth, gums, skin of temple, and external ear and face, lower lip, muscles of mastication, of special sense of taste to tongue, the skin of cheek, and mucous membrane of the mouth, the skin of the temporal region, and about the ear, the joint of the jaw, parotid gland; also, submaxillary gland, mucous membrane of tongue. All of these are derived from the inferior maxillary branch. All and each of these have a duty to perform, a duty that never ceases, nor permits of rest. Yet, so long as all remain in a healthy state functionally, there is no departure from duty; there will continue to be a physiological condition. But, if the nerve at its periphery in any one of these distributions is deranged, then there will arise a morbid condition.

The point of distinction between Physiological and Pathological actions, cannot always be determined; but when the deviation attains to a certain magnitude, then the distinction is sufficiently easy.

In the investigation of this subject, the student has, beside general observation, two modes of searching, one by vivisection in animals, the other by post mortem observation. In so complex a question as the functions of the fifth pair of nerves, a question not yet fully decided, we cannot fully, at one time grasp the whole subject. We shall confine ourselves to what seems the most practical. All nerves may become subject to two general influences apart from what is normal, one of which is Physiological, the other Pathological. In the first there is simply a physiological stimulus; in the the other there is a pathological irritant.

For instance, food in the mouth causes a due supply of saliva; this is the effect of a physiological stimulus; but the presence of some obnoxious substance in the mouth, or an ulcerated gum causes an incessant flow of saliva; this is due to a pathological irritant. Again some irritating dust finds entrance to the nostrils, the consequence is sneezing, and a flow of water, to expel, and wash away the objectionable material. But, should the foreign body be sufficiently irritating, or large, that it is not cast out; then inflammatary action will follow. The former was physiological; the latter is pathological. Again, take the eye; a bit of dirt is lodged upon the cornea, its presence is sufficiently objectionable to lead to a more plentiful flow of water, and the dust is washed away. The whole was transient, and unattended with irritation; on the other hand, a bit of steel is lodged upon the eye, no moisture can soften it nor remove it; it remains, producing pain by its presence, and when the eye is moved, or made increasingly sensitive by light. Now, how palpable it is that the one was physiological, the other pathological,

But, it must not be forgotten that irritation of a nerve may be produced, speaking generally, in three different places, viz.:—At the nerve centres, at the priphery, or at some point along the trunk of the nerve. It is most important to remember this, inasmuch as the effects of the irritation may be equal in all cases, and possess no peculiarity by which it can be determined where the site of irritation resides.

Take the bladder, or rectum. The presence of morbid urine, or impacted fœces is attended with severe local irritation, but the physician cannot, consequently, conclude, whenever there is irritation of either of these parts, that there is some local cause, inasmuch as the irritation may be due to an abnormal state of the spinal cord, from whence the nerves are derived. The *galvanic battery* is impaired.

THE DIGNITY OF THE PROFESSION.

BY W. G. BEERS, MONTREAL.

There has been a good deal of talk about elevating the Profession in Canada, and there is no doubt but that the majority of its members are sincere in their desires, and feel what they say. Looking upon the present position of Dentistry in this country, compared to what it was two or three years ago, we have good cause for gratification; but we are yet far from deserving the dignity and status for which we aim. The dignity of the Profession embraces so wide a field of discussion, and so many side issues, that it cannot have justice done it in the limited pages of our *Journal*, but a few words on the subject may be in season.

The right hand of fellowship extended to the Dentists of Ontario by the Medical men of that Province is appreciated most highly, but we are in favor of Dentistry standing on its own merits, and if we do not mistake, this is the feeling of those very gentlemen who so nobly countenanced and assisted the Dental movement up West. A want of self reliance has, perhaps, been mistaken for diplomacy, and we think the Dental movement could and should stand on its own merits as a public benefit, and a professional protection. We are sure no one will misinterpret our views on this point, for we derived too much personal pleasure and profit from the Lectures of Drs. Canniff and Richardson, at the last Dental Convention in Toronto, to breathe the suspicion of depreciation, and we have a very high respect for, and approval of such assistance. The point is, that our Profession as a separate and distinct branch of Medicine and Surgery should not need other qualifications for, and claim to dignity than its own position entitles it. To elevate it to this position should be the aim of every true Dentist. We purpose adverting to several matters which we think tend to clog the progress and respectability of Dentistry; and if in the review, a cap fits any reader, we trust it will be appropriated with the same frankness in which it is given. While admitting that the past, and even much of the present should be no criterion, we believe that the Profession can only attain an equality with Medicine by the abandonment of much that is now common *custom*. A great deal has been said and done in days past, by some of our worthiest members, which to-day is ranked

outright charlatanism, but from the superior views of matters and the higher status of the present, we may be charitable to the past, and let by-gones be by-gones. "Sufficient unto the day is the evil thereof," and there is enough to occupy our reformatory ideas without recurring to the manner in which A. gained a practice, or to the biography of B. Fashion is a great lever, and the most of us are led by the nose with it, and if it is not easy to accommodate ourselves to the changes brought about by more elevated views, it should afford some consolation to feel that these changes are our best guarantees of respectability.

The present styles of *advertising*, used by our profession, do not promise true dignity. We would submit the principle that what is unprofessional in this respect in medicine, is equally so in dentistry; and what is disreputable in the one, cannot by any twisted logic, or plausible reasoning, be made reputable in the other. We have before us as we write a large number of dental advertisements, circulars and cards, which, though representing by no means first class operators, and in many cases the very reverse of good operators, yet mostly all assume an individual superiority on the part of the advertisers, which is remarkable for audacity and untruth. Some of the two former, half a yard long, rival the enterprise and infallbility of Holloway and Perry Davis; others more moderate as to size but quite as quackish. We had no idea of the vast attainments and inspired capacities of certain of our brethern until we read their circulars; and we presume the miserable work we have seen produced by them must be attributed to some peculiar disturbed state of mental and physical nature at the time the work was done. Yet, we have a foolish conviction of our own that if plugging teeth for dogs were fashionable, and our dog needed it, we would'nt care to trust him, or any other poor dog we pitied, to the care of such superior beings.

The great beauty of the English language is that it can be made to tell truth so plainly, and if we tell those puffing advertisers that in their circulars and cards they lie, it will be attributed to the bluntness of the good old language. They who promise "invariable cures," and "invariable success," tell falsehoods, and know it. We have no desire to quote, lest we be personal, but the amount of falsification, and unprincipled quackery printed in some of these advertisements, is most degrading to the profession. If their prompters were infallible they would have too much modesty to blow about it; if

they were really shining lights in operative and mechanical dentistry, they would not so sound their own trumpets. Vulgar pretensions to be better educated, to know principles and practices peculiar to oneself and unknown to others, savors of, and is, arrant quackery.

There can be no objection to a modest advertisement, in which nothing false or fraudulent is stated. Young practitioners must of necessity advertise, but there is no reason why any Dentist should circulate his circulars at every door, like the handbills of a theatre; turn the whole front of his house into an advertising medium; post his bills on every fence, and in every hotel. He may advertise truth too "loudly" as well as advertise falsehoods. Nothing should be said in an advertisement that tends to create an impression that the advertiser has had peculiar advantages over others, or is more fitted to perform the duties of a Dentist. In fact, more modesty would do nobody any harm.

We have said that young practitioners must advertise, and there is no reason why any Dentist should be proscribed from doing so. The difficulty lies in the style, and the means used to convey the advertisement. The College of Dentists of England—now defunct—obliged every member to sign a declaration that they would not advertise contrary to a by-law of the College—which, we believe, simply permitted name, residence and hours of business; while the College of Surgeons which was empowered to examine and grant Dental certificates, took the extreme view, "that advertisements of every kind and shape are as objectionable in Dentistry as in medicine." The latter rule, however, would never be suitable to a comparatively new country like Canada. With regard to appendages sometimes put to advertisements, the American Society of Dental Surgeons passed the following resolutions in 1845, and as our article has already extended to greater length than we anticipated, we will close by quoting this resolution—proposing, however, to continue the subject in the next number.

"That this Society view the publication of Dentists in connection with their advertisements, of letters of recommendation from Divines, and Doctors of Medicine, and in short, all who are not acquainted with Dental practice, with decided disapprobation, and they would especially recommend to all its members, who may be pursuing this course, to discontinue a *practice savoring so much of quackery*, and which is so well calculated to degrade the Profession."

THE DOCTOR DESTROYED MY TEETH

BY R. TROTTER, GUELPH.

The above expression is frequently made use of to Dentists, and in some cases is not without reason.

In the administration of medicine, it often happens, that if the physician does not give proper instructions to his patients, or they are careless about following them, the ingredients prescribed have a most destructive effect on the teeth. Hence, physicians, ought to be very careful to inform their patients when medicines are given which must necessarily act injuriously on the dental organs, if caution be not used, of the necessity of washing the mouth carefully after each dose. Notwithstanding, every care be taken, mercurial Ptyalism frequently affects, permanently, the health of the dental organs. The object of this article, however, is not to teach Doctors their duty, but to suggest to Dental Practitioners that a duty devolves upon them, to protect physicians from the erroneous impression that often prevails with persons after having had a severe illness, viz.:—That the "Doctor destroyed my teeth," when in reality the Doctor or Medicine may have had nothing to do with it. In severe illness, assimilation and nutrition are deranged, and the teeth, in common with other organs of the body, lose a certain amount of weight and tonicity, while the destructive qualities of those agents which injure them are intensified. And the rapid decay of the teeth afterwards, is not caused by the "Doctor" or Medicine, but by a loss of vigor, the absence of the usual cleansing, and a vitiation of the agents that come in contact with them.

I make these suggestions hoping that the profession will feel it to be their duty to correct an error which has long been prevented.

DENTAL EDUCATION.

BY A. C. COGSWELL, HALIFAX, N. S.

(*Continued from page* 168.)

Doctor Kingsbury, Professor of Dental Histology and Operative Dentistry, commences his lectures by considering Dental Pathology and description of Dentine, with its morbid effects and results, impressing more fully on the minds of the students, by anatomical

collections, from the Saccular state, to the full developement of the permanent teeth, through all their various stages; preparations of the various cavities for filling, materials to use, and clinical operations, so that all may not only have a theoretical, but practical knowledge; this is most thoroughly taught in the dispensary and operating room of the College where every student can operate, for those who daily present themselves, and for whom most difficult and troublesome cases are made to yield to proper treatment. All work is carefully examined by the Demonstrator of that department, Doctor W. C. Head, whose qualifications as an operator cannot fail to teach all the true principles of filling teeth, from simple cavities to more difficult ones, in all stages, and in every known position.

The Operating Room is supplied with eighteen chairs, and tables for the students, in which each one may safely keep their operating instruments, to be used according to their several engagements with their patients. All appointments are made by cards which are provided for that purpose. In the Department of Mechanical Dentistry every facility is afforded for instruction. Benches, Lathes, Furnaces and all necessary articles are provided. This department is especially under the supervision and care of Doctor W. P. Henry, who devotes a portion of each day to instructing the students while in actual practice, the proper method of taking impressions, fitting plates, grinding on teeth and preparing them for actual use, both whole and parts of sets, and articulating them properly in the mouths of the numerous patients who are constantly presenting themselves for Artificial Dentures. Two hours of each day are especially devoted to this department. The days for each student to extract are regulated, so that all may have an opportunity to acquire experience and skill in this department. Doctor Smith, who is Professor of Mechanical Dentistry and Metallurgy, is not the less active to describe and explain all the methods and materials used for impressions, castings, plates, and substances used in the manufacture of artificial teeth, from the practical illustration of a block, moulded, carved, creased and prepared for use, as well as teeth mounted on Platina, continuous gums, Gold and Rubber plate; these are all shewn, that the student may have a knowledge of the various kinds of work best suited for each case. In the department of Physiology and Comparative Anatomy, the means of instruction are very extensive. Professor J. H. McQuillen, who occupies that chair, and who also

has the honor to hold the position as Dean of the faculty, spares no pains to impress on the minds of the class, the science of Physiology, and the laws necessary to be observed for the maintenance of health, illustrating these points by means of a large and valuable collection of fresh and dry specimens, drawings, Papier Mache models. Comparative Anatomy, with the organs of digestion, circulation, respiration, and the nervous system, in addition to a life sized Manakin, capable of complete dissection. Vivisections on lower animals, rabbits, dogs, pigeons and frogs are made in presence of the class, as well as microscopical sections prepared and passed round the class by means of a hand microscope, thus giving an increased interest in the subjects so presented, and proving beyond doubt, all theories on the part of the students, respecting various organs and tissues.

Professor Flagg's instructions from his chair require a quick ear to catch the many valuable ideas as they fluently flow, taking up and applying the general principles of medicine, especially to Dentistry, from the first stages of inflammation, down to ulceration, from a normal to an abnormal condition—with all the causes and effects, preventions and cure, taking up the different Pathological conditions of the teeth, treating on first and second dentition, irregularities, and fully explaining all conditions of caries of the teeth, their supposed causes, and illustrating the different positions of cavities, by specimens of models carved from Plaster, of which a large collection has been carefully prepared by the Professor.

On Chemistry. Doctor S. B. Howell treats of light, heat, electricity and other properties, proving laws by which the operations of nature are governed, explaining the properties of all minerals, metals and liquids, practically illustrating all operations of Chemistry to the entire satisfaction of the class, making special applications of these to the wants and requirements of the Dentist.

* Doctor H. Allen, Professor of Anatomy and Surgery, gives us a detailed description of the human frame, situation, form, and relative attachments of the various parts, illustrating his lectures by the ample materials in the Museum, and demonstrations by dissections on the human cadaver, especially those of the cranium, keeping in view its great importance in relation to our Profession. This city offers many facilities for students, where lectures on Anatomy can be attended during the evening, as well as classes for dissecting—clinics at the several Medical Colleges as well, also, as at the Hospitals.

* Dr. Allen is also Professor of Anatomy and Surgery, in the University College of Pennsylvania.

FILLING TEETH.

BY C. S. CHITTENDEN, HAMILTON.

I would like to call the attention of the readers of the *Journal* to the article in the last number, copied from *The Missouri Dental Journal*, on Cylinder Filling.

The writer gives a good description of one of the best methods of filling teeth previous to the commencement of the use of adhesive foil, and says, very correctly: that "This method of using gold foil is altogether too much ignored at the present day."

When we take into consideration, the fact that there are thousands upon thousands of first rate fillings now in use, made of soft foil, either in the form of cylinders or pellets, which have preserved the teeth in which they were inserted, for thirty or forty years, and then take a glance at the vast number of exceedingly poor fillings, made from adhesive gold, which every Dentist meets from day to day, we cannot help thinking that adhesive gold has turned the heads of many of our young operators, and old ones too, for that matter. I would not for a moment urge objections to adhesive gold, for, by its use many teeth can be saved which could not be preserved by soft foil; but I do maintain, that when really as good fillings can be put in with soft foil, in one-tenth of the time required for adhesive gold, it is far wiser to use the soft foil.

The writer in *The Missouri Dental Journal* closes his remarks as follows, viz.: "There is no method in use in which a greater weight of gold can be compressed into a cavity than by the use of cylinders." Now if, as we all know, *that* filling is nearest perfection which is most solidly condensed, and no greater weight of gold can be introduced in any other way, their can be but one objection to this method of filling teeth, and that is, that a filling made of soft foil cannot be made to receive as fine a "finish" as one of adhesive gold. That need be no objection whatever, for, if the cylinders or pellets are heated just sufficiently to dry them thoroughly, before introducing them into the cavity, and each cylinder or pellet solidly condensed as the operation progresses, there will be no trouble in making a fine facing for the filling, by welding adhesive gold on to it, in the same manner as if the whole filling were made of adhesive foil.

Take, for instance, a large crown cavity in a lower molar. If adhesive gold only is used, a great length of time is required to do it properly, and a great deal of patience on the part of the patient, while the utmost care must be taken by both patient and operator, in order to keep the flow of saliva and mucus from flooding the filling. Now, suppose we take the same cavity and fill it with cylinders or pellets, as described in the article from which my text is taken, with the exception, that I would not allow the cylinders to project above the walls of the cavity, but, rather that the cavity should not be quite full after the gold has been *thoroughly* condensed. At this stage of the operation, I would commence building on the adhesive foil, and finish my filling in the usual manner. I adopted this method of using gold in cavities of this description several years ago, and having found it a great saving of time to myself, and of annoyance to my patients, and that I am surer of success, than when I attempt the exclusive use of adhesive foil, I continue to practice in this manner, but I prefer pellets, rather than cylinders, as I think they can be more easily adapted to the irregular walls of the cavity.

ROYAL COLLEGE OF DENTAL SURGEONS, ONT.

Reported for *The Canada Journal of Dental Science*, by J. O'Donnell, L.D.S., Secretary.

The regular meeting of this corporation was held at the Queen's Hotel, commencing on Tuesday, and ending on Saturday, January 23rd, 1869.

The following members were present: B. W. Day, M.D., L.D.S., President; J. O'Donnell, L.D.S., Secretary; C. S. Chittenden, L.D.S., Treasurer; H. T. Wood, L.D.S., Registrar; F. G. Callender, L.D.S, J. B. Meacham, L.D.S., A. D. Lalonde, L.D.S., G. V. N. Relyea, L.D.S., J. S. Scott, M.D., L.D.S., and George L. Elliott, L.D.S.

Synoposis of the proceedings of the session:

The following Dentists having furnished to the Board the required information, that they had been in established office practice for five years previous to the passing of the Act, and also being otherwise qualified, were granted certificates to practice, and also the degree of Licentiate of Dental Surgery. D. S. Rupert, St. Marys; Hugh A. Baird, Acton; Chas. D. Wait, Uxbridge; John Bonner, Listowel; R. M. Revell, and A. Teeple, Woodstock; John Philpott Sutton,

Brantford ; Thomas Rowe, M.D., Cobourg ; J. H. Padfield, Burford ; Edward Thomas, and James Bastedo, Nelson ; J. W. Elliott, M. Edward Snider and M. Myers, Toronto ; C. N. Vars, Oshawa ; W. H. Card, Whitby ; A. McMichael, Waterford, and J. Wells, Port Burwell.

The following members of the Board were appointed to conduct the examination of candidates for licenses :

Dental Anatomy—Dr. Day ; Chemistry—Dr. Scott ; Institutes of Dentistry—Messrs. Elliott and Lalonde ; Dental Surgery—Messrs. O'Donnell and Wood ; Operative Dentistry—Messrs. Callender and Chittenden ; Dental Physiology—Mr. O'Donnell ; Mechanical Dentistry—Messrs. Relyea and Meacham.

The following having passed satisfactory examinations, were granted certificates to practice, and the degree of Licentiate of Dental Surgery :—

M. S. Beebe, Thorold ; Wm. Patterson, Paris ; J. B. How, Toronto ; Wm. A. Agnew, Lloydtown ; J. B. Devlin, Mohawk ; N. Pearson, Newmarket ; R. Campbell, Guelph ; Geo. W. Harris, Seaforth ; George Ceasar, Kilmanagh ; J. M. Wells, Aurora ; Chas. Graham, Sharon ; C. P. Lennox, Chatham ; L. McDonald, Ingersoll ; P. B. Rosenberry, Arkona ; J. F. Gordon, Drayton ; Henry Robinson, Schomburg ; Frank Soper, Cornwall ; R. Nimmo, Port Hope ; S. J. Sovereign, Bronte ; D. V. Beacock, Lindsay ; J. L. McDonald, Colborne ; L. Burlingham, Owen Sound ; W. Wells, Waterloo ; D.W. Dulmadge, Roblin's Mills ; and Chas. Colter, Strathroy.

The Finance Committee submitted their report, which was received and adopted.

Moved by J. O'Donnell, seconded by J. B. Meacham,—That all Dentists, that have had an established office practice, previous to the passing of the Act, be allowed to practice till the meeting in July next, providing the necessary papers are deposited with the Secretary of the Board before the 3rd of March, 1869.—Carried.

On Friday Evening at the close of the Oral Examinations, the class was called in and addressed by the President, Messrs. Callender, Chittenden, Wood, Meacham and others. Mr. Callender hoped that the gentlemen who had passed their examinations, and were now clothed with authority to practice according to law, would not cease in their researches, neither in their labours to advance their calling. That they would feel a greater degree of responsibility resting on

them now, than heretofore, and accordingly, feel bound to do everything in their power to promote the standing and usefulness of so noble and humane an art.

Mr. Chittenden, followed in a few appropriate remarks, enunciating the same sentiments as the former speaker; he also requested that each person would send his photograph to him, which desire was expressed by all the Members of the Board.

A vote of thanks to the Members of the Board for the uniform kindness and courtesy extended to the class, was carried, on motion of W. Wells and seconded by Mr. George Ceasar.—

Mr. J. L. McDonald moved, seconded by Mr. D. V. Beacock,—That a vote of thanks is due, and is hereby tendered to the Board, for their successful efforts to elevate the profession. Mr. Callender, also received a vote of thanks for an operation performed before the class, viz.:—Filling a front tooth with gold; and building out; also, for the instructions given in connection with the same.

The Session closed at 1 p. m., on Saturday, and the meeting was accordingly adjourned.

The next Regular Meeting of the Board will be held in the City of Toronto, commencing on the third Tuesday in July, 1869.

QUESTIONS PUT TO THE DENTAL CLASS.

The following are the written questions put to the class by the different examiners:

CHEMISTRY.

1st.—Give the properties of Gold and Silver?

2nd.—What is an Amalgam?

3rd.—What are Sulphates, Chlorides, Nitrates, and how are they formed?

ANATOMY.

1st.—From what pair of Cranial Nerves are the teeth supplied?

2nd.—Describe the Superior and Inferior Maxillary Bones?

3rd.—Describe the Periosteum?

OPERATIVE DENTISTRY.

1st.—Describe the Calcareous deposits upon the teeth, how many varieties, their origin, effects and treatment?

2nd.—Describe Exostosis, its effects?

3rd.—Describe Necrosis, causes?

4th.—Describe Odontalgia, its causes and treatment?

5th.—Describe Caries of the Teeth, causes, consequences and treatment?

6th.—Describe the points to be noted in the examination for Filling?

7th.—Describe the method of Opening, Cleansing, Forming and Filling with Gold an anterior approximal, and a crown cavity of a molar tooth?

8th.—Describe the Pathological conditions to which the teeth are subject?

9th.—Describe the important considerations in the Selection of Materials for filling teeth, and the properties they should possess?

10th.—Describe the treatment of Exposed Pulps, and preparing the teeth and roots for, and filling?

11th.—Describe Alveolar Abscess, cause and treatment?

12th.—Describe the important conditions, under which it is advisable, and the manner of preparing a Natural Root and attaching an artificial crown to it?

13th.—Describe the indications for the Extracting of Teeth?

DENTAL SURGERY.

1st.—Describe the manner of Extracting a tooth, any you choose?

2nd.—Describe the manner of stopping Hemorrhage?

3rd.—Give the proper way of aiming at, or reaching the Antrum, the modes of treatment for the various diseases, and the appliances used?

4th.—Describe the proper mode of treatment for diseased Mucus Membrane?

MECHANICAL DENTISTRY.

1st.—Describe the different methods of applying Artificial Teeth?

2nd.—Describe the benefit to be derived from Artificial Teeth?

3rd.—Describe the different methods of obtaining correct Impressions and Models of the Mouth, also Metallic models and counter models?

4th.—Describe the method of obtaining an Antagonizing Model?

5th.—Describe the different materials that are used as bases for Artificial Teeth?

6th.—Describe the advantages of one, over the other, or the combinations?

7th.—Describe the manner of preparing and swaging Gold Plate?

DENTAL PHYSIOLOGY.

1st.—Describe the Physiological functions of the mouth?

2nd.—Describe the Glands that supply the mouth?

3rd.—Describe the portion of the mouth most susceptible to taste?

4th.—What are the effects of the Saliva, and when is it most abundant?

5th.—What effect have the Salivary Glands on Mastication?

INSTITUTES OF DENTISTRY.

1st.—At what age of the Fœtus can you detect the first appearance of temporary teeth?

2nd.—What are signs of appearance called?

3rd.—How are they produced?

4th.—What is the first step in the formation?

5th.—What is the second step?

6th.—What is the size of the alveolar arch at second dentition?

7th.—What is the cause of the elongation of the Jaws?

8th.—At what time is first permanent molar completely formed?

9th.—At what time do the jaws elongate the most rapidly?

10th.—How long does the elongation continue?

11th.—If the teeth cannot erupt, what is the result?

12th.—Do the Temporary Teeth come in irregular?

13th.—Is the first Permanent Molar ever irregular?

14th.—What are the various ways of regulating Incisors?

14th.—How would you regulate a Central Incisor transversely situated?

16.—What is the best method of regulating crowded lower incisors?

17th.—How would you shorten the under jaw?

18th.—At what age should this be done?

SELECTED ARTICLES.

MECHANICAL DENTISTRY.

GOODALL'S PATENT ELASTIC OR SPRING PLATE FOR PARTIAL SETS OF ARTIFICIAL DENTURES.

BY E. B. GOODALL, PORTSMOUTH, N. H.

"Th' invention all admired, and each, how he
To be the inventor miss'd, so easy it seem'd,
Once found, which yet unfound most would have thought
Impossible."—MILTON: *Paradise Lost.*

THE advance in mechanical dentistry has been seemingly slow, but

to those practitioners who can take a retrospective of a couple of decades, placing side by side the results of its present *status* with the comparatively crude specimens which then existed, the advance will appear to have been very sure, if slow. This progress was brought forcibly to the notice of the writer, in his examination of eight or ten beautiful specimens of mechanical dentistry, from the artistic hand of Dr. Reynolds, to be seen in the new and elegant marble depot of Dr. S. S. White, at Philadelphia. The high finish of these specimens of whole sets shows that Dr. Reynolds is not only a ready writer (witness his article upon "Mechanical Dentistry" in the DENTAL COSMOS for December, 1868), but that he is a practical and progressive dentist.

That department of mechanical dentistry which has applied itself to the fitting of *partial* sets, has been notoriously unsatisfactory both to the practitioner and his patients; the latter ought to be, and generally are, wisely, averse to the extraction of the sound teeth left, to give place to an entire set of new dentures. The practice of clasping the plate of a partial set to the natural teeth has always been annoying, insecure, and injurious; and hardly less has been the inconvenience attending the introduction of a suction plate, covering the entire roof of the mouth, and more or less impairing taste and speech.

The need of some method for partial sets which should obviate these difficulties has, in the words of an eminent dentist, "been long and severely felt by the profession."

The writer moderately claims that the elastic or spring plate invented by him, and practically tested by a large number of his patrons, to their infinite delight and satisfaction, has met that want, inasmuch as the dentures inserted by his method are entirely independent of clasps or suction, are adapted perfectly to the natural teeth, and leave the roof of the mouth uncovered; his spring plate gives more firmness, never tipping or rocking from pressure on either side, and is more comfortable to the wearer. By this method every natural sound tooth is retained—the artificial ones matching them. The writer has scores of testimonials from those who have tested in their own mouths, its charming, practical effects. He has recently visited Boston, New York, Philadelphia, and Baltimore, and there personally, invited the examinations and criticisms of the demonstrators of mechanical dentistry of the several dental colleges in the above named cities, and he hereby tenders to those gentlemen his thanks for the cordial manner of his reception, and above all, for their open and frank ac-

knowledgment of the novelty of his spring plate, and hearty indorsement of its merits.

At the request of several of these gentlemen, he has prepared the following general instructions in regard to the mode of preparing the plate.

After obtaining an accurate impression of the mouth, either of wax or plaster, taking care not to *draw down the wax around the natural teeth* in removing the impression, proceed to make the *plaster cast, retaining all the natural teeth* upon it. With a pencil draw a curved line around the entire arch of the cast, from one-fourth to three-fourths of an inch from the necks of the natural teeth, usually terminating the plate at the proximal surfaces of the first and second molars, where incisors or canines are to be inserted; and extend the plate around the posterior surface of the dens sapientiæ on each side, where bicuspids and molars are to be inserted. Cut out from the plaster cast all the palatal portion to $\frac{1}{8}$ or 1-16th. of the pencil line before mentioned; thus forming and shaping the cast, so that the plate when packed will be in two strips or bands, joined firmly and neatly over the rugæ. Thus, when highly vulcanized, there will be a spring to each strip, or two elastic, flexible bands which are *practically automatic*, in the full meaning of the word. Of course the form (as to width and length) is varied according to the number of teeth to be inserted, and the position and arrangement of the natural teeth.

By scraping the lingual necks of the molars or bicuspids on the plaster cast 1-16th. inch, taking care to scrape only above the margin of the gum, the plate will be more secure; but this is not necessary unless the arch is shallow and mucous membrane soft, spongy, or springy. Ordinarily, a perfect impression and well-packed rubber base secures not only a *perfect adaptation*, but the plate is retained in place securely without suction or clasps, simply by its *elasticity*. These spring plates do not rock or tip, even when masticating on artificial bicuspids or molars on either side or both sides, and the same is true in regard to central or lateral incisors, either single or duplicate, or all together. In his practice he has substituted with perfect success, and during the past year has inserted, a large number of partial dentures for patients who formerly wore a clasp or suction plate, and has received the warmest thanks for the neat, light, and thin artificial spring plate, in place of suction or clasp. He is aware that some dentists will be quite ready to say of this principle (everything *new* and *untried*

has objectors) that it will press upon the natural teeth, producing soreness or discomfort, and is not applicable to *all* cases. The fact is (and facts are very practical) that partial dentures inserted by the method herein described, *do not occasion pain, soreness,* or discomfort to the natural teeth. This being the most plausible objection, it is well to say that it is of no practical import; for suppose the plate to be heated over an alcohol lamp for ten or fifteen seconds, and the two bands to be spread 1-16th. of an inch or more, the result would be at first an undue pressure upon the natural teeth, but in one or two days at most, that pressure would be overcome by the expansion of the arch, so that it would be held in place by its elasticity or spring, alone. If these strips were quite short and stiff, there would be a continual wedge, but the above method is essentially different and entirely automatic, as before shown.

All the spaces and divisions between the natural teeth should be neatly waxed before packing, and when completed, all the points between the natural teeth should be finished with a high polish like the rest of the plate, making a complete and beautiful piece of work.

A gentleman, a dentist of fine reputation and good practice, who has had seven partial dentures inserted by first-class dentists of Boston and Philadelphia, with only indifferent success, having recently adopted this new spring plate on rubber base, says: "I am pleased with the improved plan you have invented for partial dentures, and am confident that it will meet a want *long* and *severely* felt by the profession. After many unsuccessful attempts (extending through several years), by means of clasp and suction, to have a partial set fitted properly to my mouth, I am now wearing one after your principle with great and increasing satisfaction."

Every practical dentist who desires the advancement of the profession, will gladly welcome this great *desideratum* in mechanical dentistry, for its facility of construction, economy, perfect adaptability, and general utility.

N. B.—The writer would be glad to illustrate by drawings from models, but cannot do so now.—*Dental Cosmos.*

SAVING THE PULP ALIVE.

There is no subject connected with Surgical Dentistry, which engages the mind of the profession at this time, so much as the

above. Experiments in this direction are being tried by thousands, and by the end of another dental year—the next meeting of the "American Dental Association"—we will probably have some reliable statistics in regard to it. In the meantime, I do not deem it advisable for practitioners to give up the practice of destroying and removing the pulp as heretofore practiced. But whenever favorable opportunities occur for watching the case, it would be well to try the experiment of saving even suppurating pulps.

Freshly exposed pulps no one thinks of destroying. In these cases, I wipe the cavity with kreosote and cap with Hill's stopping, and plug with gold immediately. I press the "Hill's" directly against the pulp foramen and do not attempt an arch. C.

Missouri Dental Journal.

OBITUARY.

Died, at Chatham, Ontario, on the 22nd Jan., 1869, W. W. WHITE, Dentist, aged 40 years.

Mr. White was an Englishman by birth, but came to Canada in early life. He commenced to study Dentistry about fourteen years ago, and after the term of his pupilage expired, settled in Chatham, where he continued the practice of his profession for about ten years. About two years and a half ago his health began to fail, and he gradually sunk under his disease, consumption. For the last six months of his life he was confined to the house. He leaves a wife and three children.

BIBLIOGRAPHICAL.

CHLOROFORM, AND A NEW METHOD OF ADMINISTERING IT.

We have received from the publishers a neat little volume on the nature, administration, and effects of Chloroform, by A. M. ROSEBRUGH, M. D. Surgeon to the Toronto Charitable Eye Dispensary, which, promises to be of considerable value, to those who employ this drug for anæsthitic purposes.

In the opening part the Doctor tells what impurities are likely to be found, and what means to adopt for finding them, and then gives the opinions, in a condensed form, of many of the most learned men of Europe, who have given the subject their attention, as to the

action of chloroform on the system, and the best treatment to be adopted for resuscitation in cases of apparent death; on the latter, he gives a report of the committee of the Medical and Surgical Society of England.

Nearly half of the work is devoted to a new method of administering the chloroform by inhalers, admirably adapted to the purpose, by which a large saving is made in the amount used, and at the same time the operator is able to know exactly what amount of vapor the patient is receiving, and can graduate the dose from the minimum to the maximum quantity required to produce anæsthesia on the different constitutions.

A copy should be in the hands of every dentist who uses this agent for the alleviation of pain.

EDITORIAL.

REPLY TO MR. BEACOCK'S LETTER.

We copy the following letter from the Globe of March 23rd for the benefit of those of our readers who do not see that paper.

ROYAL COLLEGE OF DENTAL SURGEONS.

To the Editor of the Globe.

SIR,—Would it not be well for the Secretary or Treasurer of the Royal College of Dental Surgeons to give a correct report of the receipts and expenditure of all moneys received and paid out by them during their term of office. As there has been some three thousand dollars paid into the hands of the Treasurer by the licentiates of dental surgery for their diplomas during the past nine months, and no report yet given, it is currently reported among the dentists that the money has all been spent. I think, sir, it is but a just and reasonable request to ask how and in what way this large sum of money has been used. The Act clearly states that the members of the Board shall not meet more than twice in the year. In violation of this, they have met not less than four times during the past eight months, each member (and there are no less than twelve of them) receiving something like ten dollars per diem.

By inserting the above you will confer a great favor on the dentists throughout Ontario.

I Remain, yours, &c.,

DAVID VALENTINE BEACOCK.

Lindsay, March 19, 1869.

We propose to make a few comments on the foregoing, not that we think that any one has a *right* to ask any questions concerning the disposal of the funds of the Board, except he be a member of the Board, but, we do think that some of the false statements contained in Mr. Beacock's letter ought not to be allowed to go to the public without some reply. Granting that Mr. Beacock has a right to ask for information, we think it would have been much more manly for him to ask the Treasurer for a statement, than to fly off to one of the public papers, with a long string of conclusions which he says are "currently reported." The amount, which he says has been paid to the Treasurer, is not as large as he states, by a good many hundred dollars, and will be all accounted for at the meeting of the Board in July. The Treasurer was prepared with his vouchers, in January to have his accounts audited, but, the immense amount of work which the Board was obliged to do in the five days of the session, to complete the examination of twenty-five students, compelled the members, although very reluctant to do so, to defer the auditing of the accounts until the next meeting. We are at a loss to understand what Mr. Beacock means by stating that the "menbers of the Board have met not less than four times during the last eight months," but, probably he knows; and probably he knows, too, what he means by stating "each" member has received something like ten dollars per diem."

As we said before, although the Treasurer does not admit the *right* of any one to examine his accounts, he has invariably allowed any dentist who wished, to look over every item, and ask any questions he chose, with regard to the disposition of the funds, as he does not consider that there is, or should be any secrecy about the matter but, he *cannot* publish any statement of the receipts and expenditures, until his accounts have been audited, and he has been authorized by the Board to publish such a statement. C. S. C.

HANGING MADE PLEASANT.

There is every indication that by the aid of science, hanging may become more pleasant to criminals, as it is proposed to introduce chloroform on the gallows, and draw the bolt when the "patient" is in the last stage. Some of the tender hearted lambs in Ottawa, requested the Sheriff, at the late execution of their friend Whelan, to

give him chloroform; and we see that a Sheriff in Oneida County New York, actually did administer it to a criminal on the gallows, and that the bolt was not drawn until the victim was oblivious to the performance.

We have heard of the delightful mental impressions produced by chloroform, and it will be consoling to nervous individuals, condemned, "to be hanged by the neck until dead," if they will be permitted to kick the bucket during a sweet dream of elysium,—where they have little chance of going. W. G. B.

EXOSTOSIS.

We have received from Mr. W. H. Card, of Whitby, a remarkable case of exostosis, by which the second and third right superior molars are firmly joined together, from the apices of the roots to the necks of the teeth. The third molar is a good deal decayed, and in attempting to extract it, the second molar was brought away with it. We do not remember having seen a case where the disease had extended so far as in this instance.

A SUBSCRIBER ASKS.

"Can you inform me how to obviate the objection to Os-artificial, when applied over sensitive dentine, as the pain on application is so extremely severe in many cases."

[Paint the cavity with a solution of gutta percha, or collodion previous to inserting the filling.] W. G. B.

MISCELLANEOUS.

THE EFFECTS OF TOBACCO UPON THE TEETH.

BY S. S. BOZKATH, MILTON JUNCTION, IOWA.

MESSRS. EDITORS:—In the *Dental Office Laboratory* of November, I find an article with the above caption, and I have had my attention drawn constantly to that subject since I began practice, and as "in the multitude of counsellors there is wisdom," I have concluded to offer a few remarks upon the subject.

In the beginning, I will state that I do not use the weed in any form,

and do most heartily abominate the filthy habit, and if I should say anything that might seem to favor the use of tobacco, it cannot be said that self-indulgence in a nasty habit induces me to seek excuses for the use of it in others.

Although multitudes assert that they use tobacco, through a long lifetime, without injurious consequences to their systems, and many of our highest medical authorities assert that the ordinary use of tobacco does not have any deleterious effect upon the system, yet I think that any candid person who will look at the subject from an unbiassed stand-point, will admit that any agent that exerts so powerful an influence upon the nervous system and through that, upon the circulation and assimilation, must be productive of mischief when exerted continually. The constant strain upon the system, by its depressing influence, must inevitably result in derangement of function, and a corresponding influence upon the general health. And in so far as it does thus affect the general health, it does undoubtedly have an indirect deleterious effect upon the teeth. But I think the greatest evil is in the transmission of impaired constitutions to their offspring, which naturally and inevitably results from an enervated condition of the parents. I think the fearful tendency to decay in the teeth of the rising generation may be ascribed more to this than to any, and I had almost said, than to all other causes. And now for the direct effects.

Your first objection, "the wear upon the cusps of the teeth," is well taken, and cannot be disputed. But your second point, "the action upon the gums, and indirectly upon the vital stucture of the teeth," we will examine a little.

That poisonous substances are used to some extent in the manufacture of tobacco, I suppose is doubted by no one; and our finely drawn theories would naturally lead us to conclude that even if tobacco itself were inert, these substances must be injurious, especially to the delicate structure of the gums and other mucous membranes of the mouth, and must be discarded, if we wish to maintain a healthy condition of these parts. But experience has amply demonstrated that theories are of value only, so far as they are sustained by the facts in the case. And the question at once arises, are those who habitually use tobacco more subject to diseases of the teeth and gums than are those who do not? My opportunities for observation have

not been so extensive, perhaps, as have been those of others, but so far as they go, I think I must say that such is not the case.

That tobacco may, abstractly, be injurious to the different structures of the mouth, and still be advisable under certain circumstances, or rather, that under certain circumstances it may be the least of two evils, I think may be demonstrated. The products of the fermentation of particles of food about the teeth and gums may be, and I think are, more injurious to the structures of the mouth than are the juices of tobacco; and these particles of food are removed, in a measure, in the process of chewing tobacco, and the products of their fermentation are so diluted and washed away by the increased flow of saliva, as to be comparatively harmless. Of course, if every one took the pains to keep their teeth clean, that all persons should, this theory would at once fall to the ground; but I think my observations warrant me in saying, that as a general rule those who indulge in this filthy practice are too careless in their habits of personal cleanliness to pay much attention to their teeth.

Your statement that you "have often found the tobacco juice permeating the cementum and dentine" of the teeth of tobacco users, is not altogether explicit. If the juice of tobacco does permeate the substance of sound and apparently healthy teeth, it would seem to require no argument to prove that it is injurious, as it is generally conceded that the presence of any substance in any of the tissues of the body, not necessary to the maintenance or building up of those tissues, is unfavorable to the maintenance of a healthy condition of the parts. But you did not inform us whether you had observed those conditions in sound teeth, or whether the fluids had found their way to the interior of the teeth, through carious openings, and thus entered the canaliculi through their interior openings.

It would appear that the excessive demands upon the salivary glands caused by the use of tobacco, must result in derangement of function, and thus by its impairment of the digestive powers, have a reflex action upon the teeth.

Let us theorize as we may, the matter must be determined by the facts in the case. This calls us back to the question—are those who use tobacco more subject to diseases of the mouth and teeth than those who do not use it?

As I said before, my observations do not warrant me in saying that they are; but I would like to hear from others who are interested, as it is a subject of considerable importance.

RECEIPTS FOR MAKING HILL'S STOPPING, OXY-CHLORIDE OF ZINC, & WOOD'S FUSIBLE METAL.

HILL'S STOPPING.—The following is the formula of the inventor. With pure gutta-percha in a plastic state, are mixed, quick lime, two parts, and quartz and feldspar, one part each, which latter are reduced to an impalpable powder, and kneaded into the mass as long as it will receive them without becoming brittle. Dissolve the gutta-percha in chloroform to almost a pasty consistence, then add the mineral substances and put into a vessel, suitable for evaporation of the chloroform. It should be made so thick that the silex would not fall to the bottom.

OXY-CHLORIDE OF ZINC.

Refined Borax,.....1 part.
Quartz,.....2 parts.

Triturate thoroughly in a mortar, then add gradually 45 parts of French Zinc white; when perfectly incorporated, calcine in Hessian crucible, at a good red heat, for eight or ten minutes. This forms a frit, which, when cool, must be ground very fine, in small quantities, at once, together with trifling portions of colouring matter, such as yellow ocre or burnt umber.

To 2 part of the pulverized frit, add 3 parts of calcined Zinc, and combine thoroughly in a mortar. Bottle and stop tight. The more recently it is made, the better.

SOLUTION FOR THE ABOVE.

Dry Salt Chloride of Zinc,.....1 ounce
Water,.....6 drams
Dissolve.

WOOD'S FUSIBLE METAL.

Bismuth.....	15 parts
Lead.....	8 do
Tin.....	4 do
Cadmuim.....	3 do

PERSONAL.—We find the following in the Brampton *Times*, and can cordially endorse the sentiments therein contained:—It will be seen by our advertisement columns that R. Trotter, Esq., Dentist, who has been a resident of Brampton for many years, is about leaving this town to permanently reside in Guelph. Mr. Trotter has won for himself a deservedly high reputation in his profession, as well as of being a good citizen; and though many will regret his leaving this neighbourhood, yet he will take with him their good wishes for his future prosperity, with the hope that he may be successful in winning the same golden opinions of the people of Guelph and vicinity, as he has done in Brampton.—*Guelph Mercury*

CASE OF DISLOCATION.

A man, who, several days since, dislocated his jaw, walked twelve miles to St. Peter, Minn., with his mouth agape, to have the disjointed member set right. To prevent a violent collision, the Surgeon's assistant insisted on inserting his thumb in the patient's mouth, until the doctor plainly indicated the danger, and placed in position a stout splinte. Upon crowding the jaw, it resumed its rightful place with such force as to snap the stick asunder, seeing which, the student rejoiced that he had withdrawn his thumb.

CUTANEOUS ABSORBTION.

Professor Scoutetten, of Metz, has written to the Paris Academy of Medicine on the subject of cutaneous absorption. He maintains that the skin, when healthy, does not absorb; and that no bath whatever can have any effect on it. The doctor is so positive on this subject, that he offers himself to be experimented on by entering any bath containing poisonous substances, whether mineral or vegetable, provided they have no corrosive qualities. He further offers to pay a fine, of an amount to be fixed by the academy, if he be wrong; and declares himself ready to come to Paris at any time to place himself at the academy's disposal for that purpose.

BOOTH'S REMAINS.

The remains of Booth, the assassin of President Lincoln, were recently identified by his younger brother beyond doubt by a peculiarly plugged tooth.

DENTAL PUNS:—When should you apply a sovereign remedy to your tooth? ANS.—when it is a-king.

Why does an aching tooth impose silence on the sufferer? ANS.—Because it makes him hold his jaw.

EFFECTS OF MERCURY.

From a notice in the Dublin *Medical Press and Circular* of Dr. Murison's new book on Diseases of the Liver, &c., we find the following:—

"Take, for instance, the question of the action of mercury on which Dr. Hughes Bennett has been engaged in experiments for the British Medical Association, and whose conclusions thereanent so surprised the great body of practitioners. Dr. Murison has evidently carefully weighed the evidence, and he has come to a conclusion which is likely at present to receive the assent of the majority. He thinks that "mercury and allied purgatives probably produce bilious stools by irritating the upper part of the bowel, and sweeping on the bile before there is time for its absorption." He recognizes the fact that articles of food frequently give rise to similar effects, and thinks that their action is perfectly similar. From this we might suppose that other purgatives should be substituted more frequently than they are, and assuredly this view supports the American preference for podophyllin, or, as it is called sometimes in the States, "vegetable calomel." We could certainly say much in its favor. Dr Murison considers calomel of great use in congestion of the liver, but if it increased the secretion of the bile, it would have an injurious effect.—He thinks it likely that "irritation of the duodenum by purgatives, may be reflected to the gall-bladder, and cause it to contract, and that the evacuation of the viscus may account in part for this increased quantity of bile on the stools." Dr. Murison's is a handy sized volume. The former half treats of enlargements of the liver, under the division of painful and painless enlargements. The latter includes gallstones, jaundice, hepatic pain, contractions, and abdominal dropsy. The cases upon which the lectures are founded are well selected and carefully related. Their study is likely to lead to more careful diagnosis and treatment."—*Boston Med. and Surg. Journal.*

A CLERICAL SURGEON.—Father Helyen, a Catholic priest of Boom, in Belgium, performed the Cæsarian operation on a young woman in order to baptize the infant before it died. The mother appears to have been living when the operation was commenced, but both mother and child succumbed. In his defence, the priest said that he performed the operation in obedience to the direct instructions of the archbishop. The instructions are now to be cancelled, and the clerical surgeon tried for murder.—*Med. and Surg. Reporter.*